

PRODUCT SELECTION GUIDE

CONTRACTOR HANDBOOK

Electrification Ireland

ENGINEERED
TO OUTRUN



ABB's Electrification Business Area is a global leader in electrical products and solutions, operating in more than 100 countries, with over 200 manufacturing sites. Our 50,000+ employees are dedicated to delivering safe, smart and sustainable electrification. With ABB Ability™ enabled digital solutions at its core, our portfolio protects, connects and optimises the flow of electrical energy for smarter electricity distribution for utilities, industry, buildings, infrastructure and mobility.

Table of contents

004–015	1. Introduction
016–049	2. Smart home - Designed to make your life simpler
050–053	3. EV charging - Terra AC Wallbox
054–115	4. Modular DIN rails
116–143	5. Enclosed switching products
144–149	6. Enclosed switches
150–233	7. Cable management products
234–251	8. Energy and Lighting management
252–268	9. Furse® - Earthing, lightning and surge protection
269–281	10. Commercial / Industrial enclosures
282–283	11. Enclosed control products
284–329	12. Metering and monitoring
330–342	13. Electronic relays and controls
343–358	14. Motor Control and protection
359–365	15. Jokab safety products

A safer, more reliable flow of electricity



"We make our customers more successful by identifying the challenges they face and creating opportunities through intelligent solutions to improve insight and efficiency into power distribution."

To meet the needs of this changing world, ABB's Electrification business is dedicated to developing pioneering technologies that, from the substation to the point of consumption, create a safer, smarter, more sustainable electrical flow – for everyone.

With a broad range of market-leading products and solutions, a global sales network and customised support, ABB provides flexibility that improves energy performance, whatever the requirements. Our trusted, high-quality products are intelligent and cloud-based, enabling them to control and protect power more effectively.



Buildings



Data Centres



EV Charging



Marine



Oil & Gas



Rail



Food & Beverage



Manufacturing



Solar

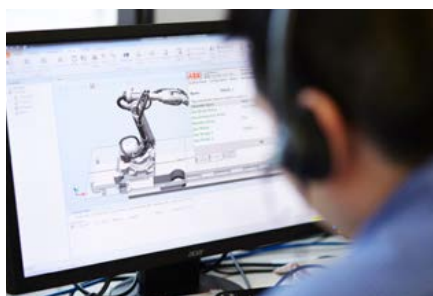


Wind

Digital services

Simplified business solutions

By digitalising our services, we are easing the transformation for our customers from traditional office based operations, towards a digitalised future, enabling a more efficient pro-active work environment.



E-Configure

With e-Configure, customers can completely integrate the ordering process, selecting, configuring and ordering their products more quickly and simply.



ABB Connect Partner Hub

Join our dynamic, online platform that connects customers directly with key professionals, such as system integrators, and ABB Ability™ digital solutions and services.



Building Information Modeling

ABB BIM objects are just one click away. Find them stored along with supporting documentation in our download centre or via selected third party repositories.



ABB eFinder

ABB eFinder is a quick & easy way of sourcing and buying ABB Electrification components online. Just type in your product ID or product code, and eFinder will show you the list of distributor web shops and the approved distributors in your area.



ABB EasyOrder

Exclusively available for ABB Electrification customers and partners, ABB EasyOrder is loaded with useful features including real-time information on pricing, stock and delivery, smart suggestions for accessories and instant access to technical data.





Smarter mobility

Electric vehicle infrastructure solutions

As an innovator in EV infrastructure solutions, ABB is laying the foundations in the UK for a future of smarter, reliable, and emission-free mobility, accessible by everyone, everywhere.

Whether you're a home owner wanting to travel emission free, an out-of-town retailer looking to offer charging points for customers or looking to build en-route fast charging stations, ABB's future-proof charging technology with unrivalled connectivity offers a sustainable option for EV charging.

Charging systems for every application

DC fast-charging

Terra DC fast chargers. The most widely used EV fast chargers in the market, ideal for urban applications, retail and refuelling stations.

- Compact footprint
- Maximised revenue generation
- Future ready



DC wallbox

The Terra DC wallbox is a future-proof investment supporting current and future EVs with high voltage charging, applicable to a wide variety of use cases, in an ultra-compact footprint, that is safe and reliable, for residential use too.

- Intelligent design: compact, convenient, connected
- Future-proof: ROI maximised
- Safety: built-in protection



High power fast-charging

Terra HP charge post is a modular 175-350kW high power charger ideally suited for highway corridor and EV fleet operations.

- Customisable branding
- Premium user experience



AC wallbox

Terra AC wallbox provides tailored, intelligent and networked charging solutions for any business, home or location.

- High value
- Futureproof flexibility
- Safety and protection



Scan the QR code to learn more

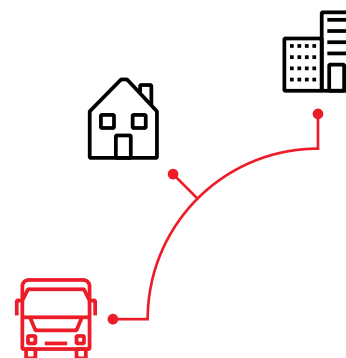




ABB Ability™ Energy Manager

Sustainability and energy efficiency

ABB Ability™ Energy Manager is the digital solution to monitor and optimise your energy consumption and CO₂ footprint, giving the chance to make faster and better decisions based on data insights.

What is ABB Ability™ Energy Manager?



Energy management

tool for small to large size sites - including segment specific features (Building, Datacentres)



Energy and Asset Manager

Innovative cloud-based or on-premise platform and ready-to-use solution



Cost efficient solution

with add-on and premium services, including upgrade to ABB Ability™



Pre-engineered functionalities

ensure on-site commissioning in less than 1 day



Scan the QR code
to unlock your
FREE TRIAL





ABB Electrification business

Service facilities (Ireland)

ABB Electrification Services (Ireland) are committed to customer experience, enabling faster response for investigation, repair and refurbishment of ABB's Electrification portfolio.

Your business efficiency depends on your choices. ABB's service agreements let you focus on what you do best, while your power distribution system runs smoothly. With your equipment performance optimised, your cost control improved, it's your way towards less unplanned downtime and easier maintenance budgeting. Here are some examples of the service choice you can make:



Technical support

Expert help is only a phone call away. This solution is for all technical telephone assistance and rapid troubleshooting advice.



Delivered maintenance services

This is the essential maintenance to prolong the lifetime of your assets. We take precise maintenance actions, including providing genuine ABB parts in preventive maintenance kits.



On-site response time

For those times when you need help, and you need it now. One phone call and an expert will be on-site within the time agreed.



Self maintenance services

We provide you with access to proprietary resources that allow you to manage your own maintenance. Resources include online troubleshooting tools, manuals and equipment histories.



Skills development services

Your investments improve performances when effectively used on a day-to-day basis. We share our expertise to elevate your operators' skills to maximise your investment.



Product Training & CPD Seminars

What courses and training are available?

We offer training in the following areas, among others:

- Products and systems
- Commissioning and user training
- Service and maintenance training
- Design and dimensioning
- Customer-specific tailored courses

ABB offer a wide range of free product training and support, providing informed decision making for your electrical installation needs.

With ABB Electrification Business you don't just have access to the most comprehensive range of Low and Medium Voltage products available - providing unlimited compatibility solutions - we also offer industry-leading support services.

These include structured training and seminars to help our customers develop a greater knowledge and understanding of their industry's legislation and standards - essential for making informed project specification decisions.

Our CPD seminars and training aim to:

- provide critical and relevant facts on changes in industry legislation
- address the impact of these changes on your business
- provide guidance on effective methodologies to simplify implementation
- address ways of reducing overall labour and maintenance costs

CPD Seminars and training

Building Automation - KNX
Universal Protocol & DALI

IIoT - Low Voltage Connectivity,
Communications and Energy Efficiency

Arc Fault Detection Devices (AFDD)

Electric Vehicle Charging (EVC) - Infrastructure,
Market and Connectivity

Introduction to **MV Switchgear**

IEC61439 Overview of Standard
for Low Voltage Switchgear and Assemblies

Technical Overview of **LV Switchgear**
and **Panel Selection**

The Fundamentals & Principles of
Building Energy Management Systems

Building Services Integration - BACnet
and other options

LV Selectivity / Discrimination

Product training

ABB i-bus® KNX

ABB-free@home®

KNX basics

ABB InSite Energy Management System

Emergency Lighting - Naveo®Pro IoT

Lite Panel Pro

Smissline

Emax 2 ACB components and accessories

Tmax XT MCCB breaking new grounds

Automatic Transfer Switch (ATS)

TruONE™ & Compact ATS



* For a full list of all training courses we offer visit our website: new.abb.com/ie/ABB-Ireland-CPD-Presentations
Where requested, we can tailor a course, provide an informal briefing or supply specific training on our product lines.

Ordering products

Helping you to find the correct product at a glance



How to use this book

Quick guide to ordering products

Section header

This is the product group title

Product image

Helping you to find the correct product at a glance

ESB installation contactors Order Codes



ESB25_N

The ESB25..N installation contactors are used to control single and three-phases loads up to 25 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environment. ESB25..N series is providing the following benefits:

- Hum-free operation, low power consumption and integrated overvoltage protection.
- Various contact combinations and accessories are available.

Description

Item specific product description

ESB25..N installation contactors - 25 A, AC-1/AC-7a, AC/DC operated

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC/DC	Pkg qty	Weight (1 pc.) kg	Type	Order Code
Single packaging						
	2	24	1	0.245	ESB25-40N-01	1SAE231111R0140
	2	230 ... 240	1	0.235	ESB25-40N-06	1SAE231111R0640
	2	24	1	0.245	ESB25-04N-01	1SAE231111R0104
	2	230 ... 240	1	0.235	ESB25-04N-06	1SAE231111R0604
	2	24	1	0.245	ESB25-22N-01	1SAE231111R0122
	2	230 ... 240	1	0.235	ESB25-22N-06	1SAE231111R0622
	2	24	1	0.245	ESB25-31N-01	1SAE231111R0131
	2	230 ... 240	1	0.235	ESB25-31N-06	1SAE231111R0631
	2	24	1	0.245	ESB25-13N-01	1SAE231111R0113
	2	230 ... 240	1	0.235	ESB25-13N-06	1SAE231111R0613

⁽¹⁾ Other control voltages: see voltage code table and contact ABB for availability of products.

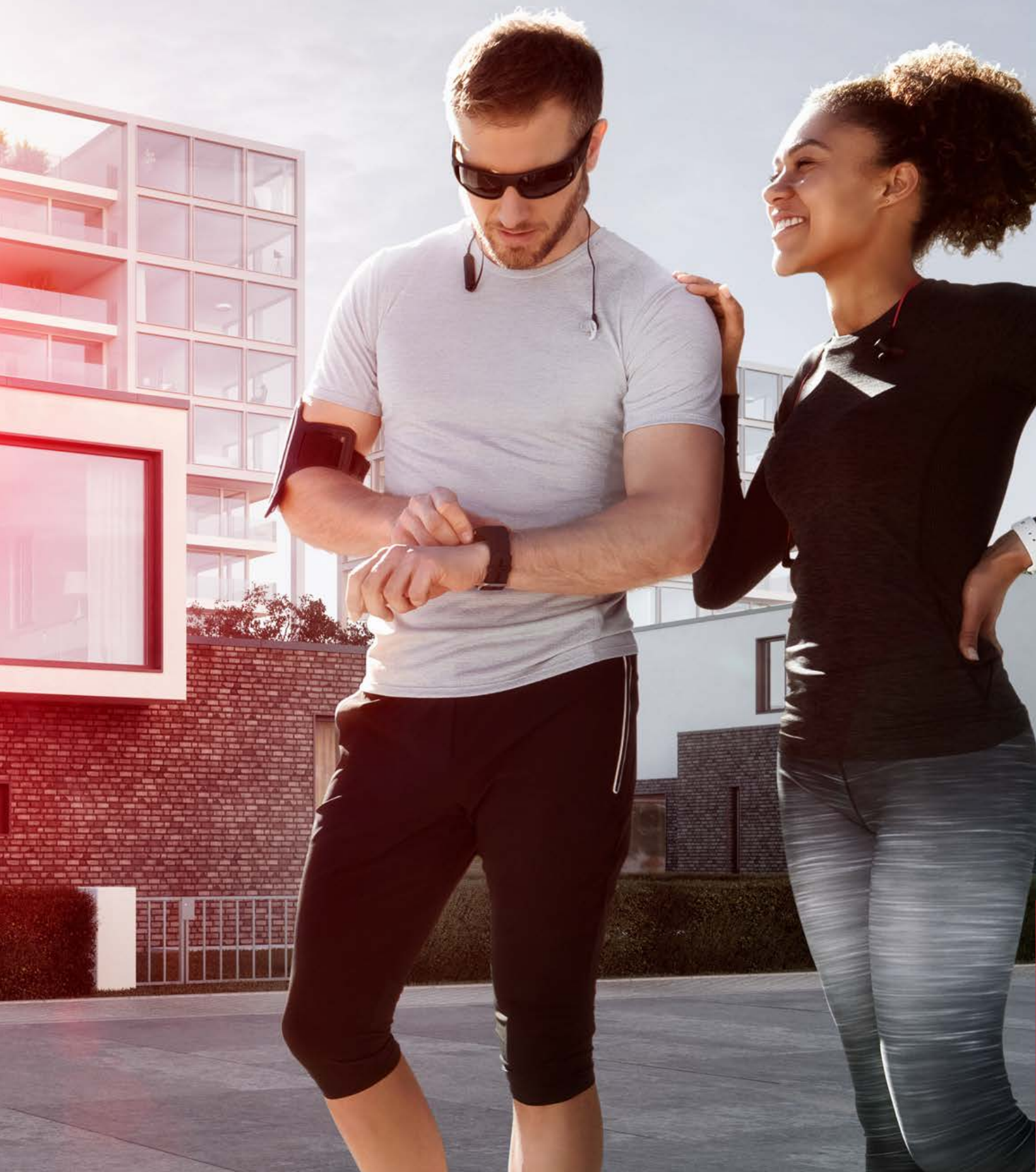
Order Code

When placing an order this is the number to quote

ABB EasyOrder bolservices.it.abb.com
Phone +353 (1) 405 7300
Email lvpsalesie@ie.abb.com
Web new.abb.com/ie

24/7
 Monday - Friday: (GMT) 9am - 5pm

24/7



Smart home - Designed to make your life simpler

018	ABB-free@home®
020	The range
046	ABB IP Door entry systems



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300



ABB-free@home® The Smart Home

Now easier than ever. Only a few components are needed to install ABB-free@home® for direct activation of lights, HVAC, blind control and more. The entire system only requires a bus cable, the sensor/actuator unit, a power supply and a System Access Point for programming.



One smart Home one app



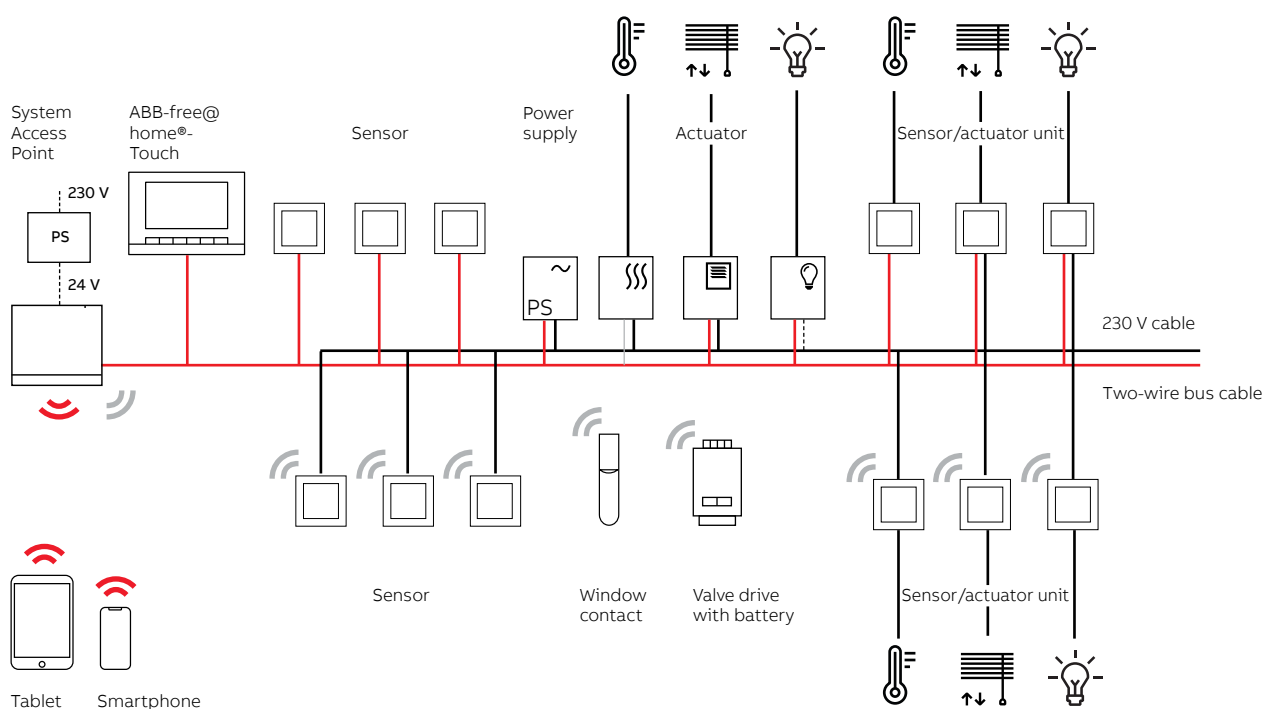
Central distribution board with rail-mounting actuator

The installation of central rail-mounting actuators in the consumer unit makes the installation of the sensors even easier – as only the bus line is located in the flush-mounted box. With this method, the costs for each channel can be reduced.

Sensor/actuator unit for decentralised control

All in one. With the sensor/actuator unit, both the sensor and actuator are located in a single device to save space. The basic function of the unit is pre-configured, which makes programming the basic function unnecessary – but possible if required. The 230-volt line is wired as usual.

Wired communication



Wireless communication

ABB-free@home® - The range

Modularity makes everything possible



System Access Point 2.0	
Article no.	SAP/S.3
Description	For commissioning and remote control of the ABB-free@home® system. With integrated ABB-free@home® wireless antenna. With integrated ABB-free@home® bus connection. Allows the execution of astro and time programs. Commissioning and remote control is executed via web interface or app. No additional commissioning software is required. Easy commissioning with WLAN ad-hoc mode. Connection to the home network via WLAN client mode or via CAT cable.
Dimensions (H×W×D)	107 mm × 109 mm × 30 mm
Technical data	Display elements: LED for status display Nominal voltage: 230 V~ Rated frequency: 50 Hz/60 Hz Protection type of device: IP 20

ABB-free@homeTouch 7"	
Article no.	DP4-T-1
Description	For use as remote sensor.
Cable length: 4 m	
Line type: H03 VV-F Type: NTC 10 kohm	



ABB-free@homeTouch 4.3"	
Article no.	black: DP4-1-625 white: DP4-1-611
Description	For the central control of up to 16 configurable ABB-free@home® functions. For the display of configurable system messages. A configurable primary function can be triggered with a multi-touch gesture. Capacitive touch screen with closed glass surface. With integrated room temperature controller and temperature sensor. In connection with temperature sensor DP4-T-1 the integrated room temperature controller can be fitted with a remote sensor. Suitable as room temperature controller extension unit (up to 8).
Dimensions (H×W×D)	104 mm × 143 mm × 53 mm
Technical data	Display size: 10.9 cm (4.3") Display resolution: 480 × 854 Mounting height: 8 mm Display elements: 1 LCD display Bus voltage: 24 V~ Protection class (Device): IP 30

Installation box, FM	
Article no.	DP4-F
Description	For flush-mounted und hollow-wall installation of the ABB-free@homeTouch 4.3" DP4-1-6XX. Windproof.
82 mm × 123 mm × 50 mm	
Mounting depth: 50 mm	



ABB SmartTouch® 10"

Article no.	white / stainless: ST/U10.1.1-811 black / stainless: ST/U10.1.1-825 white / graphite: ST/U10.2.1-811 black / graphite: ST/U10.2.1-825 white / satin gold: ST/U10.3.1-811 black / satin gold: ST/U10.3.1-825 white / rose gold: ST/U10.4.1-811 black / rose gold: ST/U10.4.1-825
Description	Freely programmable Touch panel featuring a 10-inch IPS screen with 1280*800 resolution that combines smart home automation and door communication in one device for residential applications, hotels, and commercial buildings. ABB SmartTouch® 10" offers home control and monitoring of the ABB-free@home®, or ABB i-bus®KNX system and the fully integrated functions of ABB-Welcome. Control, observe and manage your entire installation on one device: Switching - Dimming - Slider - Blind - RGBW control element - Step switch - Scene switch - Display element - Audio control element - RTC control element - VRV control element and display different values such as energy consumption and production. With scene function, logic functions, presence simulation and time programs. ABB SmartTouch® 10" can also be used as an end device for communication with the ABB-Welcome outdoor stations, and as part of the ABB-Welcome door communication system.
Dimensions (H x W x D)	180.2 mm x 254.6 mm x 17.5 mm
Functions	ABB i-bus®KNX: A total of 450 control elements are displayed on a maximum of 25 pages. ABB-free@home®: Twisted pair connection provides a single dashboard page with a maximum of 18 controls. Alternatively, for additional control, connection via wi-fi delivers the same amount of control and features as the ABB-free@home® Next app. 80 fault and alarm messages 30 logic functions 30 timers Presence simulation for 20 participants 10 scene actuators (in total 100 scenes are possible to store) 3 object RTCs Equipped with a hearing loop for coupling the audio signal into hearing aids A single page can have up to 18 touch surfaces
Technical data	External power supply: 20-32 VDC (SELV) or via the ABB-Welcome system controller. Display size: 25,4 cm (10") Display resolution: 1280*800 Display screen: IPS display Flush or Surface mounted. Can also be mounted on a desktop stand. The flat design slim real metal frame sits almost flush with the wall (14 mm) and is available in 4 colors (stainless steel, graphite, gold and rose gold) and black or white glass.



IP Touch 7"

Article no.	AN +LAN Version-White:
	2TMA130050W0068
	LAN + WIF Version-White:
	2TMA130050W0066
	LAN +LAN Version-Black:
	2TMA130050B0068
	LAN + WIF Version-Black:
	2TMA130050B0066



IP Touch 10"

Article no.	LAN +LAN Version-White:
	2TMA130050W0060
	LAN + WIF Version-White:
	2TMA130050W0058
	LAN +LAN Version-Black:
	2TMA130050B0060
	LAN + WIF Version- Black:
	2TMA130050B0058

Description	IP touch with cyber security boot & storage function. Supporting the systems door communication ABB-Welcome, ABB i-bus® KNX and ABB-free@home®. Connectable via LAN or WiFi, power supply via direct DC or PoE. Can be mounted surface or flush. With integrated room temperature controller and temperature sensor.
	During the conversation a picture of the visitor can be taken and stored in the picture memory. For door calls during absence three pictures of the visitor are automatically stored in the picture memory. Different bell sounds are adjustable for door and floor ringing; five polyphone bell sounds are available. Individual bell sounds (can be integrated via SD card). SD card slot for extension of the picture memory. Equipped with a hearing loop (T-Loop) for coupling the audio signal into hearing aids. Capacitive HD display with glass surface, resolution 7" with 1024 x 600 and 10" with 1280 x 800.
Dimensions (H x W x D)	198.5 mm x 149.6 mm x 36 mm



Sensor/Switch actuator (1 contact)

Article no.	2 Button: SSA-F-1.1.PB.1 4 Button: SSA-F-2.1.PB.1
Description	For switching 230 V~ devices. With 1 integrated switch actuator. Switching function is available pre-configured.
Dimensions (H×W×D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm



Sensor/Switch actuator 2/2gang (2 contacts)

Article no.	4 Button: SSA-F-2.1.PB.1
Description	For switching 230 V~ devices. With 1 integrated switch actuator. Switching function is available pre-configured. Use with ABB-free@home® 4 fold push buttons.
Dimensions (H×W×D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 2× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2 x 1200 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm



Sensor/Dim actuator (1 dimming channel)

Article no.	2 Button: SBA-F-1.1.PB.1 4 Button: SBA-F-2.1.PB.1
Description	For dimming 230 V~ loads. With integrated universal dimming actuator for controlling different lamps. The dimming function is available pre-configured.
Dimensions (H×W×D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 1× dimming channel Suitable for: 230 V incandescent lamps and low-voltage halogen lamps with conventional transformers or electronic transformers Rated power: 10–180 W/VA Suitable for: LEDi and energy-saving bulbs Rated power: 2–80 W/VA Protection class of device: IP 20 Mounting depth: 31.5 mm



Sensor/Blind actuator

Article no.	2 Button: SBA-F-1.1.PB.1 4 Button: SBA-F-2.1.PB.1
Description	For controlling blind and awning motors. With integrated blind actuator. Blind function is available pre-configured.
Dimensions (H×W×D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 1× Change-over contacts/normally open contact, potential-bound Rated power: 920 VA Rated current: 4 A Suitable for: Operating mode blind Protection class of device: IP 20 Mounting depth: 31.5 mm



Room Temperature Controller

Article no. RTC-F-1.PB

Description Room temperature control function for controlling commercially available valve drives or analogue valve drives (continuous controllers). With display of set-value temperature. Only to be used with ABB-free@home® Zenit cover plates for room thermostat.

Dimensions (H × W × D) 44 mm × 44 mm × 29.4 mm

Technical data Display elements: LCD Display showing operation modes Protection class of device: IP 20 Mounting depth: 17.9 mm



Room Temperature Controller

RTC-F-2.1-1.PB-WL

Room temperature control function for controlling commercially available valve drives or analogue valve drives (continuous controllers). With display of set-value temperature. Only to be used with ABB-free@home® Zenit cover plates for room thermostat.

44 mm × 44 mm × 29.4 mm

Display elements: LCD Display showing operation modes Protection class of device: IP 20 Mounting depth: 17.9 mm



Sensor unit 1gang

Article no. 2 button: SU-F-1.0.PB.1
4 button: SU-F-2.0.PB.1

Description For sending switching, dimming and blind commands to an ABB-free@home® actuator.

Dimensions (H × W × D) 44 mm × 44 mm × 23.5 mm

Technical data Control element: Switch contacts top/ bottom Display elements: LED as light for orientation or display of switching state Protection class of device: IP 20 Mounting depth: 14.1 mm



Movement detector + 1 actuator

MSA-F-1.1.PB.1

With select lens for detection with animal access. Including an integrated actuator for switching 230 V~ devices. To be used with ABB-free@home® Zenit cover plates for movement detector.

44 mm × 44 mm × 47 mm

Outputs: 1× normally open contact, potential free
Suitable for: resistive
Rated current: 10 A
Rated power: 2300 W
Suitable for: capacitive
Rated current: 10 AX
Detection range: frontal 6m, lateral 3m
Detection angle: 180°
Brightness limit value: 1 – 500 lux
Protection class of device: IP 20
Mounting depth: 31.5 mm

**Movement detector**

Article no.	MD-F-1.0.PB.1
Description	With select lens for detection with animal access. For automatic switching of ABB-free@home® actuators dependent on movement and brightness. To be used with ABB-free@home® Zenit cover plates for movement detector.
Dimensions (H×W×D)	44 mm × 44 mm × 29.6 mm
Technical data	Detection range: frontal 6 m, lateral 3 m Detection angle: 180° Brightness limit value: 1 – 500 lux Protection class of device: IP 20 Mounting depth: 14.1 mm



wireless



wireless

Sensor/Switch actuator, wireless (1 contact)

2 Button: SSA-F-1.1.PB.1-WL 4 Button: SSA-F-2.1.PB.1-WL	For switching 230 V~ devices. With integrated actuator. Switching function is available pre-configured.
	44 mm × 44 mm × 40.9 mm
	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm



wireless

Sensor/Switch actuator, wireless (2 contact)

Article no.	4 Button: SSA-F-2.2.PB.1-WL
Description	For switching 230 V~ devices. With integrated actuator. Switching function is available pre-configured. To be used with ABB-free@home® Zenit cover plates for 4 fold push buttons.
Dimensions (H×W×D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 2× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2 × 1200 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm



wireless

Sensor/Dim actuator 1/1gang, wireless

2 Button: SSA-F-1.1.PB.1-WL	For dimming 230 V~ loads. With integrated universal dimming actuator for controlling different lamps. The dimming function is available pre-configured. To be used with ABB-free@home® Zenit cover plates for 2 fold push buttons.
	44 mm × 44 mm × 40.9 mm
	Outputs: 1× dimming channel Suitable for: 230 V incandescent lamps and low-voltage halogen lamps with conventional transformers or electronic transformers Rated power: 10–180 W/VA Suitable for: LEDi and energy-saving bulbs Rated power: 2–80 W/VA Protection class of device: IP 20 Mounting depth: 31.5 mm



wireless

Sensor/Dim actuator 2/1gang, wireless

Article no. 4 Button: SDA-F-2.1.PB.1-WL

Description For dimming 230 V~ loads. With integrated universal dimming actuator for controlling different lamps. The dimming function is available pre-configured. To be used with ABB-free@home® Zenit cover plates for 4 fold push buttons.

Dimensions (H×W×D) 44 mm × 44 mm × 40.9 mm

Technical data Outputs: 1× dimming channel
Suitable for: 230 V incandescent lamps and low-voltage halogen lamps with conventional transformers or electronic transformers
Rated power: 10–180 W/VA
Suitable for: LEDi and energy-saving bulbs
Rated power: 2–80 W/VA
Protection class of device: IP 20
Mounting depth: 31.5 mm



wireless



wireless

Sensor/Blind actuator 1/1gang, wireless2 Button: SBA-F-2.1.PB.1-WL
4 Button: SBA-F-1.1.PB.1-WL

For controlling blind and awning motors. With integrated blind actuator. Blind function is available pre-configured. To be used in combination with ABB-free@home® Zenit cover plates for 4 fold push buttons.

44 mm × 44 mm × 40.9 mm

Outputs: 1× Change-over contacts/normally open contact, potential bound
Rated power: 920 VA
Rated current: 4 A
Suitable for: Operating mode blind
Protection class of device: IP 20
Mounting depth: 31.5 mm



wireless

Room Thermostat, wireless

Article no. RTC-F-1.PB-WL

Description Room temperature control function for controlling commercially available valve drives or analogue valve drives (continuous controllers) in connection with HA-M-0.6.1, HA-M-0.12.1, FCA-M-2.3.1. With display of set-value temperature. To be used with ABB-free@home® Zenit cover plates for room temperature controller.

Dimensions (H×W×D) 44 mm × 44 mm × 29.4 mm

Technical data Display elements: LCD Display showing operation modes
Protection class of device: IP 20
Mounting depth: 17.9 mm



wireless

Sensor unit, wireless (4 Button)

4 Button: SU-F-2.0.PB.1-WL

For sending switching, dimming and blind command to an ABB-free@home® actuator. To be used with ABB-free@home® Zenit cover plates for 4 fold push buttons.

44 mm × 44 mm × 23.5 mm

Control element: Switch contacts top/bottom
Display elements: LED for orientation or switch state display
Protection class of device: IP 20
Mounting depth: 14.1 mm



Wireless

Movement detector + 1 actuator, wireless	
Article no.	MSA-F-1.1.1-WL
Description	With select lens for detection with animal access. Including an integrated actuator for switching 230 V~ devices. To be used with ABB-free@home® Zenit cover plates for movement detector.
Dimensions (H×W×D)	44 mm × 44 mm × 47 mm
Technical data	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Detection range: frontal 6 m, lateral 3 m Detection angle: 180° Brightness limit value: 1 – 500 lux Protection class of device: IP 20 Mounting depth: 31.5 mm

01 02 03 04

— 01 Switch actuator.

— 02 Rocker, 2 fold push buttons.

— 03 Frame.

— 04 ABB-free@home® Switch Sensor 1/2gang KNX.

05 06 07 08

— 05 ABB-free@home® 1/2gang switches.

— 06 ABB-free@home® Room temperature controller.

— 07 ABB-free@home® Movement detector.

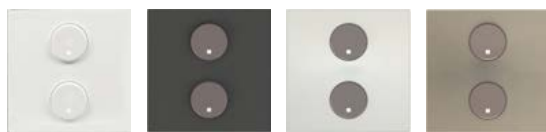
— 08 ABB-free@home® 2/4gang switches.

Colour options for frames and cover plates
Millenium

Colour	Code (c)	Colour	Code (c)
anthracite	AN	matt gold	MG
antique gold	AG	silk black	SB
brushed stainless steel	ST		

Available symbols for push buttons

Symbol	Code (i)	Colour	Code (i)
No symbol		Scene	S
Light	L	Dimmer	D
Blind	B		



	Cover plate for 2 fold push buttons inc. neutral symbols
Article no.	SR-2-N2 c
Description	As cover for ABB-free@home® 1gang switches of Zenit VDE and NEMA ranges.
Dimensions (H × W × D)	44 mm x 44 mm
Colours (c)	AN, BL, CV, PL



	Icon for Zenit Rockers
Article no.	Icons (white): SB i -N2BL Icons (grey): SB i -N2GR
Description	Interchangeable icons for Zenit rockers, available with several icon designs (i) in 2 colors, grey (GR) and white (BL).
Dimensions (H × W × D)	44 mm × 44 mm
Symbols (i)	L, B, S, D



	Cover plate for movement detector
Article no.	CP-MD-N2 c
Description	As cover for ABB-free@home® movement detector of Zenit VDE and NEMA ranges.
Dimensions (H × W × D)	44 mm x 44 mm
Colours (c)	AN, BL, CV, PL



	Cover plate for room temperature controller
Article no.	N2372.1 c
Description	As frame for ABB-free@home® sensors and rockers of Zenit NEMA range
Dimensions (H × W × D)	122 mm × 90 mm
Colours (c)	AN, OX, CV, PZ, PL, BL, CB, CN, WG



	Cover plate for 4 fold push buttons inc. neutral symbols
Article no.	SR-4-N2 c
Description	As cover for ABB-free@home® 2gang switches of Zenit VDE and NEMA ranges.
Dimensions	44 mm x 44 mm
Colours (c)	AN, BL, CV, PL



	Cover plate for room temperature controller
Article no.	CP-RTC-N2 c
Description	As cover for ABB-free@home® room thermostat RTC-F-1.PB.
Dimensions	44 mm x 44 mm
Colours (c)	AN, BL, CV, PL



	Square Frame, VDE
Article no.	N2271 c
Description	As frame for ABB-free@home® sensors and rockers of Zenit VDE range.
Dimensions	90 mm × 90 mm
Colours (c)	AN, OX, BL


Cover plate for 2 fold push buttons incl neutral symbols

Article no.	2 Button: SR-2-AMAN 4 Button: SR-4-AMAN
-------------	--

Description	As cover for ABB-free@home® 1/2gang switches of Millenium Range.
-------------	--

Dimensions (H×W×D)	44 mm×44 mm
-----------------------	-------------


Cover Plate for Movement Detector

Article no.	CP-MD-AMAN
-------------	------------

Description	As cover for ABB-free@home® movement detector of Millenium Range.
-------------	---

Dimensions (H×W×D)	44 mm×44 mm
-----------------------	-------------


Cover Plate for Room Temperature Controller

Article no.	CP-RTC-AMAN
-------------	-------------

Description	As cover for ABB-free@home® room thermostat RTC-F-1.PB.
-------------	---

Dimensions (H×W×D)	44 mm×44 mm
-----------------------	-------------


Square Frame, Millenium

Article no.	AMD5144- c
-------------	-------------------

Description	As frame for ABB-free@home® sensors and rockers of Millenium Range, includes mounting frame: AMD5053.
-------------	---

Dimensions (H×W×D)	86 mm×86 mm
-----------------------	-------------

Colours (c)	AG, MG, SB, ST
----------------------	----------------

Symbols (i)	
----------------------	--


Icon for Millenium Rockers

Article no.	SB i -AMAN
-------------	-------------------

Description	Interchangeable icons for Millenium rockers, available with several icon design options (i) in colour anthracite.
-------------	--

Article no.	AN
-------------	----

Article no.	L, S, D
-------------	---------

**Sensor/Switch actuator (1 contact)**

Article no.	2 Button: SSA-F-1.1.PB.1-WL 4 Button: SSA-F-2.1.PB.1-WL
-------------	--

Description	For switching 230 V~ devices. With 1 integrated switch actuator. Switching function is available pre-configured.
-------------	--

Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
---------------------------	-------------------------

Technical data	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm
----------------	--

**Sensor/Switch actuator 2/2gang**

Article no.	4 Button: SSA-F-2.1.PB.1
-------------	--------------------------

Description	For switching 230 V~ devices. With 1 integrated switch actuator. Switching function is available pre-configured. Use with ABB-free@home® 4 fold push buttons.
-------------	---

Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
---------------------------	-------------------------

Technical data	Outputs: 2× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm
----------------	--

**Sensor/Dim actuator (1 contact)**

Article no.	2 Button: SDA-F-1.1.PB.1 4 Button: SDA-F-2.1.PB.1
-------------	--

Description	For dimming 230 V~ loads. With integrated universal dimming actuator for controlling different lamps. The dimming function is available pre-configured.
-------------	---

Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
---------------------------	-------------------------

Technical data	Outputs: 1× dimming channel Suitable for: 230 V incandescent lamps and low-voltage halogen lamps with conventional transformers or electronic transformers Rated power: 10–180 W/VA Suitable for: LEDi and energy-saving bulbs Rated power: 2–80 W/VA Protection class of device: IP 20 Mounting depth: 31.5 mm
----------------	---

**Sensor/Blind actuator 1/1gang**

Article no.	2 Button: SBA-F-1.1.PB.1
-------------	--------------------------

Description	For controlling blind and awning motors. With integrated blind actuator. Blind function is available pre-configured. To be used with ABB-free@home® 2 fold push buttons.
-------------	--

Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
---------------------------	-------------------------

Technical data	Outputs: 1× Change-over contacts/normally open contact, potential-bound Rated power: 920 VA Rated current: 4 A Suitable for: Operating mode blind Protection class of device: IP 20 Mounting depth: 31.5 mm
----------------	--



Sensor/Blind actuator

Article no.	2 Button: SBA-F-1.1.PB.1 4 Button: SBA-F-2.1.PB.1
-------------	--

Description	For controlling blind and awning motors. With integrated blind actuator. Blind function is available pre-configured.
-------------	--

Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
------------------------	-------------------------

Technical data	Outputs: 1× Change-over contacts/normally open contact, potential-bound Rated power: 920 VA Rated current: 4 A Suitable for: Operating mode blind Protection class of device: IP 20 Mounting depth: 31.5 mm
----------------	--



Room temperature controller

Article no.	RTC-F-1.PB
-------------	------------

Description	Room temperature control function for controlling commercially available valve drives or analogue valve drives (continuous controllers). With display of set-value temperature. Only to be used with ABB-free@home® Zenit cover plates for room thermostat.
-------------	---

Dimensions (H × W × D)	44 mm × 44 mm × 29.4 mm
------------------------	-------------------------

Technical data	Display elements: LCD Display showing operation modes Protection class of device: IP 20 Mounting depth: 17.9 mm
----------------	---



Room temperature controller

Article no.	RTC-F-2.1-1.PB-WL
-------------	-------------------

Description	Room temperature control function for controlling commercially available valve drives or analogue valve drives (continuous controllers). With display of set-value temperature. Only to be used with ABB-free@home® Zenit cover plates for room thermostat.
-------------	---

Dimensions (H × W × D)	44 mm × 44 mm × 29.4 mm
------------------------	-------------------------

Technical data	Display elements: LCD Display showing operation modes Protection class of device: IP 20 Mounting depth: 17.9 mm
----------------	---



Sensor unit

Article no.	2 button: SU-F-1.0.PB.1 4 Button: SU-F-2.0.PB.1
-------------	--

Description	For sending switching, dimming and blind commands to an ABB-free@home® actuator. To be used with ABB-free@home® 4 fold push buttons.
-------------	--

Dimensions (H × W × D)	44 mm × 44 mm × 23.5 mm
------------------------	-------------------------

Technical data	Control element: Switch contacts top/ bottom Display elements: LED as light for orientation or display of switching state Protection class of device: IP 20 Mounting depth: 14.1 mm
----------------	--



Movement detector + 1 actuator	
Article no.	MSA-F-1.1.PB.1
Description	With select lens for detection with animal access. Including an integrated actuator for switching 230 V~ devices. To be used with ABB-free@home® Zenit cover plates for movement detector.
Dimensions (H × W × D)	44 mm × 44 mm × 47 mm
Technical data	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Detection range: frontal 6 m, lateral 3 m Detection angle: 180° Brightness limit value: 1 – 500 lux Protection class of device: IP 20 Mounting depth: 31.5 mm



Movement detector	
Article no.	MD-F-1.0.PB.1
Description	With select lens for detection with animal access. For automatic switching of ABB-free@home® actuators dependent on movement and brightness. To be used with ABB-free@home® Zenit cover plates for movement detector.
Dimensions (H × W × D)	44 mm × 44 mm × 29.6 mm
Technical data	Detection range: frontal 6 m, lateral 3 m Detection angle: 180° Brightness limit value: 1 – 500 lux Protection class of device: IP 20 Mounting depth: 14.1 mm



wireless



wireless

Sensor/Switch actuator 1/1gang, wireless (1 contact)	
Article no.	2 Button: SSA-F-1.1.PB.1-WL 4 Button: SSA-F-2.1.PB.1-WL
Description	For switching 230 V~ devices. With integrated actuator. Switching function is available pre-configured.
Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm



wireless

Sensor/Switch actuator 2/2gang, wireless	
Article no.	4 Button: SSA-F-2.2.PB.1-WL
Description	For switching 230 V~ devices. With integrated actuator. Switching function is available pre-configured. To be used with ABB-free@home® Zenit cover plates for 4 fold push buttons.
Dimensions (H × W × D)	44 mm × 44 mm × 40.9 mm
Technical data	Outputs: 2× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2 x 1200 W Suitable for: capacitive Rated current: 10 AX Protection class of device: IP 20 Mounting depth: 31.5 mm



wireless

Sensor/Dim actuator 1/1gang, wireless

Article no. 2 Button: SDA-F-1.1.PB.1-WL

Description For dimming 230 V~ loads. With integrated universal dimming actuator for controlling different lamps. The dimming function is available pre-configured. To be used with ABB-free@home® Zenit cover plates for 2 fold push buttons.

Dimensions (H × W × D) 44 mm × 44 mm × 40.9 mm

Technical data Outputs: 1× dimming channel
Suitable for: 230 V incandescent lamps and low-voltage halogen lamps with conventional transformers or electronic transformers
Rated power: 10–180 W/VA
Suitable for: LEDi and energy-saving bulbs
Rated power: 2–80 W/VA
Protection class of device: IP 20
Mounting depth: 31.5 mm



wireless

Sensor/Dim actuator 2/1gang, wireless

SDA-F-2.1.PB.1-WL

For dimming 230 V~ loads. With integrated universal dimming actuator for controlling different lamps. The dimming function is available pre-configured. To be used with ABB-free@home® Zenit cover plates for 4 fold push buttons.

44 mm × 44 mm × 40.9 mm

Outputs: 1× dimming channel
Suitable for: 230 V incandescent lamps and low-voltage halogen lamps with conventional transformers or electronic transformers
Rated power: 10–180 W/VA
Suitable for: LEDi and energy-saving bulbs
Rated power: 2–80 W/VA
Protection class of device: IP 20
Mounting depth: 31.5 mm



wireless



wireless

Sensor/Blind actuator, wireless (1 contact)Article no. 2 Button: SBA-F-1.1.PB.1-WL
2 Button: SBA-F-2.1.PB.1-WL

Description For controlling blind and awning motors. With integrated blind actuator. Blind function is available pre-configured.

Dimensions (H × W × D) 44 mm × 44 mm × 40.9 mm

Technical data Outputs: 1× Change-over contacts/normally open contact,potential-bound
Rated power: 920 VA
Rated current: 4 A
Suitable for: Operating mode blind
Protection class of device: IP 20
Mounting depth: 31.5 mm



wireless

Room Thermostat, wireless

RTC-F-1.PB-WL

Room temperature control function for controlling commercially available valve drives or analogue valve drives (continuous controllers) in connection with HA-M-0.6.1, HA-M-0.12.1, FCA-M-2.3.1. With display of set-value temperature. To be used with ABB-free@home® Zenit covers.

44 mm × 44 mm × 29.4 mm

Display elements: LCD Display showing operation modes
Protection class of device: IP 20
Mounting depth: 17.9 mm



wireless



wireless



wireless

Sensor unit, wireless		Movement detector + 1 actuator, wireless	
Article no.	2 Button: SU-F-1.0.PB.1-WL 4 Button: SU-F-2.0.PB.1-WL	MSA-F-1.1.1-WL	
Description	For sending switching, dimming and blind command to an ABB-free@home® actuator.	With select lens for detection with animal access. Including an integrated actuator for switching 230 V~ devices. To be used with ABB-free@home® Zenit cover plates for movement detector.	
Dimensions (H×W×D)	44 mm×44 mm×23.5 mm	44 mm×44 mm×47 mm	
Technical data	Control element: Switch contacts top/bottom Display elements: LED for orientation or switch state display Protection class of device: IP 20 Mounting depth: 14.1 mm	Outputs: 1× normally open contact, potential free Suitable for: resistive Rated current: 10 A Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Detection range: frontal 6 m, lateral 3 m Detection angle: 180° Brightness limit value: 1 – 500 lux Protection class of device: IP 20 Mounting depth: 31.5 mm	

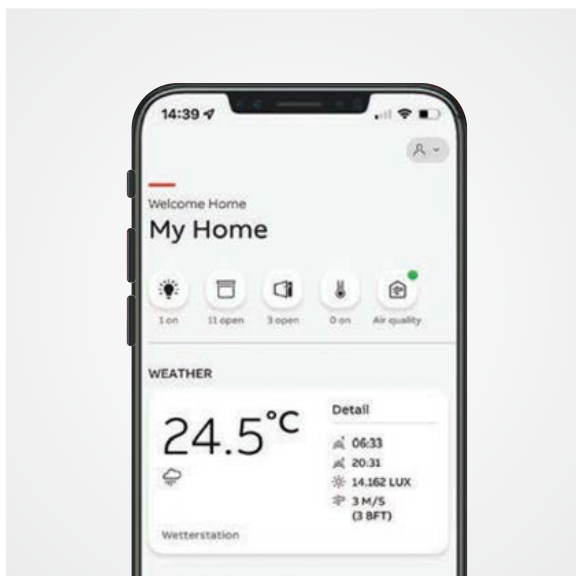


ABB-free@home® | ABB Tenton®

Measure, monitor, and control the air quality in your home.

With ABB-free@home®, you have all you need to make your home secure and comfortable, all via one simple system.

Nowadays, we are more aware of the importance of maintaining good health and general well-being, as well as reducing pollutants and promoting sustainability. That's why we've introduced ABB Tenton® for ABB-free@home®. Working seamlessly with ABB-free@home® ecosystem, it ensures your home's overall air quality will be as you want it to be at all times – giving you even more control and peace of mind.

Measurement and control across four key areas

The unique ABB Tenton® Indoor Air Quality (IAQ) system gives you the comprehensive information you need:

- **Temperature** – measure and control the temperature so it's always just right
- **Humidity** – measure humidity levels for a healthy living environment.
- **Carbon dioxide** – monitor CO₂ levels for safety and overall comfort
- **Volatile organic compounds (VOC)** – check pollutant levels to ensure well-being

In each case, you'll have all the data at your fingertips – and you'll be automatically notified if any of these elements exceeds the set level or designated air quality. You'll then be able to adjust heating, air conditioning, and ventilation as required.

How it works

- Sensors capture Information and summarise it into an easy-to-understand air quality index, displayed on the unit.
- If levels exceed set thresholds, then you're sent notifications automatically.
- Everything is viewable and adjustable on the device or via your ABB-free@home® app.
- Individually monitor levels in rooms throughout your home, wherever you are.
- Integrate seamlessly with ABB-free@home® functions, so you can operate lighting, heating, aircon, blinds, and more.

How to get started

- It's simple to set up – a professional electrician can install everything, with no need for special installers or system integrators.
- The clean, elegant design has flexible options for flush or surface mounting, and comes in a choice of colors to match your interior.
- You can also customize the function and control elements, using our online labeling tool to display text and symbols in the ways you want.



SECTION 2

**Control unit**

Article no.	8 button: SB-F-8.0.1-84 12 Button: SB-F-12.0.1-84
-------------	--

Technical data	Inputs: 4 Polling voltage: 20 V~ Protection type of device: IP 20
----------------	---

Colours	White Matt, Silver, Black, White
---------	----------------------------------

**Control unit with temperature control**

Article no.	6 button: SBR-F-6.0.1-84 8 button: SBR-F-10.0.1-84
-------------	---

Technical data	Inputs: 4 Polling voltage: 20 V~ Protection type of device: IP 20
----------------	---

Colours	White Matt, Silver, Black, White
---------	----------------------------------

Control unit with temperature control and air quality

Article no.	6 Button: SBC-F-6.0.1-84 8 Button: SBC-F-10.0.1-84
-------------	---

Technical data	Inputs: 4 Polling voltage: 20 V~ Protection type of device: IP 20
----------------	---

Colours	White Matt, Silver, Black, White
---------	----------------------------------



Fan coil actuator, MDRC

Article no.	FCA-M-2.3.1
Description	For controlling blower convectors. Supports 2-pipe and 4-pipe system for heating and cooling. The fan speed levels can be switched using a changeover or step switch function. Three contacts for switching a three-stage fan. Two contacts for activating the heating and cooling valves. With two binary inputs for connecting dewpoint and condensation contacts. The scanning voltage is provided by the device. The bus connection is provided via the enclosed bus terminal.
Dimensions (H × W × D)	90 mm × 108 mm × 64 mm
Technical data	Supports 24 V and 230 V valves Outputs: 3x Normally open contact, potential free Suitable for: AC3 Rated current: 6 A Output voltage: 230 V~ Protection type of device: IP 20 Module width: 6 MW



Power supply

Article no.	PS-M-64.1.1
Description	Power supply with integrated choke. Fast diagnosis due to LED display for operational readiness and errors.
Dimensions (H × W × D)	90 mm × 72 mm × 64 mm
Technical data	Display element: operating/overload LED Nominal voltage: 230 V~, +10%/-15% Secondary: 30 V, +2 V/-2 V Rated frequency: 50 Hz/60 Hz Outputs: 1 Nominal current: 640 mA Protection type of device: IP 20 Module width: 4 MW



Binary input 4gang

Article no.	BI-M-4.0.1
Description	Records 10 to 230 V AC/DC signals via 4 channels. The information of the signal evaluation can be used for activating ABB-free@home® actuators or for recording status information.
Dimensions (H × W × D)	90 mm × 36 mm × 64 mm
Technical data	Inputs: 4 Protection type of device: IP 20 Module width: 2 MW



Switch Actuator, 4-fold, 16 A, MDRC

Article no.	SA-M-4.16.2.2
Description	For switching 4 independent 127 V~/230 V~ loads. Each contact has a manual operation function independent of auxiliary voltage for additionally displaying the contact setting. The bus can be connected via enclosed terminal block.
Dimensions (H × W × D)	90 mm × 70 mm × 63.5 mm
Technical data	Outputs: 4 Maximum switching current: 16A Maximum switching power: 2500 W Mounting type: DIN rail Number of inputs: Analog (0 ... 10 V / 4 ... 20 mA) Analog, 0 No unit Number of LEDs: 1 Rated current: 16 A Output voltage: 230 V AC Protection class (Device): IP20 Module width: 4 MW

**Switch Actuator, 8-fold 16 A, MDRC**

Article no. SA-M-8.16.2.2

Description For switching 8 independent 127 V~/230 V~ loads. Each contact has a manual operation function independent of auxiliary voltage for additionally displaying the contact setting. The bus can be connected via enclosed terminal block.

Dimensions (H × W × D) 90 mm × 140 mm × 63.5 mm

Technical data Outputs: 8
Maximum switching current: 16A
Maximum switching power: 2500 W
Mounting type: DIN rail
Number of inputs: Analog (0 ... 10 V / 4 ... 20 mA)
Analog, 0 No unit
Number of LEDs: 1
Rated current: 16 A
Output voltage: 230 V AC
Protection class (Device): IP20
Module width: 8 MW

**Switch Actuator, 12-fold 16 A, MDRC**

Article no. SA-M-12.16.2.2

For switching 12 independent 127 V~/230 V~ loads. Each contact has a manual operation function independent of auxiliary voltage for additionally displaying the contact setting. The bus can be connected via enclosed terminal block.

90 mm × 210 mm × 63.5 mm

Outputs: 12
Maximum switching current: 16A
Maximum switching power: 2500 W
Mounting type: DIN rail
Number of inputs: Analog (0 ... 10 V / 4 ... 20 mA)
Analog 0 No unit
Number of LEDs: 1
Rated current: 16 A
Output voltage: 230 V AC
Protection class (Device): IP20
Module width: 12 MW

**Switch actuator 8gang**

Article no. SA-M-8.8.1

Description The binary inputs can be used as an interface for convenient operation of ABB-free@home® systems via potential free push buttons or for reading technical binary signals. The switching outputs can be switched independently as a function of other sensors connected to the bus.

Dimensions (H × W × D) 90 mm × 144 mm × 64 mm

Technical data Inputs: 8
Polling voltage: 32 V
Max. cable length: ≤ 100m
Outputs: 8
Suitable for: AC1
Rated current: 6 A, at cos φ 0.8
Output voltage: 230 V~
Suitable for: AC3
Rated current: 6 A, at cos φ 0.45
Protection class of device: IP 20
Module width: 8 MW

**Blind Actuator, 4-fold, 230 V, MDRC**

Article no. BA-M-4.230.1.1

Description For controlling 4 independent blind or roller shutter drives. The outputs are inversely blocked. The bus can be connected via enclosed terminal block

Dimensions (H×W×D) 90 mm × 70 mm × 63.5 mm

Technical data Outputs: 4
Maximum switching current: 6A
Maximum switching power: 1200 W
Mounting type: DIN rail
Number of inputs; Analog (0 ... 10 V / 4 ... 20 mA)
Analog 0 No unit
Number of LEDs: 1
Rated current: 6 A
Output voltage: 230 V AC
Protection class (Device): IP20
Module width: 4 MW

**Blind Actuator, 8-fold 230 V, MDRC**

Article no. BA-M-8.230.1.1

For controlling 8 independent blind or roller shutter drives. The bus can be connected via enclosed terminal block.

90 mm × 140 mm × 63.5 mm

Outputs: 8
Maximum switching current: 6A
Maximum switching power: 1200 W
Mounting type: DIN rail
Number of inputs; Analog (0 ... 10 V / 4 ... 20 mA)
Analog 0 No unit
Number of LEDs: 1
Rated current: 6 A
Output voltage: 230 V AC
Protection class (Device): IP20
Module width: 8 MW

**Dimming actuator, 4gang**

Article no. DA/M.4.210.2.1

Description Multichannel universal dimming actuator optimised for dimming retrofit LED lamps (LEDi). Also suitable for dimming incandescent lamps, low-voltage halogen lights with conventional or electronic transformers, 230 V halogen lamps and dimmable energy-saving halogen lamps. Automatic load detection (can be deactivated). Separate N-connection per channel. Parallel connection of the outputs possible to increase the output power. Outputs can be connected in parallel in any configuration. Minimum load: 2 W.

Dimensions (H×W×D) 90 mm × 108 mm × 64 mm

Technical data Rated voltage: 110 - 230 V~, +10 % / -10 %
Rated frequency: 50 Hz - 60 Hz
Outputs: 4x dimming channel
Rated power: 2 - 210 W/VA
Protection class (Device): IP 20
Temperature range (Device): -5 °C to 45 °C
Mounting depth: 68 mm
Module width: 6 MW

**Dimming actuator, 6gang**

Article no. DA/M.6.210.2.1

Multichannel universal dimming actuator optimised for dimming retrofit LED lamps (LEDi). Also suitable for dimming incandescent lamps, low-voltage halogen lights with conventional or electronic transformers, 230 V halogen lamps and dimmable energy-saving halogen lamps. Automatic load detection (can be deactivated). Separate N-connection per channel. Parallel connection of the outputs possible to increase the output power. Outputs can be connected in parallel in any configuration. Minimum load: 2 W.

90 mm × 144 mm × 64 mm

Rated voltage: 110 - 230 V~, +10 % / -10 %
Rated frequency: 50 Hz - 60 Hz
Outputs: 6x dimming channel
Rated power: 2 - 210 W/VA
Protection class (Device): IP 20
Temperature range (Device): -5 °C to 45 °C
Mounting depth: 68 mm
Module width: 8 MW

**DALI Gateway, MDRC**

Article no.	HA-M-0.12.1
Description	The device is used to interface between DALI and ABB-free@home® installations and incorporates the DALI power supply. One DALI output for up to 16 DALI Slaves.
Dimensions (H×W×D)	90 mm × 72 mm × 64 mm
Technical data	Bus voltage: 24 V Rated voltage: 100 – 240 V~ Rated frequency: 50 Hz, 60 Hz DALI outputs: 1 Protection class (device): IP 20

**Dimming actuator, 4gang, 315W**

DA/M.4.315.2.1
Multichannel universal dimming actuator optimised for dimming retrofit LED lamps (LEDi). Also suitable for dimming incandescent lamps, low-voltage halogen lights with conventional or electronic transformers, 230 V halogen lamps and dimmable energy-saving halogen lamps. Automatic load detection (can be deactivated). Separate N-connection per channel. Parallel connection of the outputs possible to increase the output power. Outputs can be connected in parallel in groups. Minimum load: 2 W.
90 mm × 144 mm × 182 mm
Bus voltage: 24 V Rated voltage: 230 V~ Rated frequency: 50 Hz / 60 Hz Outputs: 4 dimming channel Rated output: 10 - 315 W/VA Rated output: 2 - 80 W/VA Protection class (device): IP 20 Temperature range (device): -5 °C - 45 °C Storage temperature range: -20 °C - 70 °C Module width: 8 Division units: 8

**Heating actuator 12gang**

Article no.	HA-M-0.12.1
Description	For controlling thermoelectric actuating drives in heating/cooling systems. The outputs are protected against short-circuit and overload.
Dimensions (H×W×D)	90mm × 144 mm × 64 mm
Technical data	Outputs: 12 Type of load: resistive Nominal current: 160 mA Protection type of device: IP 20 Module width: 8 MW

**Heating actuator 6gang**

HA-M-0.6.1
For controlling thermoelectric actuating drives in heating/cooling systems. The outputs are protected against short-circuit and overload.
90 mm × 72 mm × 64 mm
Outputs: 6 Type of load: resistive Nominal current: 160 mA Protection type of device: IP 20 Module width: 4 MW



Weather station		USB Interface, MDRC	
Article no.	WS-1	USB-M-1.1	
Description	For recording and transmitting of brightness, temperature, wind speed and rain. Weather data can be linked with actuators to automatically control functions. Weather data can be visualized in the ABB-free@home® web interface and the ABB-free@home® app. Wind speed measuring range 2 - 30 m/s. The bus can be connected via enclosed terminal block.	USB Interface for the creation of a central twisted pair line in multi-dwelling applications, e.g. a Central Weather Station in an apartment building.	
Dimensions (H × W × D)	108 mm × 121 mm × 227 mm	90 mm × 36 mm × 64.5 mm	
Technical data	Rated voltage: 110 V~ - 230 V~ Rated frequency: 50 Hz - 60 Hz Bus voltage: 24 V~ Inputs: 4 Protection class (Device): IP 44 Temperature range (Device): -20 °C to 55 °C Brightness limit value: 1 Lux - 100000 Lux	Supply voltage: 5 V DC via USB Type B connector Bus voltage: 24 V (bus connection terminal) Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Module width: 2 MW	



Movement detector + 1 actuator, wireless	
Article no.	MSA-F-1.1.1- C -WL
Description	With select lens for detection with animal access. Communication with the ABB-free@home® system is carried out wireless. For automatic switching of ABB-free@home® actuators dependent on movement and brightness. Switch- off delay of the actuator can be programmed via the web interface of the System Access Point. For switching 127 V~/230 V~ consumers.
Dimensions (H × W × D)	71 mm × 71 mm × 53 mm
Technical data	Outputs: 1x Normally open contact, potential free Suitable for: ohmic Rated current: 10 A Output voltage: 230 V~ Rated power: 2300 W Suitable for: capacitive Rated current: 10 AX Rated power: 2300 VA Suitable for: inductive Rated current: 10 AX Rated power: 2300 VA Detection range: frontal: 6 m, lateral: 3 m Detection angle: 180 ° Brightness limit value: 1 Lux - 500 Lux Mounting height: 1.1 m - 1.3 m Protection class of device: IP 20 Mounting depth: 32 mm Position for installation: vertical
(c)	81, 82, 83, 84, 803, 840, 866, 884, 885

**External Antenna**

Article no. SAP-1-WL

Description To be used in combination with System Access Point SAP-S-2 and SAP/S.3. Transmits the wireless signal outside, in case the internal antenna of the System Access Point is shielded. With magnetic foot.

Dimensions (H × W × D) cable lengths: 1.5 m

Technical data**Basic ABB-free@home® radiator thermostat, wireless**

HA-S-1-WL

For temperature regulation of water-bearing heaters. With integrated temperature sensor, controller and actuating drive. Local operation for the switchover between comfort mode and Off. No wire laying required. Communication with the ABB-free@home® system is carried out wireless. Setpoint adjustment via the ABB-free@home® app or a ABB-free@home® extension unit. Integrated "Window open" detection or can be linked with WBI-S-X-W.

63 mm × 48 mm × 84 mm

With lime protection function.
With frost protection function.
Noiseless running.
Installation with sleeve nut M 30 x 1.5
Fits many popular valve bases (e.g. Braukmann, Heimeier, Honeywell, Junkers, MNG).
The adapters for Danfoss RAV, Danfoss RA and Danfoss RAVL are included in the scope of supply.
Adapters for additional valves are available as accessories.
Battery included in scope supply.
Battery type: 2 x AA
Protection class (Device): IP 20

**Valve adapter Herz**

Article no. AC-HA-1

Description Metal adapter for installation radiator thermostat. (HA-S-X-WL). For valve bodies Herz M 28 x 1,5.

**Valve adapter Comap**

AC-HA-2

Metal adapter for installation radiator thermostat. (6256/X-WL). For valve bodies Comap M 28 x 1,5.



Valve adapter Herz

Article no.	AC-HA-3
Description	Metal adapter for installation radiator thermostat. (HA-S-X-WL). For valve bodies Orkli M 28 x 1,0.



wireless

ABB-free@home® window sensor, wireless

Article no.	studio white matt: WBI-S-1-64-WL basalt black: WBI-S-1-65-WL stainless steel: WBI-S-1-66-WL
Description	For monitoring and transmission of the current window handle position (window open, closed, tilted). The status can be visualised on the ABB-free@home® panel and in the ABB-free@home® app. The window sensor is installed between the available window handle and the window frame. Existing window handle is used. Suitable for window handle: 7 mm square fastener, 43 mm attachment screw separation, lifter dia. 10 and 12 mm, max. mounting plate size 34 x 77 mm (WxH). No wire laying required. Mounting accessories (square extension, screws, adapter for cams) for the window sensor are included in scope of delivery.
Dimensions (H x W x D)	168 mm x 38 mm x 13 mm
Technical data	Battery included in scope supply. Battery type: CR2 Notification in case of low battery capacity in the ABB-free@home® app. Protection class (Device): IP 43



wireless

ABB-free@home® universal detector, wireless

Article no.	studio white matt: BI-S-1-64-WL basalt black: BI-S-1-65-WL
Description	For monitoring and transmission of the state (open, closed) of dormer windows, skylights, doors and gates. Additional connection option for an external, potential-free sensor (choice of normally closed or normally open contact). The status can be visualized on the ABB-free@home® panel and in the ABB-free@home® app. Isolated evaluation and monitoring of channels. The universal detector and the magnets are fixed with adhesive film or screws. Accessories (adhesive foil, screws, magnet) included in delivery.
Dimensions (H x W x D)	118 mm x 30 mm x 22 mm
Technical data	Battery type: CR2 Notification in case of low battery capacity in the ABB-free@home® app. External sensor max. wire length: 5 m External sensor terminal connection diameter: 0.14...0.5 mm² (single wire) Protection class (Device): IP 43



Binary input 2gang

Article no. BI-F-2.0.1

Description Conventional push-buttons or auxiliary contacts can be connected to 2 channels. The information of the contact enquiry can be used for activating ABB-free@home® actuators or for recording status information. The contact polling voltage is made available from the binary input itself. Extension of the connecting cables possible by a maximum of 10 m. Flush-mounted device for installation in a 60 mm device box or distribution box.

Dimensions (H × W × D) 39 mm × 40 mm × 12 mm

Technical data Inputs: 2
Polling voltage: 20 V–
Protection type of device: IP 20



Binary input 4gang

BI-F-4.0.1

Conventional push-buttons or auxiliary contacts can be connected to 4 channels. The information of the contact enquiry can be used for activating ABB-free@home® actuators or for recording status information. The contact polling voltage is made available from the binary input itself. Extension of the connecting cables possible by a maximum of 10 m. Flush-mounted device for installation in a 60 mm device box or distribution box.

39 mm × 40 mm × 12 mm

Inputs: 4
Polling voltage: 20 V–
Protection type of device: IP 20



Split Unit Gateway, FM

Article no. SUG-F-1.1

Description The device is used to interface between the ABB-free@home® system and many manufacturers' air conditioners, so-called split units. The device converts the ABB-free@home® telegrams into infrared commands and transmits them to the split unit. The transmitter of the supplied cable is bonded directly onto the split unit's receiver. The split unit then no longer receives the commands from a remote control. Instead, it can be operated via any ABB-free@home® sensors. The model of the split unit can be selected during commissioning. Auxiliary voltage is not required.

Dimensions (H × W × D) 39 mm × 40 mm × 12 mm

Technical data Outputs: 1
Bus voltage: 24 V
Protection class (device): IP 20

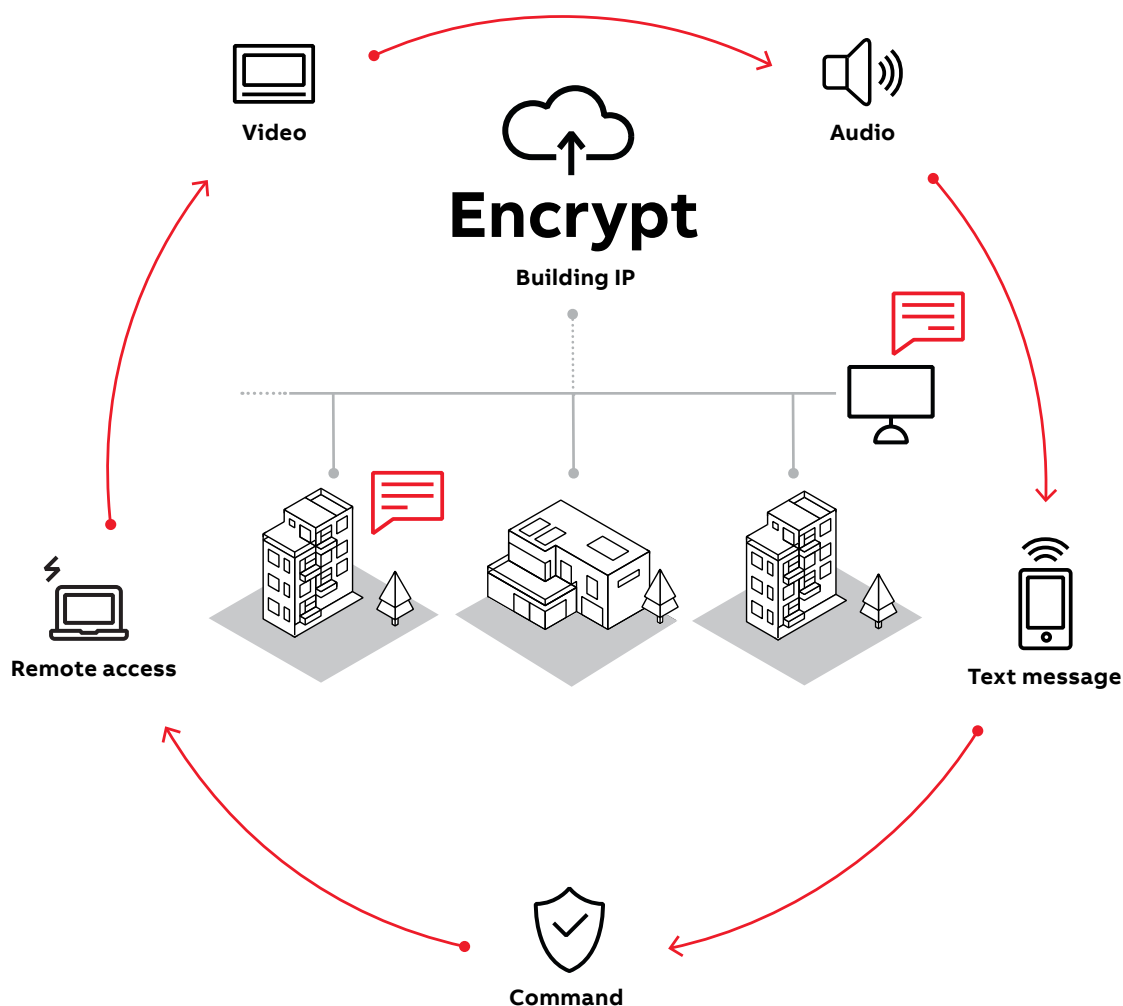
ABB IP Door Entry Systems

Systems fully connected

Door communication, access control and home & building automation. ABB offers a complete range of smart products with all possibilities at your fingertips.

Fully connected

- Easily expandable system
- One programming software for all types of building
- Supports multiple outdoor call stations
- Indoor touch panels to see/speak and answer
- Free App control available for all platforms



Customisable or prebuilt outdoor call stations



Display
IC/DC module



Keypad
module



Round 1
pushbutton



Round 1 pushbutton
with card reader



Round 2
pushbutton



Round 2 pushbutton
with card reader



Round 3
pushbutton



Round 3 pushbutton
with card reader



Bar 3 row
pushbutton



Bar 4 row
pushbutton



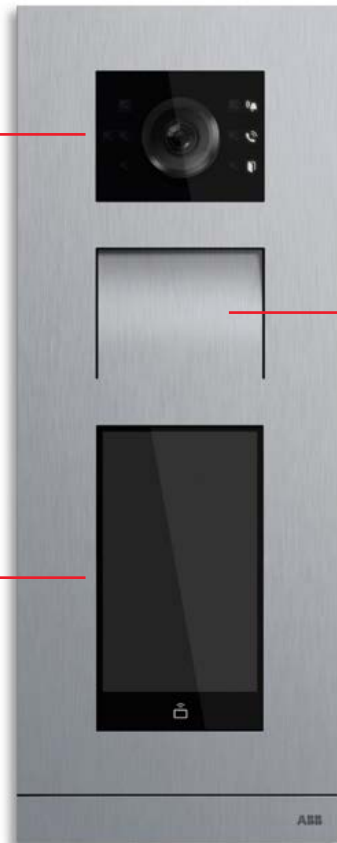
HD video
streaming (720P)
with 130° angle



Audio module



Intuitive operable
touchscreen
& virtual keypad
integrated



01 **Video Keypad**
outdoor station,
stainless steel

02 **Video** outdoor
station, touch 5",
stainless steel

03 **Video pushbutton**
outdoor station,
stainless steel

04 **Mini** outdoor station,
aluminium alloy

05 **2nd confirmed**
outdoor station,
aluminium alloy



01



02



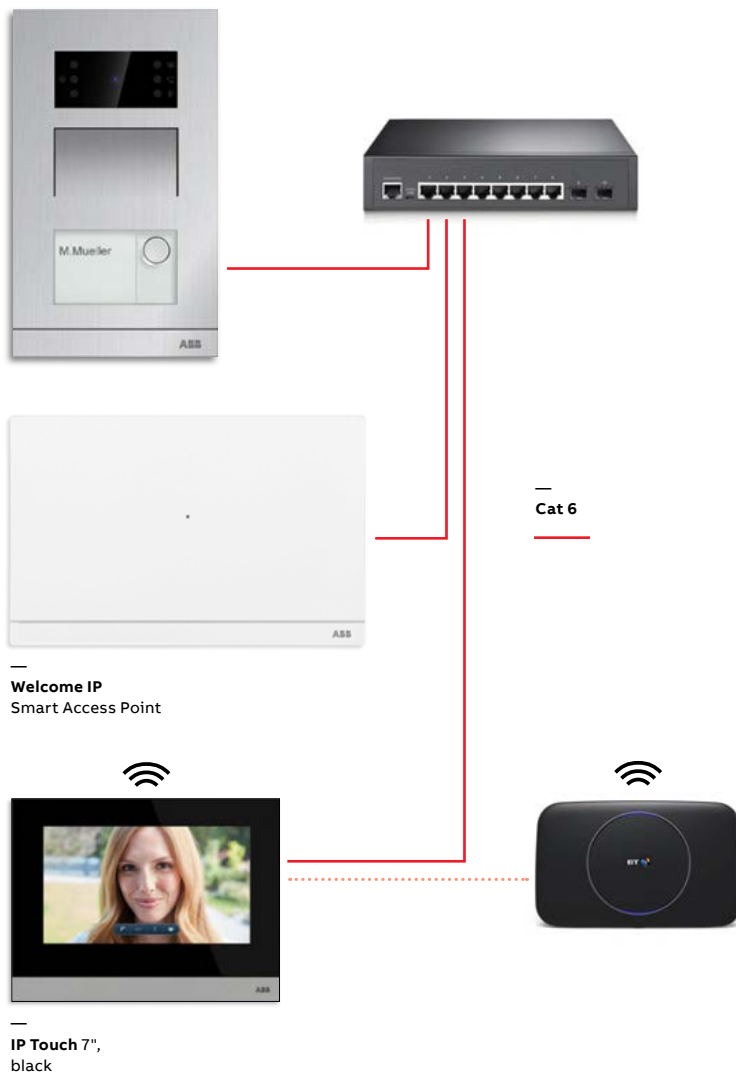
03



04



05



One topology to suit all types of building

Answer door calls away from home

Bring the door communication of your ABB Welcome IP system to your iOS or Android smart phone. Don't miss any visitor on your door anymore. With the ABB Welcome IP App all the calls from your outdoor station will be redirected to your smartphone or tablet.

Example bill of materials

1. Outdoor Station (Aluminium finish) - 1-Call button (2TMA130010A0009)
2. Smart Access Point (2TMA400260W0008)
3. 7" Touch Screen (White) - LAN/LAN Communication (2TMA130050W0065)

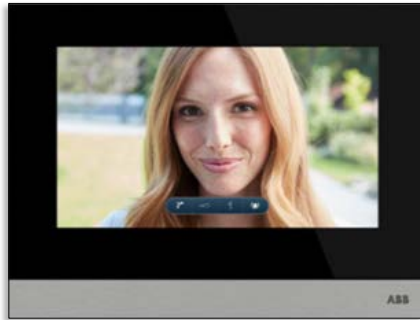
Control your lighting / heating / blinds and your door entry in one system

- Communicates directly to ABB's home automation system
- Communicates directly to ABB's commercial building automation system
- Can operate as a standalone system

Touch screens to act as the central control



Touch screen control



22mm for 7"



With high resolution display

- Intuitive GUI on sliding screen
- Selection of installation box options* ensure easy installation on all kinds of walls
- Induction loop for hearing aid
- Only 7.8 mm depth when flush mounted
- Both LAN and Wi-Fi version to connect to home network

*Available in 7" and 10" version in black or white finish.

01

01 IP Touch 7", white





For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Terra AC wallbox

To serve a growing market

Reducing cost of EVs

EVs will be cheaper than internal combustion engine (ICE) alternatives by the mid-to-late 2020s **in almost every market**



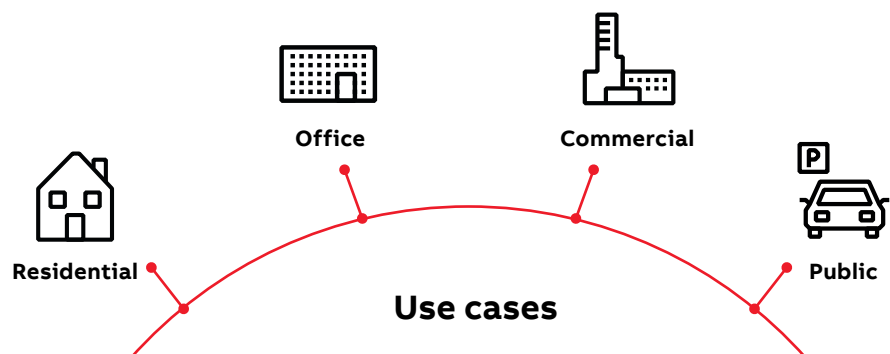
Passenger EV sales

Passenger EV sales will rise to **28 million** in **2030** and **56 million** by **2040**

Global EV sales

Electric vehicles will represent **57% of global** passenger **car sales** by **2040**

Terra AC wallbox provides tailored, intelligent and networked charging solutions for any business, home or location.



At home

From private homes to multi-tenant homes and residential communities

At work

From small offices to large offices, business parks and complexes

Commercial locations

From hotels to sports institutions and shopping centres

While parking

While on the street or in a car park

Smarter charging

IEC portfolio

AC charger for electric vehicles, type 2

Power supply network: 230 V single phase and 400 V three phase, 50/60 Hz

	Rated power (kW)	Max.	Socket outlet or connector type	Other features	Type	Order code	Weight Pkg (1pce) (kg)
Single phase							
	7.4	32	Socket with shutter, type 2	RFID	Terra AC W7-S-R-O	ABB6AGC101252	3
			Socket with shutter, type 2	RFID, 4G	Terra AC W7-S-R-C-O	ABB6AGC105906	3
			Cable 5 m, type 2	RFID	Terra AC W7-G5-R-O	ABB6AGC082155	5
			Cable 5 m, type 2	RFID, 4G	Terra AC W7-G5-R-C-O	ABB6AGC085385	6.5
Single phase with display and MID certification							
			Socket with shutter, type 2	RFID, 4G, daisy-chain ethernet	Terra AC W7-S-RD-MC-O	ABB6AGC101191	3
			Cable 5 m, type 2	RFID, 4G, daisy-chain ethernet	Terra AC W7-G5-RD-MC-O	ABB6AGC085386	6.5
Three phase							
	22	32	Socket with shutter, type 2	RFID	Terra AC W22-S-R-O	ABB6AGC082589	3
			Socket with shutter, type 2	RFID, 4G	Terra AC W22-S-R-C-O	ABB6AGC082154	3
			Cable 5 m, type 2	RFID, 4G	Terra AC W22-G5-R-C-O	ABB6AGC082157	6.5
			Cable 5 m, type 2	RFID	Terra AC W22-G5-R-O	ABB6AGC082158	6.5
Three phase with display and MID certification							
	22	32	Socket with shutter, type 2	RFID, 4G, daisy-chain ethernet	Terra AC W22-S-RD-MC-O	ABB6AGC081282	3
			Cable 5 m, type 2	RFID, 4G, daisy-chain ethernet	Terra AC W22-G5-RD-MC-O	ABB6AGC081285	6.5

Terra AC wallbox - Accessories

Description	Current (A)	Type	Order Code	Weight Pkg (1pce) (kg)
Pedestal				
For floor standing installation				
Metal pedestal for 1 charger, free-standing	–	TAC pedestal single	ABB6AGC085345	9.12
Metal pedestal for 2 chargers, back to back free-standing	–	TAC pedestal back to back	ABB6AGC085684	11
RFID card (MIFARE)				
RFID cards with ABB logo, pack of 5	–	SER-abbRFIDtags	ABB6AGC082175	0.07
RFID cards, blank, pack of 5	–	SER-blankRFIDtags	ABB6AGC082176	0.07
Charge cables				
Length: 7 m				
Cables with 2 connectors of same or different types				
Single phase				
Type 2 to type 2	32	TAC-cable T2-T2 7m1P32A	ABB6AGC082535	2.95
Type 2 to type 1	32	TAC-cable T2-T1 7m1P32A	ABB6AGC082539	3.77
Three phase				
Type 2 to type 2	32	TAC-cable T2-T2 7m3P32A	ABB6AGC082537	4.18

Terra AC wallbox

Technical specification

Terra AC wallbox - Technical specification

Product information	
Charging type	Mode 3 charging, level 2
Input/output power rating and current	IEC ratings: Single phase up to 7.4 kW / 32 A Three phase up to 22 kW / 32 A
	UL ratings up to 7.7 kW / 32 A
Input/output voltage	Single phase: 110 ... 240 V Three phase: 380 ... 415 V, 50 / 60 Hz
Network type	TT, TN
Socket outlet or connector type	Type 2 socket with or without shutter Type 1 or type 2 cable. Cable can be wrapped around the charger
Protection	Overcurrent, overvoltage, undervoltage, ground fault including DC residual current protection, integrated surge protection
Overvoltage category	III
Energy metering	Revenue grade energy meter Class B (+/- 1%) , MID certification on display variants only
Mobile communication with nano SIM socket	EU: GSM, 4G, LTE, WCDMA US: 4G, LTE, WCDMA
Available configurable contacts	1 input, 1 output
User Interface	
Connectivity	Wifi, Ethernet (RJ45), Bluetooth, RS485, 4G / 3G
User authentication	ABB RFID card (1 included) or ChargerSync™ app and portal
User interface	TerraConfig app or portal for setup, ChargerSync™ app or portal for use
Communication protocols	OCPP 1.6 and RS485 for energy meter connection
Status indication	5 LED's
Configuration	
Software update	OCPP 1.6, ABB web portal or App
Control and configuration	ABB web portal or App
General characteristics	
IP and IK rating	IP54, IK10 (IK8+ for operating temperature from -35 to -30 °C)
NEMA enclosure type	NEMA 3
Operating altitude	2000 m
Operating temperature range	-35...+50 °C (derating may apply)
Storage temperature range	-40...+80 °C
Mounting	Wall or floor using a pedestal
Dimensions	H x W x D 320 x 195 x 110 mm
	H x W x D 12.60 x 7.68 x 4.33 inches
Certification and standards	
Safety standards	IEC/EN 61851-1, EN 62311, EN 62479, IEC/EN 62955 TuV listed conforming to UL 2594, UL 2231-1, UL 2231-2, UL 1998, CSA C22.2. NO.280
Codes and standards	IEC 61851-21-2, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12 CE RED- WLAN / RFID / E-UTRA: EN 300 328 V2.1.1, EN 300 330 V2.1.1, EN 301 908-1 V11.1.2, EN 301 908-13 EN 50470-1, EN 50470-3 FCC Part 15 Class B ENERGY STAR
Certification	CE, CB, MID, UL
Warranty	24 months

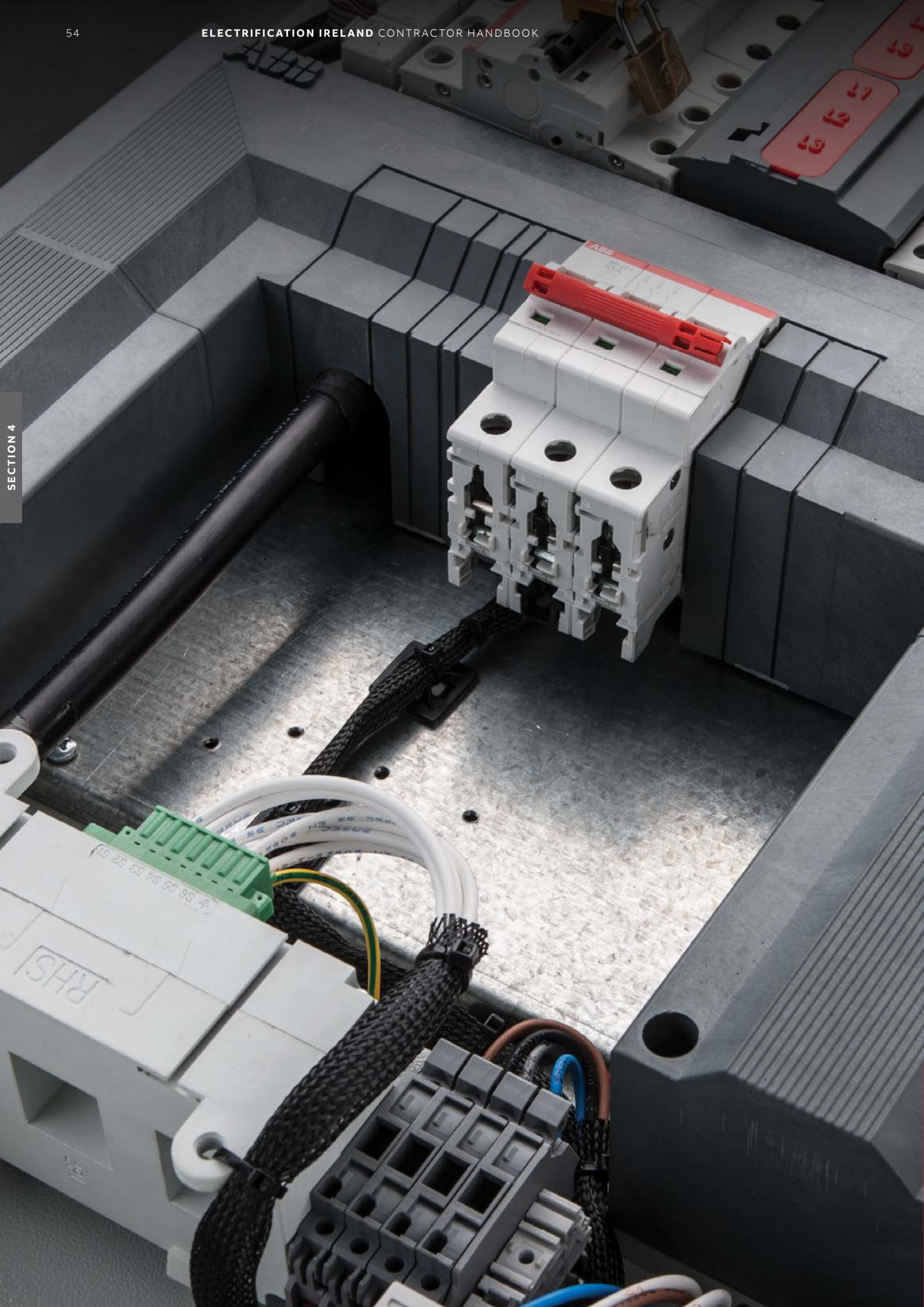
Smarter by design

Fully compliant with EU smart charging legislation

- The ChargerSync app allows streamlined charger configuration
- Ready for integration with advanced smart building energy system
- Simple software updates via the App makes the charger future-ready

With the user in mind

- Enables users to authenticate their charger via the App or RFID card. Configuration is easily done via the App or ABB web portal
- Sends charging status via the App
- Provides information about the status of chargers (availability, number of sessions, energy delivery)



Modular DIN rails

056	High performance Circuit-Breakers (HPCB's)
058	Miniature Circuit-Breakers (MCBs)
094	Arc Fault Detection Devices (AFDD)
096	RCCB F200 series residual current circuit breakers
097	Residual Current Breakers (RCBOs)
100	Metering
102	ESB installation contactors
107	DBT Timer digital time switches
109	T Line modular twilight switches
111	Modular sockets
112	TM bell transformers
113	ILTS-E D0 Fuse-switch- disconnectors
114	S800P (HPCB's)
115	SMISLINE TP plug-in system



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

High performance circuit-breakers

Selection table



Series			S 750 DR	S800P	S800S				S800N	S800C		
Characteristics			E selective, K selective		B, C, D	K	KM	UCB	UCK	B, C, D	B, C, D, K	
Rated current [A]			16 ≤ In ≤ 100		0.5 ≤ In ≤ 63	0.5 ≤ In ≤ 63	20 ≤ In ≤ 80	0.5 ≤ In ≤ 125	0.5 ≤ In ≤ 125	6 ≤ In ≤ 63	10 ≤ In ≤ 63	
IEC/EN 60947-2 Ics	1,	24										
Direct current	1P+N	60										
T=I/R≤5ms for		125			30	30				20	10	
all series,		220										
except S280	2	250						50	50			
UC and		48										
S800S-UC,		125										
where		250			30	30				20	10	
T=I/R<15ms		440										
		500						50	50			
		800										
	3,4	375			30 *6	30 *6	30 *6			20 *6	10 *6	
		500			30 *7	30 *7				20 *7	10 *7	
		750						50 *6 50 (63 ... 125 A) *7	50 *6 50 (63 ... 125 A) *7			
		1000						50 (10 ... 50 A) *7	50 (10 ... 50 A) *7			
		1200										
UL 1077/ C22.2 Int.	1,	120										
No 235	cap. 1P+N	240			30	30					20 (≤ 100 A)	
Alternating		277			14	14						
current		347			6	6					10 (≤ 100 A)	
	2, 3, 4	240										
		480										
		Y/277			14	14					10 (≤100 A)	
		600Y/347			6	6						
UL 1077/ C22.2 Int.	1,	60										
No 235	cap. 1P+N	125									10 (≤ 100 A)	
Direct current		250										
	2, 3, 4	125										
		250									10 (2P, ≤ 100 A)	
		375									10 (3P, ≤ 100 A)	
		500									10 (4P, ≤ 100 A)	
UL 489/ C22.2 Int.	1	240										
No 5	cap.	277										
Alternating	2, 3, 4	240										
current		480										
		Y/277										
UL 489/ C22.2 Int.	1	60										
No 5	cap. 2	125										
Direct current	4	600										

^{*1} only up to 40 A; 10 kA up to 50/63 A

^{*2} only for "D" characteristic

^{*3} values are not for all rated currents

^{*5} 1500 V DC for 4P

^{*6} 3 poles

^{*7} 4 poles

^{*8} relevant product standard:

E DIN VDE 0645 (based on
IEC/EN 60898-1 and IEC/EN 60947-2)

^{*9} by 250 V DC 1-pole, 600 V

3- and 4-pole

^{*10} by 600 V DC 2-pole

^{*11} ≤ 25 A

^{*12} > 25 A

^{*14} only 2 poles (connection in series)

^{*15} UL 1077 only

^{*16} ≤ 40 A

^{*17} > 40 A

^{*18} ≤ 35 A



SECTION 4

MCBs

S 200 series B characteristic

S 200 B characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for people and large length of cables in TN and IT systems.

Applications: residential, commercial and industrial.

Standard: IEC/EN 60898-1, IEC/EN 60947-2

Icn=6 kA



S 201



S 202



S 203

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	6	464901	S201-B6	2CDS251001R0065	0.112	10
	10	463805	S201-B10	2CDS251001R0105	0.112	10
	13	465007	S201-B13	2CDS251001R0135	0.115	10
	16	578639	S201-B16	2CDS251001R1165	0.115	10
	20 ^{*1}	465106	S201-B20	2CDS251001R0205	0.115	10
	25	465205	S201-B25	2CDS251001R0255	0.115	10
	32 ^{*2}	465304	S201-B32	2CDS251001R0325	0.120	10
	40 ^{*3}	465403	S201-B40	2CDS251001R0405	0.120	10
	50	550925	S201-B50	2CDS251001R0505	0.120	10
	63	550932	S201-B63	2CDS251001R0635	0.120	10
2	6	466400	S202-B6	2CDS252001R0065	0.224	5
	10	466608	S202-B10	2CDS252001R0105	0.224	5
	13	466707	S202-B13	2CDS252001R0135	0.230	5
	16	466905	S202-B16	2CDS252001R0165	0.230	5
	20	467001	S202-B20	2CDS252001R0205	0.230	5
	25	467100	S202-B25	2CDS252001R0255	0.230	5
	32	467209	S202-B32	2CDS252001R0325	0.240	5
	40	467407	S202-B40	2CDS252001R0405	0.240	5
	50	550949	S202-B50	2CDS252001R0505	0.240	5
	63	550956	S202-B63	2CDS252001R0635	0.240	5
3	6	468602	S203-B6	2CDS253001R0065	0.336	1
	10	468701	S203-B10	2CDS253001R0105	0.336	1
	13	468909	S203-B13	2CDS253001R0135	0.345	1
	16	469005	S203-B16	2CDS253001R0165	0.345	1
	20 ^{*1}	469104	S203-B20	2CDS253001R0205	0.345	1
	25	469203	S203-B25	2CDS253001R0255	0.345	1
	32 ^{*2}	469302	S203-B32	2CDS253001R0325	0.360	1
	40 ^{*3}	469401	S203-B40	2CDS253001R0405	0.360	1
	50	550963	S203-B50	2CDS253001R0505	0.360	1
	63	550970	S203-B63	2CDS253001R0635	0.360	1

^{*1} suitable for flow-type heaters 12 kW

^{*2} suitable for flow-type heaters 18 kW

^{*3} suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series B characteristic



S 204

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
4	6	528955	S204-B6	2CDS254001R0065	0.448	1
	10	528962	S204-B10	2CDS254001R0105	0.448	1
	13	528979	S204-B13	2CDS254001R0135	0.460	1
	16	528986	S204-B16	2CDS254001R0165	0.460	1
	20	528993	S204-B20	2CDS254001R0205	0.460	1
	25	529006	S204-B25	2CDS254001R0255	0.460	1
	32	529013	S204-B32	2CDS254001R0325	0.480	1
	40	529020	S204-B40	2CDS254001R0405	0.480	1
	50	550987	S204-B50	2CDS254001R0505	0.480	1
	63	550994	S204-B63	2CDS254001R0635	0.480	1

With disconnecting neutral NA



S 201 NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	6	531580	S201-B6NA	2CDS251103R0065	0.217	5
	10	531597	S201-B10NA	2CDS251103R0105	0.217	5
	13	531603	S201-B13NA	2CDS251103R0135	0.220	5
	16	531610	S201-B16NA	2CDS251103R0165	0.220	5
	20 * ¹	531627	S201-B20NA	2CDS251103R0205	0.220	5
	25	531634	S201-B25NA	2CDS251103R0255	0.225	5
	32 * ²	531641	S201-B32NA	2CDS251103R0325	0.230	5
	40 * ³	531658	S201-B40NA	2CDS251103R0405	0.230	5
	50	536158	S201-B50NA	2CDS251103R0505	0.230	5
	63	536141	S201-B63NA	2CDS251103R0635	0.230	5
3+NA	6	532280	S203-B6NA	2CDS253103R0065	0.441	1
	10	532297	S203-B10NA	2CDS253103R0105	0.441	1
	13	532303	S203-B13NA	2CDS253103R0135	0.450	1
	16	532310	S203-B16NA	2CDS253103R0165	0.450	1
	20 * ¹	532327	S203-B20NA	2CDS253103R0205	0.450	1
	25	532334	S203-B25NA	2CDS253103R0255	0.455	1
	32 * ²	532341	S203-B32NA	2CDS253103R0325	0.470	1
	40 * ³	532358	S203-B40NA	2CDS253103R0405	0.470	1
	50	536165	S203-B50NA	2CDS253103R0505	0.470	1
	63	536172	S203-B63NA	2CDS253103R0635	0.470	1

*¹ suitable for flow-type heaters 12 kW
 *² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW



S 203 NA

MCBs

S 200 series C characteristic

S 200 C characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

Applications: residential, commercial and industrial.

Standard: IEC/EN 60898-1, IEC/EN 60947-2

Icn=6 kA



S 201



S 202

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	523295	S201-C0.5	2CDS251001R0984	0.112	10
	1	523318	S201-C1	2CDS251001R0014	0.112	10
	1.6	523301	S201-C1.6	2CDS251001R0974	0.112	10
	2	523325	S201-C2	2CDS251001R0024	0.112	10
	3	523332	S201-C3	2CDS251001R0034	0.112	10
	4	523349	S201-C4	2CDS251001R0044	0.112	10
	6	464000	S201-C6	2CDS251001R0064	0.112	10
	8	464109	S201-C8	2CDS251001R0084	0.112	10
	10	464208	S201-C10	2CDS251001R0104	0.112	10
	13	464307	S201-C13	2CDS251001R0134	0.115	10
	16	464406	S201-C16	2CDS251001R0164	0.115	10
	20 * ¹	464505	S201-C20	2CDS251001R0204	0.115	10
	25	464604	S201-C25	2CDS251001R0254	0.115	10
	32 * ²	464703	S201-C32	2CDS251001R0324	0.120	10
	40 * ³	464802	S201-C40	2CDS251001R0404	0.120	10
	50	551007	S201-C50	2CDS251001R0504	0.120	10
	63	551014	S201-C63	2CDS251001R0634	0.120	10
2	0.5	523356	S202-C0.5	2CDS252001R0984	0.224	5
	1	523363	S202-C1	2CDS252001R0014	0.224	5
	1.6	523370	S202-C1.6	2CDS252001R0974	0.224	5
	2	523387	S202-C2	2CDS252001R0024	0.224	5
	3	523394	S202-C3	2CDS252001R0034	0.224	5
	4	523400	S202-C4	2CDS252001R0044	0.224	5
	6	465502	S202-C6	2CDS252001R0064	0.224	5
	8	465601	S202-C8	2CDS252001R0084	0.224	5
	10	465700	S202-C10	2CDS252001R0104	0.224	5
	13	465809	S202-C13	2CDS252001R0134	0.230	5
	16	465908	S202-C16	2CDS252001R0164	0.230	5
	20 * ¹	466004	S202-C20	2CDS252001R0204	0.230	5
	25	466103	S202-C25	2CDS252001R0254	0.230	5
	32 * ²	466202	S202-C32	2CDS252001R0324	0.240	5
	40 * ³	466301	S202-C40	2CDS252001R0404	0.240	5
	50	551045	S202-C50	2CDS252001R0504	0.240	5
	63	551052	S202-C63	2CDS252001R0634	0.240	5

*¹ suitable for flow-type heaters 12 kW
 *² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series C characteristic



S 203



S 204

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	1	523424	S203-C1	2CDS253001R0014	0.336	1
	1.6	523431	S203-C1.6	2CDS253001R0974	0.336	1
	2	523448	S203-C2	2CDS253001R0024	0.336	1
	3	523455	S203-C3	2CDS253001R0034	0.336	1
	4	523462	S203-C4	2CDS253001R0044	0.336	1
	6	467506	S203-C6	2CDS253001R0064	0.336	1
	8	467605	S203-C8	2CDS253001R0084	0.336	1
	10	467803	S203-C10	2CDS253001R0104	0.336	1
	13	467902	S203-C13	2CDS253001R0134	0.345	1
	16	468008	S203-C16	2CDS253001R0164	0.345	1
	20 * ¹	468107	S203-C20	2CDS253001R0204	0.345	1
	25	468206	S203-C25	2CDS253001R0254	0.345	1
	32 * ²	468305	S203-C32	2CDS253001R0324	0.360	1
	40 * ³	468404	S203-C40	2CDS253001R0404	0.360	1
	50	551069	S203-C50	2CDS253001R0504	0.360	1
	63	551076	S203-C63	2CDS253001R0634	0.360	1
4	0.5	529112	S204-C0.5	2CDS254001R0984	0.448	1
	1	529129	S204-C1	2CDS254001R0014	0.448	1
	1.6	529136	S204-C1.6	2CDS254001R0974	0.448	1
	2	529143	S204-C2	2CDS254001R0024	0.448	1
	3	529150	S204-C3	2CDS254001R0034	0.448	1
	4	529167	S204-C4	2CDS254001R0044	0.448	1
	6	529174	S204-C6	2CDS254001R0064	0.448	1
	8	529181	S204-C8	2CDS254001R0084	0.448	1
	10	529198	S204-C10	2CDS254001R0104	0.448	1
	13	529204	S204-C13	2CDS254001R0134	0.460	1
	16	529211	S204-C16	2CDS254001R0164	0.460	1
	20 * ¹	529228	S204-C20	2CDS254001R0204	0.460	1
	25	529235	S204-C25	2CDS254001R0254	0.460	1
	32 * ²	529242	S204-C32	2CDS254001R0324	0.480	1
	40 * ³	529259	S204-C40	2CDS254001R0404	0.480	1
	50	551106	S204-C50	2CDS254001R0504	0.480	1
	63	551113	S204-C63	2CDS254001R0634	0.480	1

*¹ suitable for flow-type heaters 12 kW
 *² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series C characteristic



S 201 NA



S 203 NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	531665	S201-C0.5NA	2CDS251103R0984	0.217	5
	1	531672	S201-C1NA	2CDS251103R0014	0.217	5
	1.6	531689	S201-C1.6NA	2CDS251103R0974	0.217	5
	2	531696	S201-C2NA	2CDS251103R0024	0.217	5
	3	531702	S201-C3NA	2CDS251103R0034	0.217	5
	4	531726	S201-C4NA	2CDS251103R0044	0.217	5
	6	531733	S201-C6NA	2CDS251103R0064	0.217	5
	8	531740	S201-C8NA	2CDS251103R0084	0.217	5
	10	531757	S201-C10NA	2CDS251103R0104	0.217	5
	13	531764	S201-C13NA	2CDS251103R0134	0.220	5
	16	531771	S201-C16NA	2CDS251103R0164	0.220	5
	20 * ¹	531788	S201-C20NA	2CDS251103R0204	0.220	5
	25	531795	S201-C25NA	2CDS251103R0254	0.225	5
	32 * ²	531801	S201-C32NA	2CDS251103R0324	0.230	5
	40 * ³	531818	S201-C40NA	2CDS251103R0404	0.230	5
	50	551021	S201-C50NA	2CDS251103R0504	0.230	5
	63	551038	S201-C63NA	2CDS251103R0634	0.230	5
3+NA	0.5	532365	S203-C0.5NA	2CDS253103R0984	0.441	1
	1	532372	S203-C1NA	2CDS253103R0014	0.441	1
	1.6	532389	S203-C1.6NA	2CDS253103R0974	0.441	1
	2	532402	S203-C2NA	2CDS253103R0024	0.441	1
	3	532419	S203-C3NA	2CDS253103R0034	0.441	1
	4	532426	S203-C4NA	2CDS253103R0044	0.441	1
	6	532433	S203-C6NA	2CDS253103R0064	0.441	1
	8	532440	S203-C8NA	2CDS253103R0084	0.441	1
	10	532457	S203-C10NA	2CDS253103R0104	0.441	1
	13	532464	S203-C13NA	2CDS253103R0134	0.450	1
	16	532471	S203-C16NA	2CDS253103R0164	0.450	1
	20 * ¹	532488	S203-C20NA	2CDS253103R0204	0.450	1
	25	532495	S203-C25NA	2CDS253103R0254	0.455	1
	32 * ²	532501	S203-C32NA	2CDS253103R0324	0.470	1
	40 * ¹	532518	S203-C40NA	2CDS253103R0404	0.470	1
	50	551083	S203-C50NA	2CDS253103R0504	0.470	1
	63	551090	S203-C63NA	2CDS253103R0634	0.470	1

*¹ suitable for flow-type heaters 12 kW

*² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series D characteristic

S 200 D characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for circuits which supply loads with high inrush current at the circuit closing (LV/LV transformers, breakdown lamps).

Applications: residential, commercial and industrial.

Standard: IEC/EN 60898-1, IEC/EN 60947-2

Icn=6 kA



S 201



S 202

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	529938	S201-D0.5	2CDS251001R0981	0.112	10
	1	529945	S201-D1	2CDS251001R0011	0.112	10
	1.6	529952	S201-D1.6	2CDS251001R0971	0.112	10
	2	529969	S201-D2	2CDS251001R0021	0.112	10
	3	529976	S201-D3	2CDS251001R0031	0.112	10
	4	529983	S201-D4	2CDS251001R0041	0.112	10
	6	529990	S201-D6	2CDS251001R0061	0.112	10
	8	530002	S201-D8	2CDS251001R0081	0.112	10
	10	530019	S201-D10	2CDS251001R0101	0.112	10
	13	530026	S201-D13	2CDS251001R0131	0.115	10
	16	530033	S201-D16	2CDS251001R0161	0.115	10
	20 * ¹	530040	S201-D20	2CDS251001R0201	0.115	10
	25	530057	S201-D25	2CDS251001R0251	0.115	10
	32 * ²	530064	S201-D32	2CDS251001R0321	0.120	10
	40 * ³	530071	S201-D40	2CDS251001R0401	0.120	10
2	50	551991	S201-D50	2CDS251001R0501	0.120	10
	63	552004	S201-D63	2CDS251001R0631	0.120	10
	0.5	530484	S202-D0.5	2CDS252001R0981	0.224	5
	1	530491	S202-D1	2CDS252001R0011	0.224	5
	1.6	530507	S202-D1.6	2CDS252001R0971	0.224	5
	2	530514	S202-D2	2CDS252001R0021	0.224	5
	3	530521	S202-D3	2CDS252001R0031	0.224	5
	4	530538	S202-D4	2CDS252001R0041	0.224	5
	6	530545	S202-D6	2CDS252001R0061	0.224	5
	8	530552	S202-D8	2CDS252001R0081	0.224	5
	10	530583	S202-D10	2CDS252001R0101	0.224	5
	13	530606	S202-D13	2CDS252001R0131	0.230	5
	16	530613	S202-D16	2CDS252001R0161	0.230	5
	20	530637	S202-D20	2CDS252001R0201	0.230	5
	25	530644	S202-D25	2CDS252001R0251	0.230	5
	32	530651	S202-D32	2CDS252001R0321	0.240	5
	40	530668	S202-D40	2CDS252001R0401	0.240	5
	50	552035	S202-D50	2CDS252001R0501	0.240	5
	63	552042	S202-D63	2CDS252001R0631	0.240	5

*¹ suitable for flow-type heaters 12 kW

*² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series D characteristic



S 203



S 204

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	530811	S203-D0.5	2CDS253001R0981	0.336	1
	1	530828	S203-D1	2CDS253001R0011	0.336	1
	1.6	530835	S203-D1.6	2CDS253001R0971	0.336	1
	2	530842	S203-D2	2CDS253001R0021	0.336	1
	3	530859	S203-D3	2CDS253001R0031	0.336	1
	4	530866	S203-D4	2CDS253001R0041	0.336	1
	6	530880	S203-D6	2CDS253001R0061	0.336	1
	8	530897	S203-D8	2CDS253001R0081	0.336	1
	10	530903	S203-D10	2CDS253001R0101	0.336	1
	13	530910	S203-D13	2CDS253001R0131	0.345	1
	16	530927	S203-D16	2CDS253001R0161	0.345	1
	20 * ¹	530934	S203-D20	2CDS253001R0201	0.345	1
	25	530941	S203-D25	2CDS253001R0251	0.345	1
	32 * ²	530958	S203-D32	2CDS253001R0321	0.360	1
	40 * ³	530965	S203-D40	2CDS253001R0401	0.360	1
4	50	552059	S203-D50	2CDS253001R0501	0.360	1
	63	552066	S203-D63	2CDS253001R0631	0.360	1
	0.5	531122	S204-D0.5	2CDS254001R0981	0.448	1
	1	531139	S204-D1	2CDS254001R0011	0.448	1
	1.6	531146	S204-D1.6	2CDS254001R0971	0.448	1
	2	531153	S204-D2	2CDS254001R0021	0.448	1
	3	531160	S204-D3	2CDS254001R0031	0.448	1
	4	531177	S204-D4	2CDS254001R0041	0.448	1
	6	531184	S204-D6	2CDS254001R0061	0.448	1
	8	531191	S204-D8	2CDS254001R0081	0.448	1
	10	531207	S204-D10	2CDS254001R0101	0.448	1
	13	531214	S204-D13	2CDS254001R0131	0.460	1
	16	531221	S204-D16	2CDS254001R0161	0.460	1
	20	531238	S204-D20	2CDS254001R0201	0.460	1
	25	531290	S204-D25	2CDS254001R0251	0.460	1
	32	531306	S204-D32	2CDS254001R0321	0.480	1
	40	531313	S204-D40	2CDS254001R0401	0.480	1
	50	552097	S204-D50	2CDS254001R0501	0.480	1
	63	552103	S204-D63	2CDS254001R0631	0.480	1

*¹ suitable for flow-type heaters 12 kW*² suitable for flow-type heaters 18 kW*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series D characteristic



S 201 NA



S 203 NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	531979	S201-D0.5NA	2CDS251103R0981	0.217	5
	1	531986	S201-D1NA	2CDS251103R0011	0.217	5
	1.6	531993	S201-D1.6NA	2CDS251103R0971	0.217	5
	2	532006	S201-D2NA	2CDS251103R0021	0.217	5
	3	532013	S201-D3NA	2CDS251103R0031	0.217	5
	4	532020	S201-D4NA	2CDS251103R0041	0.217	5
	6	532037	S201-D6NA	2CDS251103R0061	0.217	5
	8	532044	S201-D8NA	2CDS251103R0081	0.217	5
	10	532051	S201-D10NA	2CDS251103R0101	0.217	5
	13	532068	S201-D13NA	2CDS251103R0131	0.220	5
	16	532099	S201-D16NA	2CDS251103R0161	0.220	5
	20 * ¹	532105	S201-D20NA	2CDS251103R0201	0.220	5
	25	532112	S201-D25NA	2CDS251103R0251	0.225	5
	32 * ²	532129	S201-D32NA	2CDS251103R0321	0.230	5
	40 * ³	532136	S201-D40NA	2CDS251103R0401	0.230	5
	50	552011	S201-D50NA	2CDS251103R0501	0.230	5
	63	552028	S201-D63NA	2CDS251103R0631	0.230	5
3+NA	0.5	532761	S203-D0.5NA	2CDS253103R0981	0.441	2
	1	532778	S203-D1NA	2CDS253103R0011	0.441	2
	1.6	532785	S203-D1.6NA	2CDS253103R0971	0.441	2
	2	532792	S203-D2NA	2CDS253103R0021	0.441	2
	3	532808	S203-D3NA	2CDS253103R0031	0.441	2
	4	532815	S203-D4NA	2CDS253103R0041	0.441	2
	6	532822	S203-D6NA	2CDS253103R0061	0.441	2
	8	532839	S203-D8NA	2CDS253103R0081	0.441	2
	10	532846	S203-D10NA	2CDS253103R0101	0.441	2
	13	532860	S203-D13NA	2CDS253103R0131	0.450	2
	16	532877	S203-D16NA	2CDS253103R0161	0.450	2
	20 * ¹	532884	S203-D20NA	2CDS253103R0201	0.450	2
	25	532891	S203-D25NA	2CDS253103R0251	0.455	2
	32 * ²	532907	S203-D32NA	2CDS253103R0321	0.470	2
	40 * ³	532914	S203-D40NA	2CDS253103R0401	0.470	2
	50	552073	S203-D50NA	2CDS253103R0501	0.470	2
	63	552080	S203-D63NA	2CDS253103R0631	0.470	2

*¹ suitable for flow-type heaters 12 kW*² suitable for flow-type heaters 18 kW*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series K characteristic

S 200 K (power) characteristic

Function: protection and control of the circuits like motors, transformer and auxiliary circuits, against overloads and short-circuits.

Advantages: no nuisance tripping in the case of functional peak currents up to $10 \times I_n$, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2

Icu=10 kA



S 201



S 202

Number of poles	Rated current I_n A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	507196	S201-K0.5	2CDS251001R0157	0.112	10
	1	507202	S201-K1	2CDS251001R0217	0.112	10
	1.6	507219	S201-K1.6	2CDS251001R0257	0.112	10
	2	507226	S201-K2	2CDS251001R0277	0.112	10
	3	507233	S201-K3	2CDS251001R0317	0.112	10
	4	507240	S201-K4	2CDS251001R0337	0.112	10
	6	507257	S201-K6	2CDS251001R0377	0.112	10
	8	507264	S201-K8	2CDS251001R0407	0.112	10
	10	496117	S201-K10	2CDS251001R0427	0.112	10
	13	507271	S201-K13	2CDS251001R0447	0.115	10
	16	496124	S201-K16	2CDS251001R0467	0.115	10
	20	507288	S201-K20	2CDS251001R0487	0.115	10
	25	507295	S201-K25	2CDS251001R0517	0.115	10
	32	496131	S201-K32	2CDS251001R0537	0.120	10
	40	507301	S201-K40	2CDS251001R0557	0.120	10
	50	551120	S201-K50	2CDS251001R0577	0.120	10
	63	551137	S201-K63	2CDS251001R0607	0.120	10
2	0.5	507318	S202-K0.5	2CDS252001R0157	0.224	5
	1	507325	S202-K1	2CDS252001R0217	0.224	5
	1.6	507332	S202-K1.6	2CDS252001R0257	0.224	5
	2	507349	S202-K2	2CDS252001R0277	0.224	5
	3	507356	S202-K3	2CDS252001R0317	0.224	5
	4	507363	S202-K4	2CDS252001R0337	0.224	5
	6	507370	S202-K6	2CDS252001R0377	0.224	5
	8	507387	S202-K8	2CDS252001R0407	0.224	5
	10	507394	S202-K10	2CDS252001R0427	0.224	5
	13	507400	S202-K13	2CDS252001R0447	0.230	5
	16	507417	S202-K16	2CDS252001R0467	0.230	5
	20	507424	S202-K20	2CDS252001R0487	0.230	5
	25	507431	S202-K25	2CDS252001R0517	0.230	5
	32	507448	S202-K32	2CDS252001R0537	0.240	5
	40	507455	S202-K40	2CDS252001R0557	0.240	5
	50	551168	S202-K50	2CDS252001R0577	0.240	5
	63	551175	S202-K63	2CDS252001R0607	0.240	5

*1 suitable for flow-type heaters 12 kW

*2 suitable for flow-type heaters 18 kW

*3 suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series K characteristic



S 203



S 204

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	507462	S203-K0.5	2CDS253001R0157	0.336	1
	1	507479	S203-K1	2CDS253001R0217	0.336	1
	1.6	507486	S203-K1.6	2CDS253001R0257	0.336	1
	2	507493	S203-K2	2CDS253001R0277	0.336	1
	3	507509	S203-K3	2CDS253001R0317	0.336	1
	4	507516	S203-K4	2CDS253001R0337	0.336	1
	6	507523	S203-K6	2CDS253001R0377	0.336	1
	8	507530	S203-K8	2CDS253001R0407	0.336	1
	10	496148	S203-K10	2CDS253001R0427	0.336	1
	13	507547	S203-K13	2CDS253001R0447	0.345	1
	16	496155	S203-K16	2CDS253001R0467	0.345	1
	20	507554	S203-K20	2CDS253001R0487	0.345	1
	25	507561	S203-K25	2CDS253001R0517	0.345	1
	32	496162	S203-K32	2CDS253001R0537	0.360	1
	40	507578	S203-K40	2CDS253001R0557	0.360	1
	50	551182	S203-K50	2CDS253001R0577	0.360	1
	63	551199	S203-K63	2CDS253001R0607	0.360	1
4	0.5	529266	S204-K0.5	2CDS254001R0157	0.448	1
	1	529273	S204-K1	2CDS254001R0217	0.448	1
	1.6	529280	S204-K1.6	2CDS254001R0257	0.448	1
	2	529297	S204-K2	2CDS254001R0277	0.448	1
	3	529303	S204-K3	2CDS254001R0317	0.448	1
	4	529310	S204-K4	2CDS254001R0337	0.448	1
	6	529327	S204-K6	2CDS254001R0377	0.448	1
	8	529334	S204-K8	2CDS254001R0407	0.448	1
	10	529341	S204-K10	2CDS254001R0427	0.448	1
	13	529358	S204-K13	2CDS254001R0447	0.460	1
	16	529365	S204-K16	2CDS254001R0467	0.460	1
	20	529372	S204-K20	2CDS254001R0487	0.460	1
	25	529389	S204-K25	2CDS254001R0517	0.460	1
	32	529396	S204-K32	2CDS254001R0537	0.480	1
	40	529402	S204-K40	2CDS254001R0557	0.480	1
	50	551229	S204-K50	2CDS254001R0577	0.480	1
	63	551236	S204-K63	2CDS254001R0607	0.480	1

MCBs

S 200 series K characteristic



S 201 NA



S 203 NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	531825	S201-K0.5NA	2CDS251103R0157	0.217	5
	1	531832	S201-K1NA	2CDS251103R0217	0.217	5
	1.6	531849	S201-K1.6NA	2CDS251103R0257	0.217	5
	2	531856	S201-K2NA	2CDS251103R0277	0.217	5
	3	531863	S201-K3NA	2CDS251103R0317	0.217	5
	4	531870	S201-K4NA	2CDS251103R0337	0.217	5
	6	531887	S201-K6NA	2CDS251103R0377	0.217	5
	8	531894	S201-K8NA	2CDS251103R0407	0.217	5
	10	531900	S201-K10NA	2CDS251103R0427	0.217	5
	13	531917	S201-K13NA	2CDS251103R0447	0.220	5
	16	531924	S201-K16NA	2CDS251103R0467	0.220	5
	20	531931	S201-K20NA	2CDS251103R0487	0.220	5
	25	531948	S201-K25NA	2CDS251103R0517	0.225	5
	32	531955	S201-K32NA	2CDS251103R0537	0.230	5
	40	531962	S201-K40NA	2CDS251103R0557	0.230	5
	50	551144	S201-K50NA	2CDS251103R0577	0.230	5
	63	551151	S201-K63NA	2CDS251103R0607	0.230	5
3+NA	0.5	532617	S203-K0.5NA	2CDS253103R0157	0.441	1
	1	532624	S203-K1NA	2CDS253103R0217	0.441	1
	1.6	532631	S203-K1.6NA	2CDS253103R0257	0.441	1
	2	532648	S203-K2NA	2CDS253103R0277	0.441	1
	3	532655	S203-K3NA	2CDS253103R0317	0.441	1
	4	532662	S203-K4NA	2CDS253103R0337	0.441	1
	6	532679	S203-K6NA	2CDS253103R0377	0.441	1
	8	532686	S203-K8NA	2CDS253103R0407	0.441	1
	10	532693	S203-K10NA	2CDS253103R0427	0.441	1
	13	532709	S203-K13NA	2CDS253103R0447	0.450	1
	16	532716	S203-K16NA	2CDS253103R0467	0.450	1
	20	532723	S203-K20NA	2CDS253103R0487	0.450	1
	25	532730	S203-K25NA	2CDS253103R0517	0.455	1
	32	532747	S203-K32NA	2CDS253103R0537	0.470	1
	40	532754	S203-K40NA	2CDS253103R0557	0.470	1
	50	551205	S203-K50NA	2CDS253103R0577	0.470	1
	63	551212	S203-K63NA	2CDS253103R0607	0.470	1

MCBs

S 200 series Z characteristic

S 200 Z characteristic

Function: protection and control of the electronic circuits against lower and long duration overloads and short-circuits.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2

Icu=10 kA



S 201



S 202

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	530309	S201-Z0.5	2CDS251001R0158	0.112	10
	1	530330	S201-Z1	2CDS251001R0218	0.112	10
	1.6	530347	S201-Z1.6	2CDS251001R0258	0.112	10
	2	530354	S201-Z2	2CDS251001R0278	0.112	10
	3	530361	S201-Z3	2CDS251001R0318	0.112	10
	4	530378	S201-Z4	2CDS251001R0338	0.112	10
	6	530408	S201-Z6	2CDS251001R0378	0.112	10
	8	530415	S201-Z8	2CDS251001R0408	0.112	10
	10	530422	S201-Z10	2CDS251001R0428	0.112	10
	16	530439	S201-Z16	2CDS251001R0468	0.115	10
	20	530446	S201-Z20	2CDS251001R0488	0.115	10
	25	530453	S201-Z25	2CDS251001R0518	0.115	10
	32	530460	S201-Z32	2CDS251001R0538	0.120	10
	40	530477	S201-Z40	2CDS251001R0558	0.120	10
	50	551915	S201-Z50	2CDS251001R0578	0.120	10
	63	551922	S201-Z63	2CDS251001R0608	0.120	10
2	0.5	530682	S202-Z0.5	2CDS252001R0158	0.224	5
	1	530675	S202-Z1	2CDS252001R0218	0.224	5
	1.6	530699	S202-Z1.6	2CDS252001R0258	0.224	5
	2	530705	S202-Z2	2CDS252001R0278	0.224	5
	3	530712	S202-Z3	2CDS252001R0318	0.224	5
	4	530729	S202-Z4	2CDS252001R0338	0.224	5
	6	530736	S202-Z6	2CDS252001R0378	0.224	5
	8	530743	S202-Z8	2CDS252001R0408	0.224	5
	10	530750	S202-Z10	2CDS252001R0428	0.224	5
	16	530767	S202-Z16	2CDS252001R0468	0.230	5
	20	530774	S202-Z20	2CDS252001R0488	0.230	5
	25	530781	S202-Z25	2CDS252001R0518	0.230	5
	32	530798	S202-Z32	2CDS252001R0538	0.240	5
	40	530804	S202-Z40	2CDS252001R0558	0.240	5
	50	551939	S202-Z50	2CDS252001R0578	0.240	5
	63	551946	S202-Z63	2CDS252001R0608	0.240	5

MCBs

S 200 series Z characteristic



S 203



S 204

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	530972	S203-Z0.5	2CDS253001R0158	0.336	1
	1	530989	S203-Z1	2CDS253001R0218	0.336	1
	1.6	530996	S203-Z1.6	2CDS253001R0258	0.336	1
	2	531009	S203-Z2	2CDS253001R0278	0.336	1
	3	531016	S203-Z3	2CDS253001R0318	0.336	1
	4	531023	S203-Z4	2CDS253001R0338	0.336	1
	6	531030	S203-Z6	2CDS253001R0378	0.336	1
	8	531047	S203-Z8	2CDS253001R0408	0.336	1
	10	531054	S203-Z10	2CDS253001R0428	0.336	1
	16	531061	S203-Z16	2CDS253001R0468	0.345	1
	20	531078	S203-Z20	2CDS253001R0488	0.345	1
	25	531085	S203-Z25	2CDS253001R0518	0.345	1
	32	531092	S203-Z32	2CDS253001R0538	0.360	1
	40	531108	S203-Z40	2CDS253001R0558	0.360	1
	50	551953	S203-Z50	2CDS253001R0578	0.360	1
	63	551960	S203-Z63	2CDS253001R0608	0.360	1
4	0.5	530248	S204-Z0.5	2CDS254001R0158	0.448	1
	1	531320	S204-Z1	2CDS254001R0218	0.448	1
	1.6	531443	S204-Z1.6	2CDS254001R0258	0.448	1
	2	531436	S204-Z2	2CDS254001R0278	0.448	1
	3	531337	S204-Z3	2CDS254001R0318	0.448	1
	4	531344	S204-Z4	2CDS254001R0338	0.448	1
	6	531351	S204-Z6	2CDS254001R0378	0.448	1
	8	531368	S204-Z8	2CDS254001R0408	0.448	1
	10	531375	S204-Z10	2CDS254001R0428	0.448	1
	16	531382	S204-Z16	2CDS254001R0468	0.460	1
	20	531399	S204-Z20	2CDS254001R0488	0.460	1
	25	531405	S204-Z25	2CDS254001R0518	0.460	1
	32	531412	S204-Z32	2CDS254001R0538	0.480	1
	40	531429	S204-Z40	2CDS254001R0558	0.480	1
	50	551977	S204-Z50	2CDS254001R0578	0.480	1
	63	551984	S204-Z63	2CDS254001R0608	0.480	1

MCBs

S 200 series Z characteristic



S 201 NA



S 203 NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	532143	S201-Z0.5NA	2CDS251103R0158	0.217	5
	1	532150	S201-Z1NA	2CDS251103R0218	0.217	5
	1.6	532167	S201-Z1.6NA	2CDS251103R0258	0.217	5
	2	532174	S201-Z2NA	2CDS251103R0278	0.217	5
	3	532181	S201-Z3NA	2CDS251103R0318	0.217	5
	4	532198	S201-Z4NA	2CDS251103R0338	0.217	5
	6	532204	S201-Z6NA	2CDS251103R0378	0.217	5
	8	532211	S201-Z8NA	2CDS251103R0408	0.217	5
	10	532228	S201-Z10NA	2CDS251103R0428	0.217	5
	16	532235	S201-Z16NA	2CDS251103R0468	0.220	5
	20	532242	S201-Z20NA	2CDS251103R0488	0.220	5
	25	532259	S201-Z25NA	2CDS251103R0518	0.225	5
	32	532266	S201-Z32NA	2CDS251103R0538	0.230	5
	40	532273	S201-Z40NA	2CDS251103R0558	0.230	5
	50	552127	S201-Z50NA	2CDS251103R0578	0.230	5
	63	552134	S201-Z63NA	2CDS251103R0608	0.230	5
3+NA	0.5	53292 1	S203-Z0.5NA	2CDS253103R0158	0.441	1
	1	53293 8	S203-Z1NA	2CDS253103R0218	0.441	1
	1.6	53294 5	S203-Z1.6NA	2CDS253103R0258	0.441	1
	2	53295 2	S203-Z2NA	2CDS253103R0278	0.441	1
	3	53297 6	S203-Z3NA	2CDS253103R0318	0.441	1
	4	53298 3	S203-Z4NA	2CDS253103R0338	0.441	1
	6	53299 0	S203-Z6NA	2CDS253103R0378	0.441	1
	8	53300 3	S203-Z8NA	2CDS253103R0408	0.441	1
	10	53301 0	S203-Z10NA	2CDS253103R0428	0.441	1
	16	53302 7	S203-Z16NA	2CDS253103R0468	0.450	1
	20	53305 8	S203-Z20NA	2CDS253103R0488	0.450	1
	25	53306 5	S203-Z25NA	2CDS253103R0518	0.455	1
	32	53307 2	S203-Z32NA	2CDS253103R0538	0.470	1
	40	53308 9	S203-Z40NA	2CDS253103R0558	0.470	1
	50	55214 1	S203-Z50NA	2CDS253103R0578	0.470	1
	63	55216 5	S203-Z63NA	2CDS253103R0608	0.470	1

MCBs

S 200 series M-B characteristic

S 200 M-B characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for people and large length of cables in TN and IT systems.

Applications: residential, commercial and industrial.

Standard: IEC/EN 60898-1, IEC/EN 60947-2

Icn=10 kA



S 201 M



S 202 M



S 203 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	6	549424	S201M-B6	2CDS271001R0065	0.112	10
	10	549431	S201M-B10	2CDS271001R0105	0.112	10
	13	549448	S201M-B13	2CDS271001R0135	0.115	10
	16	549455	S201M-B16	2CDS271001R0165	0.115	10
	20 * ¹	549462	S201M-B20	2CDS271001R0205	0.115	10
	25	549479	S201M-B25	2CDS271001R0255	0.115	10
	32 * ²	549486	S201M-B32	2CDS271001R0325	0.120	10
	40 * ³	549493	S201M-B40	2CDS271001R0405	0.120	10
	50	543811	S201M-B50	2CDS271001R0505	0.120	10
	63	543828	S201M-B63	2CDS271001R0635	0.120	10
2	6	549585	S202M-B6	2CDS272001R0065	0.224	5
	10	549592	S202M-B10	2CDS272001R0105	0.224	5
	13	549608	S202M-B13	2CDS272001R0135	0.230	5
	16	549615	S202M-B16	2CDS272001R0165	0.230	5
	20	549622	S202M-B20	2CDS272001R0205	0.230	5
	25	549639	S202M-B25	2CDS272001R0255	0.230	5
	32	549646	S202M-B32	2CDS272001R0325	0.240	5
	40	549653	S202M-B40	2CDS272001R0405	0.240	5
	50	543859	S202M-B50	2CDS272001R0505	0.240	5
	63	543866	S202M-B63	2CDS272001R0635	0.240	5
3	6	549660	S203M-B 6	2CDS273001R0065	0.336	1
	10	549677	S203M-B10	2CDS273001R0105	0.336	1
	13	549684	S203M-B13	2CDS273001R0135	0.345	1
	16	549691	S203M-B16	2CDS273001R0165	0.345	1
	20 * ¹	549707	S203M-B20	2CDS273001R0205	0.345	1
	25	549714	S203M-B25	2CDS273001R0255	0.345	1
	32 * ²	549721	S203M-B32	2CDS273001R0325	0.360	1
	40 * ³	549738	S203M-B40	2CDS273001R0405	0.360	1
	50	543873	S203M-B50	2CDS273001R0505	0.360	1
	63	543880	S203M-B63	2CDS273001R0635	0.360	1

*¹ suitable for flow-type heaters 12 kW

*² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series M-B characteristic



S 204 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
4	6	549820	S204M-B 6	2CDS274001R0065	0.448	1
	10	549837	S204M-B10	2CDS274001R0105	0.448	1
	13	549844	S204M-B13	2CDS274001R0135	0.460	1
	16	549851	S204M-B16	2CDS274001R0165	0.460	1
	20	549868	S204M-B20	2CDS274001R0205	0.460	1
	25	549875	S204M-B25	2CDS274001R0255	0.460	1
	32	549882	S204M-B32	2CDS274001R0325	0.480	1
	40	549899	S204M-B40	2CDS274001R0405	0.480	1
	50	543910	S204M-B50	2CDS274001R0505	0.480	1
	63	543927	S204M-B63	2CDS274001R0635	0.480	1

With disconnecting neutral NA



S 201 M NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	6	549509	S201M-B6NA	2CDS271103R0065	0.217	5
	10	549516	S201M-B10NA	2CDS271103R0105	0.217	5
	13	549523	S201M-B13NA	2CDS271103R0135	0.220	5
	16	549530	S201M-B16NA	2CDS271103R0165	0.220	5
	20 * ¹	549547	S201M-B20NA	2CDS271103R0205	0.220	5
	25	549554	S201M-B25NA	2CDS271103R0255	0.225	5
	32 * ²	549561	S201M-B32NA	2CDS271103R0325	0.230	5
	40 * ³	549578	S201M-B40NA	2CDS271103R0405	0.230	5
	50	543835	S201M-B50NA	2CDS271103R0505	0.230	5
	63	543842	S201M-B63NA	2CDS271103R0635	0.230	5
3+NA	6	549745	S203M-B6NA	2CDS273103R0065	0.441	1
	10	549752	S203M-B10NA	2CDS273103R0105	0.441	1
	13	549769	S203M-B13NA	2CDS273103R0135	0.450	1
	16	549776	S203M-B16NA	2CDS273103R0165	0.450	1
	20 * ¹	549783	S203M-B20NA	2CDS273103R0205	0.450	1
	25	549790	S203M-B25NA	2CDS273103R0255	0.455	1
	32 * ²	549806	S203M-B32NA	2CDS273103R0325	0.470	1
	40 * ³	549813	S203M-B40NA	2CDS273103R0405	0.470	1
	50	543897	S203M-B50NA	2CDS273103R0505	0.470	1
	63	543903	S203M-B63NA	2CDS273103R0635	0.470	1

*¹ suitable for flow-type heaters 12 kW*² suitable for flow-type heaters 18 kW*³ suitable for flow-type heaters 21, 24 and 27 kW

S 203 M NA

MCBs

S 200 series M-C characteristic

S 200 M-C characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

Applications: residential, commercial and industrial.

Standard: IEC/EN 60898-1, IEC/EN 60947-2

Icn=10 kA



S 201 M



S 202 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	549905	S201M-C0.5	2CDS271001R0984	0.112	10
	1	549929	S201M-C1	2CDS271001R0014	0.112	10
	1.6	549912	S201M-C1.6	2CDS271001R0974	0.112	10
	2	549936	S201M-C2	2CDS271001R0024	0.112	10
	3	549943	S201M-C3	2CDS271001R0034	0.112	10
	4	549950	S201M-C4	2CDS271001R0044	0.112	10
	6	549967	S201M-C6	2CDS271001R0064	0.112	10
	8	549974	S201M-C8	2CDS271001R0084	0.112	10
	10	549981	S201M-C10	2CDS271001R0104	0.112	10
	13	549998	S201M-C13	2CDS271001R0134	0.115	10
	16	550000	S201M-C16	2CDS271001R0164	0.115	10
	20 * ¹	550017	S201M-C20	2CDS271001R0204	0.115	10
	25	550024	S201M-C25	2CDS271001R0254	0.115	10
	32 * ²	550031	S201M-C32	2CDS271001R0324	0.120	10
	40 * ³	550048	S201M-C40	2CDS271001R0404	0.120	10
	50	543934	S201M-C50	2CDS271001R0504	0.120	10
	63	543941	S201M-C63	2CDS271001R0634	0.120	10
2	0.5	550208	S202M-C0.5	2CDS272001R0984	0.224	5
	1	550222	S202M-C1	2CDS272001R0014	0.224	5
	1.6	550215	S202M-C1.6	2CDS272001R0974	0.224	5
	2	550239	S202M-C2	2CDS272001R0024	0.224	5
	3	550246	S202M-C3	2CDS272001R0034	0.224	5
	4	550253	S202M-C4	2CDS272001R0044	0.224	5
	6	550260	S202M-C6	2CDS272001R0064	0.224	5
	8	550277	S202M-C8	2CDS272001R0084	0.224	5
	10	550284	S202M-C10	2CDS272001R0104	0.224	5
	13	550291	S202M-C13	2CDS272001R0134	0.230	5
	16	550307	S202M-C16	2CDS272001R0164	0.230	5
	20	550314	S202M-C20	2CDS272001R0204	0.230	5
	25	550321	S202M-C25	2CDS272001R0254	0.230	5
	32	550338	S202M-C32	2CDS272001R0324	0.240	5
	40	550345	S202M-C40	2CDS272001R0404	0.240	5
	50	543972	S202M-C50	2CDS272001R0504	0.240	5
	63	543989	S202M-C63	2CDS272001R0634	0.240	5

*¹ suitable for flow-type heaters 12 kW

*² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series M-C characteristic



S 203 M



S 204 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Price 1 piece	Weight 1 piece kg	Pack unit pc.
			Type code	Order code			
3	0.5	550352	S203M-C0.5	2CDS273001R0984		0.336	1
	1	550376	S203M-C1	2CDS273001R0014		0.336	1
	1.6	550369	S203M-C1.6	2CDS273001R0974		0.336	1
	2	550383	S203M-C2	2CDS273001R0024		0.336	1
	3	550390	S203M-C3	2CDS273001R0034		0.336	1
	4	550406	S203M-C4	2CDS273001R0044		0.336	1
	6	550413	S203M-C6	2CDS273001R0064		0.336	1
	8	550420	S203M-C8	2CDS273001R0084		0.336	1
	10	550437	S203M-C10	2CDS273001R0104		0.336	1
	13	550444	S203M-C13	2CDS273001R0134		0.345	1
	16	550451	S203M-C16	2CDS273001R0164		0.345	1
	20 *1	550468	S203M-C20	2CDS273001R0204		0.345	1
	25	550475	S203M-C25	2CDS273001R0254		0.345	1
	32 *2	550482	S203M-C32	2CDS273001R0324		0.360	1
	40 *3	550499	S203M-C40	2CDS273001R0404		0.360	1
	50	543996	S203M-C50	2CDS273001R0504		0.360	1
	63	544009	S203M-C63	2CDS273001R0634		0.360	1
4	0.5	550659	S204M-C0.5	2CDS274001R0984		0.448	1
	1	550673	S204M-C1	2CDS274001R0014		0.448	1
	1.6	550666	S204M-C1.6	2CDS274001R0974		0.448	1
	2	550680	S204M-C2	2CDS274001R0024		0.448	1
	3	550697	S204M-C3	2CDS274001R0034		0.448	1
	4	550703	S204M-C4	2CDS274001R0044		0.448	1
	6	550710	S204M-C6	2CDS274001R0064		0.448	1
	8	550727	S204M-C8	2CDS274001R0084		0.448	1
	10	550734	S204M-C10	2CDS274001R0104		0.448	1
	13	550741	S204M-C13	2CDS274001R0134		0.460	1
	16	550758	S204M-C16	2CDS274001R0164		0.460	1
	20	550765	S204M-C20	2CDS274001R0204		0.460	1
	25	550772	S204M-C25	2CDS274001R0254		0.460	1
	32	550789	S204M-C32	2CDS274001R0324		0.480	1
	40	550796	S204M-C40	2CDS274001R0404		0.480	1
	50	544030	S204M-C50	2CDS274001R0504		0.480	1
	63	544047	S204M-C63	2CDS274001R0634		0.480	1

*1 suitable for flow-type heaters 12 kW

*3 suitable for flow-type heaters 21, 24 and 27 kW

*2 suitable for flow-type heaters 18 kW

MCBs

S 200 series M-C characteristic



S 201 M NA



S 203 M NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	550055	S201M-C0.5NA	2CDS271103R0984	0.217	5
	1	550079	S201M-C1NA	2CDS271103R0014	0.217	5
	1.6	550062	S201M-C1.6NA	2CDS271103R0974	0.217	5
	2	550086	S201M-C2NA	2CDS271103R0024	0.217	5
	3	550093	S201M-C3NA	2CDS271103R0034	0.217	5
	4	550109	S201M-C4NA	2CDS271103R0044	0.217	5
	6	550116	S201M-C6NA	2CDS271103R0064	0.217	5
	8	550123	S201M-C8NA	2CDS271103R0084	0.217	5
	10	550130	S201M-C10NA	2CDS271103R0104	0.217	5
	13	550147	S201M-C13NA	2CDS271103R0134	0.220	5
	16	550154	S201M-C16NA	2CDS271103R0164	0.220	5
	20 * ¹	550161	S201M-C20NA	2CDS271103R0204	0.220	5
	25	550178	S201M-C25NA	2CDS271103R0254	0.225	5
	32 * ²	550185	S201M-C32NA	2CDS271103R0324	0.230	5
	40 * ³	550192	S201M-C40NA	2CDS271103R0404	0.230	5
	50	543958	S201M-C50NA	2CDS271103R0504	0.230	5
	63	543965	S201M-C63NA	2CDS271103R0634	0.230	5
3+NA	0.5	550512	S203M-C0.5NA	2CDS273103R0984	0.441	1
	1	550529	S203M-C1NA	2CDS273103R0014	0.441	1
	1.6	550505	S203M-C1.6NA	2CDS273103R0974	0.441	1
	2	550536	S203M-C2NA	2CDS273103R0024	0.441	1
	3	550543	S203M-C3NA	2CDS273103R0034	0.441	1
	4	550550	S203M-C4NA	2CDS273103R0044	0.441	1
	6	550567	S203M-C6NA	2CDS273103R0064	0.441	1
	8	550574	S203M-C8NA	2CDS273103R0084	0.441	1
	10	550581	S203M-C10NA	2CDS273103R0104	0.441	1
	13	550598	S203M-C13NA	2CDS273103R0134	0.450	1
	16	550604	S203M-C16NA	2CDS273103R0164	0.450	1
	20 * ¹	550611	S203M-C20NA	2CDS273103R0204	0.450	1
	25	550628	S203M-C25NA	2CDS273103R0254	0.455	1
	32 * ²	550635	S203M-C32NA	2CDS273103R0324	0.470	1
	40 * ³	550642	S203M-C40NA	2CDS273103R0404	0.470	1
	50	544016	S203M-C50NA	2CDS273103R0504	0.470	1
	63	544023	S203M-C63NA	2CDS273103R0634	0.470	1

*¹ suitable for flow-type heaters 12 kW

*² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series M-D characteristic

S 200 M-D characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for circuits which supply loads with high inrush current at the circuit closing (LV/LV transformers, breakdown lamps).

Applications: residential, commercial and industrial.

Standard: IEC/EN 60898-1, IEC/EN 60947-2

Icn=10 kA



S 201 M



S 202 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	599832	S201M-D0.5	2CDS271001R0981	0.112	10
	1	500313	S201M-D1	2CDS271001R0011	0.112	10
	1.6	599825	S201M-D1.6	2CDS271001R0971	0.112	10
	2	599337	S201M-D2	2CDS271001R0021	0.112	10
	3	599351	S201M-D3	2CDS271001R0031	0.112	10
	4	599357	S201M-D4	2CDS271001R0041	0.112	10
	6	599399	S201M-D6	2CDS271001R0061	0.112	10
	8	599405	S201M-D8	2CDS271001R0081	0.112	10
	10	599429	S201M-D10	2CDS271001R0101	0.112	10
	13	663267	S201M-D13	2CDS271001R0131	0.115	10
	16	599450	S201M-D16	2CDS271001R0161	0.115	10
	20 *1	500467	S201M-D20	2CDS271001R0201	0.115	10
	25	599498	S201M-D25	2CDS271001R0251	0.115	10
	32 *2	599566	S201M-D32	2CDS271001R0321	0.120	10
	40 *3	599610	S201M-D40	2CDS271001R0401	0.120	10
	50	599702	S201M-D50	2CDS271001R0501	0.120	10
	63	599818	S201M-D63	2CDS271001R0631	0.120	10
2	0.5	600880	S202M-D0.5	2CDS272001R0981	0.224	5
	1	600361	S202M-D1	2CDS272001R0011	0.224	5
	1.6	600873	S202M-D1.6	2CDS272001R0971	0.224	5
	2	600385	S202M-D2	2CDS272001R0021	0.224	5
	3	600408	S202M-D3	2CDS272001R0031	0.224	5
	4	600422	S202M-D4	2CDS272001R0041	0.224	5
	6	600446	S202M-D6	2CDS272001R0061	0.224	5
	8	600453	S202M-D8	2CDS272001R0081	0.224	5
	10	600477	S202M-D10	2CDS272001R0101	0.224	5
	13	663274	S202M-D13	2CDS272001R0131	0.230	5
	16	600507	S202M-D16	2CDS272001R0161	0.230	5
	20	600514	S202M-D20	2CDS272001R0201	0.230	5
	25	600545	S202M-D25	2CDS272001R0251	0.230	5
	32	600613	S202M-D32	2CDS272001R0321	0.240	5
	40	600668	S202M-D40	2CDS272001R0401	0.240	5
	50	600750	S202M-D50	2CDS272001R0501	0.240	5
	63	600866	S202M-D63	2CDS272001R0631	0.240	5

*1 suitable for flow-type heaters 12 kW

*2 suitable for flow-type heaters 18 kW

*3 suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series M-D characteristic



S 203 M



S 204 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	601412	S203M-D0.5	2CDS273001R0981	0.336	1
	1	600897	S203M-D1	2CDS273001R0011	0.336	1
	1.6	601405	S203M-D1.6	2CDS273001R0971	0.336	1
	2	600910	S203M-D2	2CDS273001R0021	0.336	1
	3	600934	S203M-D3	2CDS273001R0031	0.336	1
	4	600958	S203M-D4	2CDS273001R0041	0.336	1
	6	600972	S203M-D6	2CDS273001R0061	0.336	1
	8	600989	S203M-D8	2CDS273001R0081	0.336	1
	10	601009	S203M-D10	2CDS273001R0101	0.336	1
	13	663281	S203M-D13	2CDS273001R0131	0.345	1
	16	601030	S203M-D16	2CDS273001R0161	0.345	1
	20 * ¹	601047	S203M-D20	2CDS273001R0201	0.345	1
	25	601078	S203M-D25	2CDS273001R0251	0.345	1
	32 * ²	601146	S203M-D32	2CDS273001R0321	0.360	1
	40 * ³	601191	S203M-D40	2CDS273001R0401	0.360	1
4	50	601283	S203M-D50	2CDS273001R0501	0.360	1
	63	601399	S203M-D63	2CDS273001R0631	0.360	1
	0.5	602143	S204M-D0.5	2CDS274001R0981	0.448	1
	1	601634	S204M-D1	2CDS274001R0011	0.448	1
	1.6	602136	S204M-D1.6	2CDS274001R0971	0.448	1
	2	601658	S204M-D2	2CDS274001R0021	0.448	1
	3	601672	S204M-D3	2CDS274001R0031	0.448	1
	4	601696	S204M-D4	2CDS274001R0041	0.448	1
	6	601719	S204M-D6	2CDS274001R0061	0.448	1
	8	601726	S204M-D8	2CDS274001R0081	0.448	1
	10	601740	S204M-D10	2CDS274001R0101	0.448	1
	13	663298	S204M-D13	2CDS274001R0131	0.460	1
	16	601771	S204M-D16	2CDS274001R0161	0.460	1
	20	601788	S204M-D20	2CDS274001R0201	0.460	1
	25	601818	S204M-D25	2CDS274001R0251	0.460	1
	32	601887	S204M-D32	2CDS274001R0321	0.480	1
	40	601931	S204M-D40	2CDS274001R0401	0.480	1
	50	602013	S204M-D50	2CDS274001R0501	0.480	1
	63	602129	S204M-D63	2CDS274001R0631	0.480	1

*¹ suitable for flow-type heaters 12 kW*² suitable for flow-type heaters 18 kW*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series M-D characteristic



S 201 M NA



S 203 M NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	600354	S201M-D0.5NA	2CDS271103R0981	0.217	5
	1	599849	S201M-D1NA	2CDS271103R0011	0.217	5
	1.6	600347	S201-MD1.6NA	2CDS271103R0971	0.217	5
	2	599863	S201M-D2NA	2CDS271103R0021	0.217	5
	3	599887	S201M-D3NA	2CDS271103R0031	0.217	5
	4	599900	S201M-D4NA	2CDS271103R0041	0.217	5
	6	599924	S201M-D6NA	2CDS271103R0061	0.217	5
	8	599931	S201M-D8NA	2CDS271103R0081	0.217	5
	10	599948	S201M-D10NA	2CDS271103R0101	0.217	5
	13	663304	S201M-D13NA	2CDS271103R0131	0.220	5
	16	599979	S201M-D16NA	2CDS271103R0161	0.220	5
	20 * ¹	599986	S201M-D20NA	2CDS271103R0201	0.220	5
	25	600019	S201M-D25NA	2CDS271103R0251	0.225	5
	32 * ²	600088	S201M-D32NA	2CDS271103R0321	0.230	5
	40 * ³	600132	S201M-D40NA	2CDS271103R0401	0.230	5
	50	600224	S201M-D50NA	2CDS271103R0501	0.230	5
	63	600330	S201M-D63NA	2CDS271103R0631	0.230	5
3+NA	0.5	663311	S203M-D0.5NA	2CDS273103R0981	0.441	1
	1	663328	S203M-D1NA	2CDS273103R0011	0.441	1
	1.6	663335	S203M-D1.6NA	2CDS273103R0971	0.441	1
	2	663342	S203M-D2NA	2CDS273103R0021	0.441	1
	3	663359	S203M-D3NA	2CDS273103R0031	0.441	1
	4	663366	S203M-D4NA	2CDS273103R0041	0.441	1
	6	663373	S203M-D6NA	2CDS273103R0061	0.441	1
	8	663380	S203M-D8NA	2CDS273103R0081	0.441	1
	10	663397	S203M-D10NA	2CDS273103R0101	0.441	1
	13	663403	S203M-D13NA	2CDS273103R0131	0.450	1
	16	663410	S203M-D16NA	2CDS273103R0161	0.450	1
	20 * ¹	663427	S203M-D20NA	2CDS273103R0201	0.450	1
	25	663434	S203M-D25NA	2CDS273103R0251	0.455	1
	32 * ²	663441	S203M-D32NA	2CDS273103R0321	0.470	1
	40 * ³	663458	S203M-D40NA	2CDS273103R0401	0.470	1
	50	663465	S203M-D50NA	2CDS273103R0501	0.470	1
	63	663472	S203M-D63NA	2CDS273103R0631	0.470	1

*¹ suitable for flow-type heaters 12 kW

*² suitable for flow-type heaters 18 kW

*³ suitable for flow-type heaters 21, 24 and 27 kW

MCBs

S 200 series M-K characteristic

S 200 M-K (power) characteristic

Function: protection and control of the circuits like motors, transformer and auxiliary circuits, against overloads and short-circuits.

Advantages: no nuisance tripping in the case of functional peak currents up to $10 \times I_n$, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2

Icu=15 kA



S 201 M



S 202 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	599436	S201M-K0.5	2CDS271001R0157	0.112	10
	1	599474	S201M-K1	2CDS271001R0217	0.112	10
	1.6	599504	S201M-K1.6	2CDS271001R0257	0.112	10
	2	599528	S201M-K2	2CDS271001R0277	0.112	10
	3	599542	S201M-K3	2CDS271001R0317	0.112	10
	4	599573	S201M-K4	2CDS271001R0337	0.112	10
	6	599597	S201M-K6	2CDS271001R0377	0.112	10
	8	599627	S201M-K8	2CDS271001R0407	0.112	10
	10	599641	S201M-K10	2CDS271001R0427	0.112	10
	13	659390	S201M-K13	2CDS271001R0447	0.115	10
	16	599665	S201M-K16	2CDS271001R0467	0.115	10
	20	599689	S201M-K20	2CDS271001R0487	0.115	10
	25	599719	S201M-K25	2CDS271001R0517	0.115	10
	32	599733	S201M-K32	2CDS271001R0537	0.120	10
	40	599757	S201M-K40	2CDS271001R0557	0.120	10
	50	599771	S201M-K50	2CDS271001R0577	0.120	10
	63	599795	S201M-K63	2CDS271001R0607	0.120	10
2	0.5	600484	S202M-K0.5	2CDS272001R0157	0.224	5
	1	600521	S202M-K1	2CDS272001R0217	0.224	5
	1.6	600552	S202M-K1.6	2CDS272001R0257	0.224	5
	2	600576	S202M-K2	2CDS272001R0277	0.224	5
	3	600590	S202M-K3	2CDS272001R0317	0.224	5
	4	600620	S202M-K4	2CDS272001R0337	0.224	5
	6	600644	S202M-K6	2CDS272001R0377	0.224	5
	8	600675	S202M-K8	2CDS272001R0407	0.224	5
	10	600699	S202M-K10	2CDS272001R0427	0.224	5
	13	659406	S202M-K13	2CDS272001R0447	0.230	5
	16	600712	S202M-K16	2CDS272001R0467	0.230	5
	20	600736	S202M-K20	2CDS272001R0487	0.230	5
	25	600767	S202M-K25	2CDS272001R0517	0.230	5
	32	600781	S202M-K32	2CDS272001R0537	0.240	5
	40	600804	S202M-K40	2CDS272001R0557	0.240	5
	50	600828	S202M-K50	2CDS272001R0577	0.240	5
	63	600842	S202M-K63	2CDS272001R0607	0.240	5

MCBs

S 200 series M-K characteristic



S 203 M



S 204 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	601016	S203M-K0.5	2CDS273001R0157	0.336	1
	1	601054	S203M-K1	2CDS273001R0217	0.336	1
	1.6	601085	S203M-K1.6	2CDS273001R0257	0.336	1
	2	601108	S203M-K2	2CDS273001R0277	0.336	1
	3	601122	S203M-K3	2CDS273001R0317	0.336	1
	4	601153	S203M-K4	2CDS273001R0337	0.336	1
	6	601177	S203M-K6	2CDS273001R0377	0.336	1
	8	601207	S203M-K8	2CDS273001R0407	0.336	1
	10	601221	S203M-K10	2CDS273001R0427	0.336	1
	13	659413	S203M-K13	2CDS273001R0447	0.345	1
	16	601245	S203M-K16	2CDS273001R0467	0.345	1
	20	601269	S203M-K20	2CDS273001R0487	0.345	1
	25	601290	S203M-K25	2CDS273001R0517	0.345	1
	32	601313	S203M-K32	2CDS273001R0537	0.360	1
	40	601337	S203M-K40	2CDS273001R0557	0.360	1
	50	601351	S203M-K50	2CDS273001R0577	0.360	1
	63	601375	S203M-K63	2CDS273001R0607	0.360	1
4	0.5	601757	S204M-K0.5	2CDS274001R0157	0.448	1
	1	601795	S204M-K1	2CDS274001R0217	0.448	1
	1.6	601825	S204M-K1.6	2CDS274001R0257	0.448	1
	2	601849	S204M-K2	2CDS274001R0277	0.448	1
	3	601863	S204M-K3	2CDS274001R0317	0.448	1
	4	601894	S204M-K4	2CDS274001R0337	0.448	1
	6	601917	S204M-K6	2CDS274001R0377	0.448	1
	8	601948	S204M-K8	2CDS274001R0407	0.448	1
	10	601962	S204M-K10	2CDS274001R0427	0.448	1
	13	659420	S204M-K13	2CDS274001R0447	0.460	1
	16	601986	S204M-K16	2CDS274001R0467	0.460	1
	20	602006	S204M-K20	2CDS274001R0487	0.460	1
	25	602020	S204M-K25	2CDS274001R0517	0.460	1
	32	602044	S204M-K32	2CDS274001R0537	0.480	1
	40	602068	S204M-K40	2CDS274001R0557	0.480	1
	50	602082	S204M-K50	2CDS274001R0577	0.480	1
	63	602105	S204M-K63	2CDS274001R0607	0.480	1

MCBs

S 200 series M-K characteristic

With disconnecting neutral NA



S 201 M NA



S 203 M NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	599955	S201M-K0.5NA	2CDS271103R0157	0.217	5
	1	599993	S201M-K1NA	2CDS271103R0217	0.217	5
	1.6	600026	S201M-K1.6NA	2CDS271103R0257	0.217	5
	2	600040	S201M-K2NA	2CDS271103R0277	0.217	5
	3	600064	S201M-K3NA	2CDS271103R0317	0.217	5
	4	600095	S201M-K4NA	2CDS271103R0337	0.217	5
	6	600118	S201M-K6NA	2CDS271103R0377	0.217	5
	8	600149	S201M-K8NA	2CDS271103R0407	0.217	5
	10	600163	S201M-K10NA	2CDS271103R0427	0.217	5
	13	659437	S201M-K13NA	2CDS271103R0447	0.220	5
	16	600187	S201M-K16NA	2CDS271103R0467	0.220	5
	20	600200	S201M-K20NA	2CDS271103R0487	0.220	5
	25	600231	S201M-K25NA	2CDS271103R0517	0.225	5
	32	600255	S201M-K32NA	2CDS271103R0537	0.230	5
	40	600279	S201M-K40NA	2CDS271103R0557	0.230	5
	50	600293	S201M-K50NA	2CDS271103R0577	0.230	5
	63	600316	S201M-K63NA	2CDS271103R0607	0.230	5
3+NA	0.5	659444	S203M-K0.5NA	2CDS273103R0157	0.441	1
	1	650451	S203M-K1NA	2CDS273103R0217	0.441	1
	1.6	659468	S203M-K1.6NA	2CDS273103R0257	0.441	1
	2	659475	S203M-K2NA	2CDS273103R0277	0.441	1
	3	659482	S203M-K3NA	2CDS273103R0317	0.441	1
	4	659499	S203M-K4NA	2CDS273103R0337	0.441	1
	6	659505	S203M-K6NA	2CDS273103R0377	0.441	1
	8	659512	S203M-K8NA	2CDS273103R0407	0.441	1
	10	659529	S203M-K10NA	2CDS273103R0427	0.441	1
	13	659536	S203M-K13NA	2CDS273103R0447	0.450	1
	16	659543	S203M-K16NA	2CDS273103R0467	0.450	1
	20	659550	S203M-K20NA	2CDS273103R0487	0.450	1
	25	659567	S203M-K25NA	2CDS273103R0517	0.455	1
	32	659574	S203M-K32NA	2CDS273103R0537	0.470	1
	40	659581	S203M-K40NA	2CDS273103R0557	0.470	1
	50	659604	S203M-K50NA	2CDS273103R0577	0.470	1
	63	659611	S203M-K63NA	2CDS273103R0607	0.470	1

MCBs

S 200 series M-Z characteristic

S 200 M-Z characteristic

Function: protection and control of the electronic circuits against lower and long duration overloads and short-circuits.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2

Icu=15 kA



S 201 M



S 202 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	599443	S201M-Z0.5	2CDS271001R0158	0.112	10
	1	599481	S201M-Z1	2CDS271001R0218	0.112	10
	1.6	599511	S201M-Z1.6	2CDS271001R0258	0.112	10
	2	599535	S201M-Z2	2CDS271001R0278	0.112	10
	3	599559	S201M-Z3	2CDS271001R0318	0.112	10
	4	599580	S201M-Z4	2CDS271001R0338	0.112	10
	6	599603	S201M-Z6	2CDS271001R0378	0.112	10
	8	599634	S201M-Z8	2CDS271001R0408	0.112	10
	10	599658	S201M-Z10	2CDS271001R0428	0.112	10
	16	599672	S201M-Z16	2CDS271001R0468	0.115	10
	20	599696	S201M-Z20	2CDS271001R0488	0.115	10
	25	599726	S201M-Z25	2CDS271001R0518	0.115	10
	32	599740	S201M-Z32	2CDS271001R0538	0.120	10
	40	599764	S201M-Z40	2CDS271001R0558	0.120	10
	50	599788	S201M-Z50	2CDS271001R0578	0.120	10
	63	599801	S201M-Z63	2CDS271001R0608	0.120	10
2	0.5	600491	S202M-Z0.5	2CDS272001R0158	0.224	5
	1	600538	S202M-Z1	2CDS272001R0218	0.224	5
	1.6	600569	S202M-Z1.6	2CDS272001R0258	0.224	5
	2	600583	S202M-Z2	2CDS272001R0278	0.224	5
	3	600606	S202M-Z3	2CDS272001R0318	0.224	5
	4	600637	S202M-Z4	2CDS272001R0338	0.224	5
	6	600651	S202M-Z6	2CDS272001R0378	0.224	5
	8	600682	S202M-Z8	2CDS272001R0408	0.224	5
	10	600705	S202M-Z10	2CDS272001R0428	0.224	5
	16	600729	S202M-Z16	2CDS272001R0468	0.230	5
	20	600743	S202M-Z20	2CDS272001R0488	0.230	5
	25	600774	S202M-Z25	2CDS272001R0518	0.230	5
	32	600798	S202M-Z32	2CDS272001R0538	0.240	5
	40	600811	S202M-Z40	2CDS272001R0558	0.240	5
	50	600835	S202-MZ50	2CDS272001R0578	0.240	5
	63	600859	S202M-Z63	2CDS272001R0608	0.240	5

MCBs

S 200 series M-Z characteristic



S 203 M



S 204 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	601023	S203M-Z0.5	2CDS273001R0158	0.336	1
	1	601061	S203M-Z1	2CDS273001R0218	0.336	1
	1.6	601092	S203M-Z1.6	2CDS273001R0258	0.336	1
	2	601115	S203M-Z2	2CDS273001R0278	0.336	1
	3	601139	S203M-Z3	2CDS273001R0318	0.336	1
	4	601160	S203M-Z4	2CDS273001R0338	0.336	1
	6	601184	S203M-Z6	2CDS273001R0378	0.336	1
	8	601214	S203M-Z8	2CDS273001R0408	0.336	1
	10	601238	S203M-Z10	2CDS273001R0428	0.336	1
	16	601252	S203M-Z16	2CDS273001R0468	0.345	1
	20	601276	S203M-Z20	2CDS273001R0488	0.345	1
	25	601306	S203M-Z25	2CDS273001R0518	0.345	1
	32	601320	S203M-Z32	2CDS273001R0538	0.360	1
	40	601344	S203M-Z40	2CDS273001R0558	0.360	1
	50	601368	S203M-Z50	2CDS273001R0578	0.360	1
	63	601382	S203M-Z63	2CDS273001R0608	0.360	1
4	0.5	601764	S204M-Z0.5	2CDS274001R0158	0.448	1
	1	601810	S204M-Z1	2CDS274001R0218	0.448	1
	1.6	601832	S204M-Z1.6	2CDS274001R0258	0.448	1
	2	601856	S204M-Z2	2CDS274001R0278	0.448	1
	3	601870	S204M-Z3	2CDS274001R0318	0.448	1
	4	601900	S204M-Z4	2CDS274001R0338	0.448	1
	6	601924	S204M-Z6	2CDS274001R0378	0.448	1
	8	601955	S204M-Z8	2CDS274001R0408	0.448	1
	10	601979	S204M-Z10	2CDS274001R0428	0.448	1
	16	601993	S204M-Z16	2CDS274001R0468	0.460	1
	20	659628	S204M-Z20	2CDS274001R0488	0.460	1
	25	602037	S204M-Z25	2CDS274001R0518	0.460	1
	32	602051	S204M-Z32	2CDS274001R0538	0.480	1
	40	602075	S204M-Z40	2CDS274001R0558	0.480	1
	50	602099	S204M-Z50	2CDS274001R0578	0.480	1
	63	602112	S204M-Z63	2CDS274001R0608	0.480	1

*1 U_{Bmax} 125 V ~ with 2 poles connected in series

MCBs

S 200 series M-Z characteristic



S 201 M NA



S 203 M NA

With disconnecting neutral NA

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1+NA	0.5	599962	S201M-Z0.5NA	2CDS271103R0158	0.217	5
	1	600002	S201M-Z1NA	2CDS271103R0218	0.217	5
	1.6	600033	S201M-Z1.6NA	2CDS271103R0258	0.217	5
	2	600057	S201M-Z2NA	2CDS271103R0278	0.217	5
	3	600071	S201M-Z3NA	2CDS271103R0318	0.217	5
	4	600101	S201M-Z4NA	2CDS271103R0338	0.217	5
	6	600125	S201M-Z6NA	2CDS271103R0378	0.217	5
	8	600156	S201M-Z8NA	2CDS271103R0408	0.217	5
	10	600170	S201M-Z10NA	2CDS271103R0428	0.217	5
	16	600194	S201M-Z16NA	2CDS271103R0468	0.220	5
	20	600217	S201M-Z20NA	2CDS271103R0488	0.220	5
	25	600248	S201M-Z25NA	2CDS271103R0518	0.225	5
	32	600262	S201M-Z32NA	2CDS271103R0538	0.230	5
	40	600286	S201M-Z40NA	2CDS271103R0558	0.230	5
	50	600309	S201M-Z50NA	2CDS271103R0578	0.230	5
	63	600323	S201M-Z63NA	2CDS271103R0608	0.230	5
3+NA	0.5	601474	S203M-Z0.5NA	2CDS273103R0158	0.441	1
	1	601481	S203M-Z1NA	2CDS273103R0218	0.441	1
	1.6	601498	S203M-Z1.6NA	2CDS273103R0258	0.441	1
	2	601504	S203M-Z2NA	2CDS273103R0278	0.441	1
	3	601511	S203M-Z3NA	2CDS273103R0318	0.441	1
	4	601528	S203M-Z4NA	2CDS273103R0338	0.441	1
	6	601535	S203M-Z6NA	2CDS273103R0378	0.441	1
	8	601542	S203M-Z8NA	2CDS273103R0408	0.441	1
	10	601559	S203M-Z10NA	2CDS273103R0428	0.441	1
	16	601566	S203M-Z16NA	2CDS273103R0468	0.450	1
	20	601573	S203M-Z20NA	2CDS273103R0488	0.450	1
	25	601580	S203M-Z25NA	2CDS273103R0518	0.455	1
	32	601597	S203M-Z32NA	2CDS273103R0538	0.470	1
	40	601603	S203M-Z40NA	2CDS273103R0558	0.470	1
	50	601610	S203M-Z50NA	2CDS273103R0578	0.470	1
	63	601627	S203M-Z63NA	2CDS273103R0608	0.470	1

MCBs

Supplementary protector S 200 MR series, 10kA

The S200 MR is a high-performance supplementary protector with ring cable lug connections conforming to UL 1077; CSA 22.2. No. 235 and IEC/EN 60947-2 standards. The integrated captive connecting screws simplify the connection of electric lines, provides extra protection and saves time.



S 201 M



S 202 M

Number of poles	Rated current In A	Bbn 4016779 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.2	954181	S201MR-K0.2	2CDS271437R0087	0.112	10
	0.3	956697	S201MR-K0.3	2CDS271437R0117	0.112	10
	0.5	956710	S201MR-K0.5	2CDS271437R0157	0.112	10
	0.75	956734	S201MR-K0.75	2CDS271437R0187	0.112	10
	1	956758	S201MR-K1	2CDS271437R0217	0.112	10
	1.6	956772	S201MR-K1.6	2CDS271437R0257	0.112	10
	2	956796	S201MR-K2	2CDS271437R0277	0.112	10
	3	956819	S201MR-K3	2CDS271437R0317	0.112	10
	4	956833	S201MR-K4	2CDS271437R0337	0.112	10
	5	956857	S201MR-K5	2CDS271437R0357	0.112	10
	6	956871	S201MR-K6	2CDS271437R0377	0.112	10
	8	956895	S201MR-K8	2CDS271437R0407	0.112	10
	10	956918	S201MR-K10	2CDS271437R0427	0.112	10
	13	956932	S201MR-K13	2CDS271437R0447	0.115	10
	15	956956	S201MR-K15	2CDS271437R0457	0.115	10
	16	956970	S201MR-K16	2CDS271437R0467	0.115	10
	20	956994	S201MR-K20	2CDS271437R0487	0.115	10
	25	957014	S201MR-K25	2CDS271437R0517	0.115	10
	30	957038	S201MR-K30	2CDS271437R0527	0.120	10
	32	957052	S201MR-K32	2CDS271437R0537	0.120	10
	35	957076	S201MR-K35	2CDS271437R0547	0.120	10
	40	957090	S201MR-K40	2CDS271437R0557	0.120	10
	50	957113	S201MR-K50	2CDS271437R0577	0.120	10
	60	957137	S201MR-K60	2CDS271437R0587	0.120	10
	63	957151	S201MR-K63	2CDS271437R0607	0.120	10
2	0.2	957670	S202MR-K0.2	2CDS272437R0087	0.224	5
	0.3	957694	S202MR-K0.3	2CDS272437R0117	0.224	5
	0.5	957717	S202MR-K0.5	2CDS272437R0157	0.224	5
	0.75	957731	S202MR-K0.75	2CDS272437R0187	0.224	5
	1	957755	S202MR-K1	2CDS272437R0217	0.224	5
	1.6	957779	S202MR-K1.6	2CDS272437R0257	0.224	5
	2	957793	S202MR-K2	2CDS272437R0277	0.224	5
	3	957816	S202MR-K3	2CDS272437R0317	0.224	5
	4	957830	S202MR-K4	2CDS272437R0337	0.224	5
	5	957854	S202MR-K5	2CDS272437R0357	0.224	5
	6	957878	S202MR-K6	2CDS272437R0377	0.224	5
	8	957892	S202MR-K8	2CDS272437R0407	0.224	5
	10	957915	S202MR-K10	2CDS272437R0427	0.224	5
	13	957939	S202MR-K13	2CDS272437R0447	0.230	5
	15	957953	S202MR-K15	2CDS272437R0457	0.230	5
	16	957977	S202MR-K16	2CDS272437R0467	0.230	5
	20	957991	S202MR-K20	2CDS272437R0487	0.230	5
	25	958011	S202MR-K25	2CDS272437R0517	0.230	5
	30	958035	S202MR-K30	2CDS272437R0527	0.240	5
	32	958059	S202MR-K32	2CDS272437R0537	0.240	5
	35	958073	S202MR-K35	2CDS272437R0547	0.240	5
	40	958097	S202MR-K40	2CDS272437R0557	0.240	5
	50	958110	S202MR-K50	2CDS272437R0577	0.240	5
	60	958134	S202MR-K60	2CDS272437R0587	0.240	5
	63	958158	S202MR-K63	2CDS272437R0607	0.240	5

MCBs

S 200 series M UC C characteristic - Universal current range

S 200 M UC C characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems; version dedicated to application in direct current circuits for voltages up to 220 V DC 1 pole and 440 V DC 2, 3 and 4 poles.

Applications: Industrial.

Standard: IEC/EN 60898-2, IEC/EN 60947-2, UL1077, CSA 22.2 No. 235

(for DC applications, please note polarity of device)

Icu=10 kA



S 201 M UC



S 202 M UC

Number of poles	Rated current In A	Bbn 401361 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
1	0.5	4430695	S201M-C0.5UC	2CDS271061R0984	0.117	10
	1	4430701	S201M-C1UC	2CDS271061R0014	0.117	10
	1.6	4430718	S201M-C1.6UC	2CDS271061R0974	0.117	10
	2	4430725	S201M-C2UC	2CDS271061R0024	0.117	10
	3	4430732	S201M-C3UC	2CDS271061R0034	0.117	10
	4	4430749	S201M-C4UC	2CDS271061R0044	0.117	10
	6	4430756	S201M-C6UC	2CDS271061R0064	0.117	10
	8	4430763	S201M-C8UC	2CDS271061R0084	0.117	10
	10	4430770	S201M-C10UC	2CDS271061R0104	0.117	10
	13	4430787	S201M-C13UC	2CDS271061R0134	0.120	10
	16	4430794	S201M-C16UC	2CDS271061R0164	0.120	10
	20	4430800	S201M-C20UC	2CDS271061R0204	0.120	10
	25	4430817	S201M-C25UC	2CDS271061R0254	0.120	10
	32	4430824	S201M-C32UC	2CDS271061R0324	0.125	10
	40	4430831	S201M-C40UC	2CDS271061R0404	0.125	10
	50	4430848	S201M-C50UC	2CDS271061R0504	0.125	10
	63	4430855	S201M-C63UC	2CDS271061R0634	0.125	10
2	0.5	4432910	S202M-C0.5UC	2CDS272061R0984	0.234	5
	1	4432927	S202M-C1UC	2CDS272061R0014	0.234	5
	1.6	4432934	S202M-C1.6UC	2CDS272061R0974	0.234	5
	2	4432941	S202M-C2UC	2CDS272061R0024	0.234	5
	3	4432958	S202M-C3UC	2CDS272061R0034	0.234	5
	4	4432965	S202M-C4UC	2CDS272061R0044	0.234	5
	6	4432972	S202M-C6UC	2CDS272061R0064	0.234	5
	8	4432989	S202M-C8UC	2CDS272061R0084	0.234	5
	10	4432996	S202M-C10UC	2CDS272061R0104	0.234	5
	13	4433009	S202M-C13UC	2CDS272061R0134	0.240	5
	16	4433016	S202M-C16UC	2CDS272061R0164	0.240	5
	20	4433023	S202M-C20UC	2CDS272061R0204	0.240	5
	25	4433030	S202M-C25UC	2CDS272061R0254	0.240	5
	32	4433047	S202M-C32UC	2CDS272061R0324	0.250	5
	40	4433054	S202M-C40UC	2CDS272061R0404	0.250	5
	50	4433061	S202M-C50UC	2CDS272061R0504	0.250	5
	63	4433078	S202M-C63UC	2CDS272061R0634	0.250	5

MCBs

S 200 series M UC C characteristic - Universal current range



S 203 M UC



S 204 M UC

Number of poles	Rated current In A	Bbn 401361 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	4435133	S203M-C0.5UC	2CDS273061R0984	0.351	1
	1	4435140	S203M-C1UC	2CDS273061R0014	0.351	1
	1.6	4435157	S203M-C1.6UC	2CDS273061R0974	0.351	1
	2	4435164	S203M-C2UC	2CDS273061R0024	0.351	1
	3	4435171	S203M-C3UC	2CDS273061R0034	0.351	1
	4	4435188	S203M-C4UC	2CDS273061R0044	0.351	1
	6	4435195	S203M-C6UC	2CDS273061R0064	0.351	1
	8	4435201	S203M-C8UC	2CDS273061R0084	0.351	1
	10	4435218	S203M-C10UC	2CDS273061R0104	0.351	1
	13	4435225	S203M-C13UC	2CDS273061R0134	0.360	1
	16	4435232	S203M-C16UC	2CDS273061R0164	0.360	1
	20	4435249	S203M-C20UC	2CDS273061R0204	0.360	1
	25	4435256	S203M-C25UC	2CDS273061R0254	0.360	1
	32	4435263	S203M-C32UC	2CDS273061R0324	0.375	1
	40	4435270	S203M-C40UC	2CDS273061R0404	0.375	1
	50	4435287	S203M-C50UC	2CDS273061R0504	0.375	1
	63	4435294	S203M-C63UC	2CDS273061R0634	0.375	1
4	0.5	4437359	S204M-C0.5UC	2CDS274061R0984	0.468	1
	1	4437366	S204M-C1UC	2CDS274061R0014	0.468	1
	1.6	4437373	S204M-C1.6UC	2CDS274061R0974	0.468	1
	2	4437380	S204M-C2UC	2CDS274061R0024	0.468	1
	3	4437397	S204M-C3UC	2CDS274061R0034	0.468	1
	4	4437403	S204M-C4UC	2CDS274061R0044	0.468	1
	6	4437410	S204M-C6UC	2CDS274061R0064	0.468	1
	8	4437427	S204M-C8UC	2CDS274061R0084	0.468	1
	10	4437434	S204M-C10UC	2CDS274061R0104	0.468	1
	13	4437441	S204M-C13UC	2CDS274061R0134	0.480	1
	16	4437458	S204M-C16UC	2CDS274061R0164	0.480	1
	20	4437465	S204M-C20UC	2CDS274061R0204	0.480	1
	25	4437472	S204M-C25UC	2CDS274061R0254	0.480	1
	32	4437489	S204M-C32UC	2CDS274061R0324	0.500	1
	40	4437496	S204M-C40UC	2CDS274061R0404	0.500	1
	50	4437502	S204M-C50UC	2CDS274061R0504	0.500	1
	63	4437519	S204M-C63UC	2CDS274061R0634	0.500	1

MCBs

S 300 series P-Z characteristic



S 303 P



S 304 P

Number of poles	Rated current In A	Bbn 401677 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
3	0.5	9078078	S303P-Z0.5	2CDS383001R0158	0.360	1
	1	9077989	S303P-Z1	2CDS383001R0218	0.360	1
	1.6	9077934	S303P-Z1.6	2CDS383001R0258	0.360	1
	2	9077910	S303P-Z2	2CDS383001R0278	0.360	1
	3	9077897	S303P-Z3	2CDS383001R0318	0.360	1
	4	9077842	S303P-Z4	2CDS383001R0338	0.360	1
	6	9077828	S303P-Z6	2CDS383001R0378	0.360	1
	8	9077774	S303P-Z8	2CDS383001R0408	0.360	1
	10	9077750	S303P-Z10	2CDS383001R0428	0.360	1
	16	9077729	S303P-Z16	2CDS383001R0468	0.369	1
	20	9077705	S303P-Z20	2CDS383001R0488	0.369	1
	25	9077651	S303P-Z25	2CDS383001R0518	0.369	1
	32	9077637	S303P-Z32	2CDS383001R0538	0.384	1
	40	9077613	S303P-Z40	2CDS383001R0558	0.384	1
	50	9077590	S303P-Z50	2CDS383001R0578	0.384	1
	63	9077576	S303P-Z63	2CDS383001R0608	0.384	1
4	0.5	9076470	S304P-Z0.5	2CDS384001R0158	0.480	1
	1	9076388	S304P-Z1	2CDS384001R0218	0.480	1
	1.6	9076333	S304P-Z1.6	2CDS384001R0258	0.480	1
	2	9076319	S304P-Z2	2CDS384001R0278	0.480	1
	3	9076296	S304P-Z3	2CDS384001R0318	0.480	1
	4	9076241	S304P-Z4	2CDS384001R0338	0.480	1
	6	9076227	S304P-Z6	2CDS384001R0378	0.480	1
	8	9076173	S304P-Z8	2CDS384001R0408	0.480	1
	10	9076159	S304P-Z10	2CDS384001R0428	0.480	1
	16	9076128	S304P-Z16	2CDS384001R0468	0.492	1
	20	9135535	S304P-Z20	2CDS384001R0488	0.492	1
	25	9076050	S304P-Z25	2CDS384001R0518	0.492	1
	32	9076036	S304P-Z32	2CDS384001R0538	0.512	1
	40	9076012	S304P-Z40	2CDS384001R0558	0.512	1
	50	9075992	S304P-Z50	2CDS384001R0578	0.512	1
	63	9075978	S304P-Z63	2CDS384001R0608	0.512	1

MCBs

DSN201E



DSN201E: 1P+N eRCBO

Function: protection and control of the circuits against overloads and short-circuits; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n} = 30 \text{ mA}$). The neutral is switched. Voltage dependent RCBO.

Applications: residential, commercial, industrial

Standard: IEC 61009-1; IEC 61009-2-2; AS/NZS 61009.1

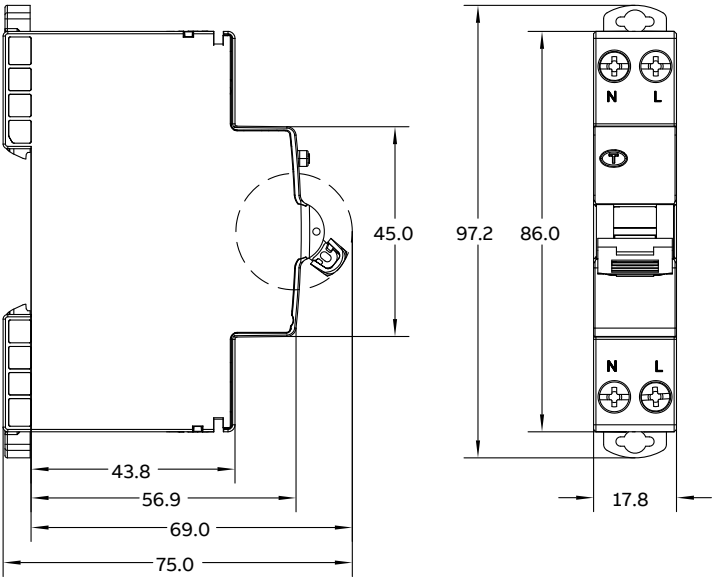
N. poles	Breaking capacity	Type	Sensitivity $I_{\Delta n}$ mA	Tripping Char.	Rated Current I_n A	EAN	Order details		Weight 1 piece kg	Pack unit pc.
							Type code	Order code		
1P+N	6 kA	A	10 mA	C	6	6941593498260	DSN201E C6 A10	2TAZ264114R1064	0.119	1
					10	6941593498277	DSN201E C10 A10	2TAZ264114R1104	0.119	1
					13	6941593498284	DSN201E C13 A10	2TAZ264114R1134	0.119	1
					16	6941593498291	DSN201E C16 A10	2TAZ264114R1164	0.119	1
					20	6941593498307	DSN201E C20 A10	2TAZ264114R1204	0.119	1
					25	6941593498314	DSN201E C25 A10	2TAZ264114R1254	0.119	1
					32	6941593498321	DSN201E C32 A10	2TAZ264114R1324	0.119	1
				B	6	6941593498338	DSN201E B6 A10	2TAZ264114R1061	0.119	1
					10	6941593498345	DSN201E B10 A10	2TAZ264114R1101	0.119	1
					13	6941593498352	DSN201E B13 A10	2TAZ264114R1131	0.119	1
					16	6941593498369	DSN201E B16 A10	2TAZ264114R1161	0.119	1
					20	6941593498376	DSN201E B20 A10	2TAZ264114R1201	0.119	1
					25	6941593498383	DSN201E B25 A10	2TAZ264114R1251	0.119	1
					32	6941593498390	DSN201E B32 A10	2TAZ264114R1321	0.119	1
			30 mA	C	6	6941593498406	DSN201E C6 A30	2TAZ264114R2064	0.119	1
					10	6941593498413	DSN201E C10 A30	2TAZ264114R2104	0.119	1
					13	6941593498420	DSN201E C13 A30	2TAZ264114R2134	0.119	1
					16	6941593498437	DSN201E C16 A30	2TAZ264114R2164	0.119	1
					20	6941593498444	DSN201E C20 A30	2TAZ264114R2204	0.119	1
					25	6941593498451	DSN201E C25 A30	2TAZ264114R2254	0.119	1
					32	6941593498468	DSN201E C32 A30	2TAZ264114R2324	0.119	1
				B	6	6941593498475	DSN201E B6 A30	2TAZ264114R2061	0.119	1
					10	6941593498482	DSN201E B10 A30	2TAZ264114R2101	0.119	1
					13	6941593498499	DSN201E B13 A30	2TAZ264114R2131	0.119	1
					16	6941593498505	DSN201E B16 A30	2TAZ264114R2161	0.119	1
					20	6941593498512	DSN201E B20 A30	2TAZ264114R2201	0.119	1
					25	6941593498529	DSN201E B25 A30	2TAZ264114R2251	0.119	1
					32	6941593498536	DSN201E B32 A30	2TAZ264114R2321	0.119	1

MCBs

DSN201E

N. poles	Breaking capacity	Type	Sensitivity I _{Δn} mA	Tripping Char.	Rated Current I _n		Order details		Weight 1 piece kg	Pack unit pc.
					A	EAN	Type code	Order code		
1P+N	10 kA	A	10 mA	C	6	6941593498543	DSN201E M C6 A10	2TAZ265114R1064	0.119	1
					10	6941593498550	DSN201E M C10 A10	2TAZ265114R1104	0.119	1
					13	6941593498567	DSN201E M C13 A10	2TAZ265114R1134	0.119	1
					16	6941593498574	DSN201E M C16 A10	2TAZ265114R1164	0.119	1
					20	6941593498581	DSN201E M C20 A10	2TAZ265114R1204	0.119	1
				B	6	6941593498598	DSN201E M B6 A10	2TAZ265114R1061	0.119	1
					10	6941593498604	DSN201E M B10 A10	2TAZ265114R1101	0.119	1
					13	6941593498611	DSN201E M B13 A10	2TAZ265114R1131	0.119	1
					16	6941593498628	DSN201E M B16 A10	2TAZ265114R1161	0.119	1
					20	6941593498635	DSN201E M B20 A10	2TAZ265114R1201	0.119	1
			30 mA	C	6	6941593498642	DSN201E M C6 A30	2TAZ265114R2064	0.119	1
					10	6941593498659	DSN201E M C10 A30	2TAZ265114R2104	0.119	1
					13	6941593498666	DSN201E M C13 A30	2TAZ265114R2134	0.119	1
					16	6941593498673	DSN201E M C16 A30	2TAZ265114R2164	0.119	1
					20	6941593498680	DSN201E M C20 A30	2TAZ265114R2204	0.119	1
				B	6	6941593498697	DSN201E M B6 A30	2TAZ265114R2061	0.119	1
					10	6941593498703	DSN201E M B10 A30	2TAZ265114R2101	0.119	1
					13	6941593498710	DSN201E M B13 A30	2TAZ265114R2131	0.119	1
					16	6941593498727	DSN201E M B16 A30	2TAZ265114R2161	0.119	1
					20	6941593498734	DSN201E M B20 A30	2TAZ265114R2201	0.119	1

Drawings



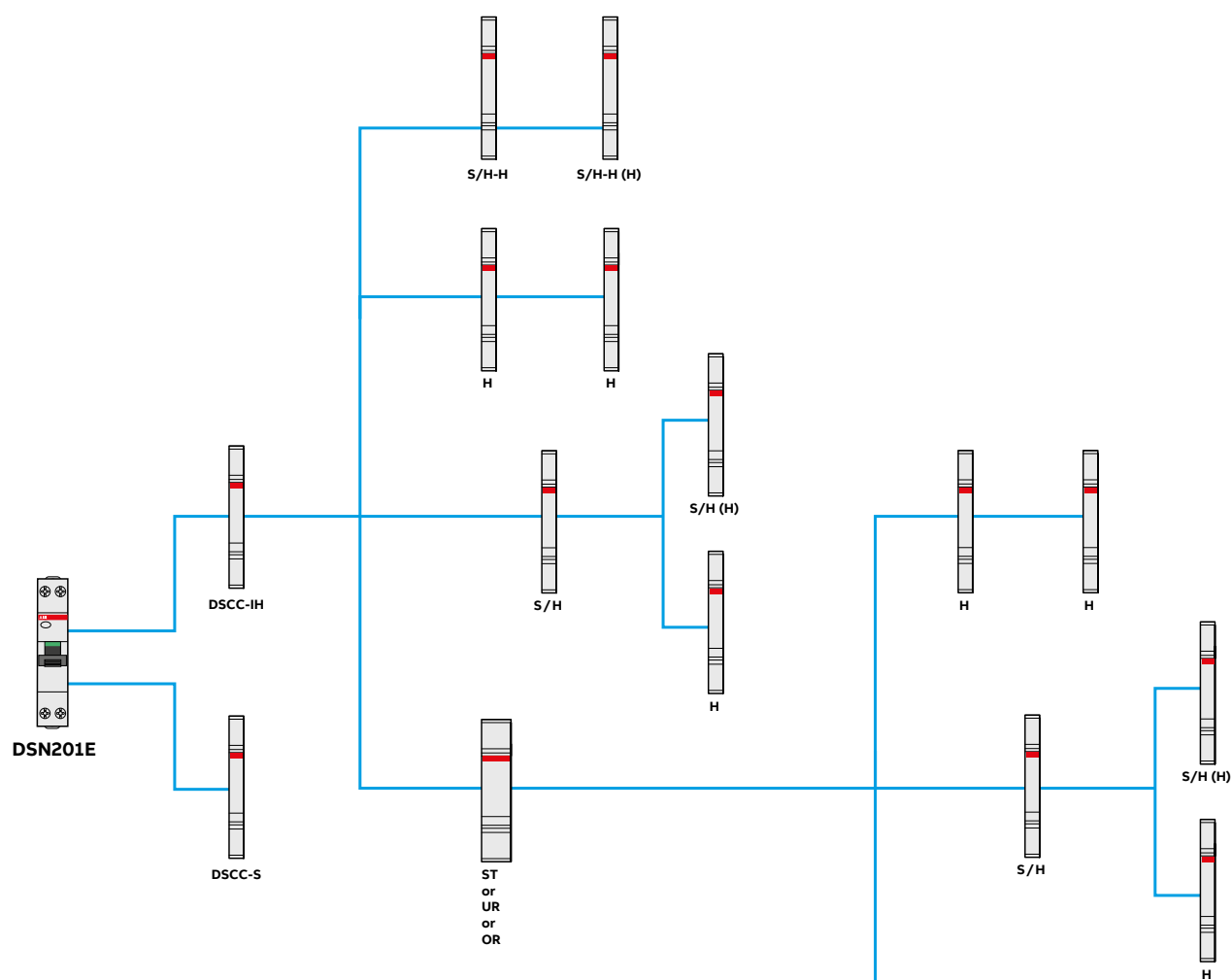
DSN201E

Accessories

Ordering code

Type	EAN	Order details		Weight 1 piece kg	Pack unit pc.
		Type code	Order code		
Auxiliary Contact/Interface	4053546160611	DSCC-IH6R	2CDS200933R0012	0,051	1
Signaling Contact	4053546160734	DSCC-S6R	2CDS200933R0013	0,051	1

Combination of auxiliary elements with DSN201E



DSCC-IH	Auxiliary contact/interface	DSCC-IH.... *
DSCC-S	Signaling contact	DSCC-S.... *
H	Auxiliary contact	S2C-H6R
S/H	Signal/auxiliary contact	S2C-S/H6R
ST	Shunt trip	S3C-A...
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
UR	Undervoltage release	S2C-UA **
OR	Overvoltage release	S2C-OVP
S/H-H	Auxiliary contact-Signal contact/ Auxiliary contact 2CO	S3C-H-S/H6R ***
S/H-H (H)	Auxiliary contact-Signal contact/ Auxiliary contact 2CO (used as auxiliary contact)	S3C-H-S/H6R

* DSCC available from January 2025

** S2C-UA can accept only one auxiliary or signal contact mounted after it

*** S3C-H-S/H6R available from January 2025

Busbars and busbars' for DSN201E

Accessories



BB-SU 1/13/10 GREY

Busbars available for the connection with DSN201E

No. pins	Phases		Bbn 4053546 EAN	Order details		Weight 1 piece	Pack unit
				Type code	Order code		
	Supply	mm²				kg	pc.
13	1P	10	046830	BB-SU 1/13/10 GREY ⁽¹⁾	2CDL801141R1013	0.044	15
13	1P	10	046847	BB-SU 1/13/10 BLUE ⁽²⁾	2CDL801145R1013	0.044	15
36	2P	10	046755	BB-SU 2/36/10	2CDL802141R1018	0.112	20
112	2P	10	046816	BB-SU 2/112/10	2CDL802141R1055	0.336	20
24	3P	10	046762	BB-SU 3/24/10	2CDL803141R1024	0.125	15
112	3P	10	046779	BB-SU 3/112/10	2CDL803141R1111	0.579	15
108	3P+N	10	046809	BB-SU 4/108/10 N	2CDL804142R1110	0.752	10
112	3P+N	10	046786	BB-SU 4/112/10 Kit*	2CDL804141R1055	0.640	5

* incl. 4 end caps and 4 connection clamps

(1) Phase connection

(2) Neutral connection

Accessories



BB-FS 25/27 Q

Feeder Terminal

mm ²	Bbn 4053546 EAN	Order details		Weight 1 piece kg	Pack unit pc.
		Type code	Order code		
25	046748	BB-FS 25/27 Q	2CDL800001R2527	0.015	30



BB-END

End Caps

mm ²	Bbn 4053546 EAN	Order details		Weight 1 piece kg	Pack unit pc.
		Type code	Order code		
10/16	046717	BB-END 2.1	2CDL800001R0021	0.001	10
16	046731	BB-END 3.2	2CDL800001R0030	0.001	10
10/16	046823	BB-END 4.1	2CDL800001R0040	0.001	10

AFDD Arc fault detection devices

Order Codes

S-ARC1, 6 kA

	Number of poles	Characteristics	Rated current I_n A	Bbn 8012542 EAN	Order details	
					Type code	Order code
	1P+N	B	6	750130	S-ARC1 B6	2CSA255901R9065
			10	178132	S-ARC1 B10	2CSA255901R9105
			13	750031	S-ARC1 B13	2CSA255901R9135
			16	178033	S-ARC1 B16	2CSA255901R9165
			20	749936	S-ARC1 B20	2CSA255901R9205
			25	341116	S-ARC1 B25	2CSA255901R9255
			32	341017	S-ARC1 B32	2CSA255901R9325
			40	340812	S-ARC1 B40	2CSA255901R9405
	1P+N	C	6	177937	S-ARC1 C6	2CSA255901R9064
			10	749837	S-ARC1 C10	2CSA255901R9104
			13	500735	S-ARC1 C13	2CSA255901R9134
			16	886136	S-ARC1 C16	2CSA255901R9164
			20	175438	S-ARC1 C20	2CSA255901R9204
			25	374114	S-ARC1 C25	2CSA255901R9254
			32	374015	S-ARC1 C32	2CSA255901R9324
			40	373919	S-ARC1 C40	2CSA255901R9404

DS-ARC1, 6 kA

	Number of poles	Rated residual current	Charac- teristics	Rated current I_n A	Bbn 8012542 EAN	Order details	
						Type code	Order code
	1P+N	30	B	6	736516	DS-ARC1 B6 A30	2CSA255103R1065
				10	735618	DS-ARC1 B10 A30	2CSA255103R1105
				13	736417	DS-ARC1 B13 A30	2CSA255103R1135
				16	735519	DS-ARC1 B16 A30	2CSA255103R1165
				20	736318	DS-ARC1 B20 A30	2CSA255103R1205
	1P+N	30	C	6	736110	DS-ARC1 C6 A30	2CSA255103R1064
				10	735212	DS-ARC1 C10 A30	2CSA255103R1104
				13	748311	DS-ARC1 C13 A30	2CSA255103R1134
				16	611110	DS-ARC1 C16 A30	2CSA255103R1164
				20	735113	DS-ARC1 C20 A30	2CSA255103R1204

Accessories

	Description	Order Code
	MCB padlock adaptor 3mm hasp	SA1
	Padlock with 2 keys	SA2
	Spare 19 Module Busbar	PS 1/19/30
	MCB Blank module RAL7035	EPP-BP1
	Blanking Plate 12 Mod	SZ-BP1
	Insulating Cover for Busbar 5pcs	SZ-BSK

S-ARC1 M, 10 kA & DS-ARC1 M

Order Codes

S-ARC1 M, 10 kA - MCB + AFDD (2module)

	Number of poles	Rated residual current $I_{\Delta n}$ mA	Characteristics	Rated current I_n A	Order details	
					Type code	Order code
	1P+N	30	B	6	S-ARC1 M B6	2CSA275901R9065
				10	S-ARC1 M B10	2CSA275901R9105
				13	S-ARC1 M B13	2CSA275901R9135
				16	S-ARC1 M B16	2CSA275901R9165
				20	S-ARC1 M B20	2CSA275901R9205
				25	S-ARC1 M B25	2CSA275901R9255
				32	S-ARC1 M B32	2CSA275901R9325
				40	S-ARC1 M B40	2CSA275901R9405
	1P+N	30	C	6	S-ARC1 M C6	2CSA275901R9064
				10	S-ARC1 M C10	2CSA275901R9104
				13	S-ARC1 M C13	2CSA275901R9134
				16	S-ARC1 M C16	2CSA275901R9164
				20	S-ARC1 M C20	2CSA275901R9204
				25	S-ARC1 M C25	2CSA275901R9254
				32	S-ARC1 M C32	2CSA275901R9324
				40	S-ARC1 M C40	2CSA275901R9404

DS-ARC1 M, 10 kA - RCBO + AFDD (3module)

	Number of poles	Rated residual current $I_{\Delta n}$ mA	Characteristics	Rated current I_n A	Order details	
					Type code	Order code
	1P+N	30	B	6	DS-ARC1 M B6 A30	2CSA275103R1065
				10	DS-ARC1 M B10 A30	2CSA275103R1105
				13	DS-ARC1 M B13 A30	2CSA275103R1135
				16	DS-ARC1 M B16 A30	2CSA275103R1165
				20	DS-ARC1 M B20 A30	2CSA275103R1205
	1P+N	30	C	6	DS-ARC1 M C6 A30	2CSA275103R1064
				10	DS-ARC1 M C10 A30	2CSA275103R1104
				13	DS-ARC1 M C13 A30	2CSA275103R1134
				16	DS-ARC1 M C16 A30	2CSA275103R1164
				20	DS-ARC1 M C20 A30	2CSA275103R1204

RCCB F 200 series A type

Order Codes

F 200 A type - F202

Number of poles	Rated residual current IΔn [mA]	Rated current in A	Order details	
			Type code	Order code
	2	10	F202A-16/0.01	2CSF202101R0160
		30	F202A-25/0.03	2CSF202101R1250
		40	F202A-40/0.03	2CSF202101R1400
		63	F202A-63/0.03	2CSF202101R1630
		80	F202A-80/0.03	2CSF202101R1800
		100	F202A-100/0.03	2CSF202101R1900
	100	25	F202A-25/0.1	2CSF202101R2250
		40	F202A-40/0.1	2CSF202101R2400
		63	F202A-63/0.1	2CSF202101R2630
		80	F202A-80/0.1	2CSF202101R2800
		100	F202A-100/0.1	2CSF202101R2900
	300	25	F202A-25/0.3	2CSF202101R3250
		40	F202A-40/0.3	2CSF202101R3400
		63	F202A-63/0.3	2CSF202101R3630
		80	F202A-80/0.3	2CSF202101R3800
		100	F202A-100/0.3	2CSF202101R3900
	500	25	F202A-25/0.5	2CSF202101R4250
		40	F202A-40/0.5	2CSF202101R4400
		63	F202A-63/0.5	2CSF202101R4630
		80	F202A-80/0.5	2CSF202101R4800
		100	F202A-100/0.5	2CSF202101R4900

F 200 A type - F204

Number of poles	Rated residual current IΔn [mA]	Rated current in A	Order details	
			Type code	Order code
	4	30	F204A-25/0.03	2CSF204101R1250
		40	F204A-40/0.03	2CSF204101R1400
		63	F204A-63/0.03	2CSF204101R1630
		80	F204A-80/0.03	2CSF204101R1800
		100	F204A-100/0.03	2CSF204101R1900
	100	25	F204A-25/0.1	2CSF204101R2250
		40	F204A-40/0.1	2CSF204101R2400
		63	F204A-63/0.1	2CSF204101R2630
		80	F204A-80/0.1	2CSF204101R2800
		100	F204A-100/0.1	2CSF204101R2900
	300	25	F204A-25/0.3	2CSF204101R3250
		40	F204A-40/0.3	2CSF204101R3400
		63	F204A-63/0.3	2CSF204101R3630
		80	F204A-80/0.3	2CSF204101R3800
		100	F204A-100/0.3	2CSF204101R3900
	500	25	F204A-25/0.5	2CSF204101R4250
		40	F204A-40/0.5	2CSF204101R4400
		63	F204A-63/0.5	2CSF204101R4630
		80	F204A-80/0.5	2CSF204101R4800
		100	F204A-100/0.5	2CSF204101R4900

RCBOs

DS201 6000 A  type, B characteristic



DS201

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I_{\Delta n}=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 6000$ A

No. of poles	Rated residual current $I_{\Delta n}$ mA	Rated current I_n A	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
1+N	10	10	065913	DS201 B10 A10	2CSR255180R0105	0.2	1
		13	065814	DS201 B13 A10	2CSR255180R0135	0.2	1
		16	066316	DS201 B16 A10	2CSR255180R0165	0.2	1
	30	6	066217	DS201 B6 A30	2CSR255180R1065	0.2	1
		10	066118	DS201 B10 A30	2CSR255180R1105	0.2	1
		13	058113	DS201 B13 A30	2CSR255180R1135	0.2	1
		16	058519	DS201 B16 A30	2CSR255180R1165	0.2	1
		20	969815	DS201 B20 A30	2CSR255180R1205	0.2	1
		25	969716	DS201 B25 A30	2CSR255180R1255	0.2	1
		32	970019	DS201 B32 A30	2CSR255180R1325	0.2	1
		40	969914	DS201 B40 A30	2CSR255180R1405	0.2	1
	100	6	779414	DS201 B6 A100	2CSR255180R2065	0.2	1
		10	790211	DS201 B10 A100	2CSR255180R2105	0.2	1
		13	779810	DS201 B13 A100	2CSR255180R2135	0.2	1
		16	779711	DS201 B16 A100	2CSR255180R2165	0.2	1
		20	779612	DS201 B20 A100	2CSR255180R2205	0.2	1
		25	779513	DS201 B25 A100	2CSR255180R2255	0.2	1
		32	372011	DS201 B32 A100	2CSR255180R2325	0.2	1
		40	023913	DS201 B40 A100	2CSR255180R2405	0.2	1
	300	6	070313	DS201 B6 A300	2CSR255180R3065	0.2	1
		10	643616	DS201 B10 A300	2CSR255180R3105	0.2	1
		13	643418	DS201 B13 A300	2CSR255180R3135	0.2	1
		16	643517	DS201 B16 A300	2CSR255180R3165	0.2	1
		20	643814	DS201 B20 A300	2CSR255180R3205	0.2	1
		25	643715	DS201 B25 A300	2CSR255180R3255	0.2	1
		32	643319	DS201 B32 A300	2CSR255180R3325	0.2	1
		40	965312	DS201 B40 A300	2CSR255180R3405	0.2	1

RCBOs

DS201 6000 A  type, C characteristic



DS201

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I\Delta n=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 6000$ A

No. of poles	Rated residual current $I\Delta n$ mA	Rated current I_n A	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
1+N	10	10	738817	DS201 C10 A10	2CSR255180R0104	0.2	1
		13	738015	DS201 C13 A10	2CSR255180R0134	0.2	1
		16	739418	DS201 C16 A10	2CSR255180R0164	0.2	1
30	30	2	738718	DS201 C2 A30	2CSR255180R1024	0.2	1
		4	737919	DS201 C4 A30	2CSR255180R1044	0.2	1
		6	737117	DS201 C6 A30	2CSR255180R1064	0.2	1
		8	738619	DS201 C8 A30	2CSR255180R1084	0.2	1
		10	737810	DS201 C10 A30	2CSR255180R1104	0.2	1
		13	737018	DS201 C13 A30	2CSR255180R1134	0.2	1
		16	739319	DS201 C16 A30	2CSR255180R1164	0.2	1
		20	738510	DS201 C20 A30	2CSR255180R1204	0.2	1
		25	737711	DS201 C25 A30	2CSR255180R1254	0.2	1
		32	737612	DS201 C32 A30	2CSR255180R1324	0.2	1
		40	738411	DS201 C40 A30	2CSR255180R1404	0.2	1
100	100	6	739012	DS201 C6 A100	2CSR255180R2064	0.2	1
		10	738213	DS201 C10 A100	2CSR255180R2104	0.2	1
		13	737315	DS201 C13 A100	2CSR255180R2134	0.2	1
		16	738916	DS201 C16 A100	2CSR255180R2164	0.2	1
		20	738114	DS201 C20 A100	2CSR255180R2204	0.2	1
		25	737216	DS201 C25 A100	2CSR255180R2254	0.2	1
		32	747215	DS201 C32 A100	2CSR255180R2324	0.2	1
		40	747116	DS201 C40 A100	2CSR255180R2404	0.2	1
300	300	2	739210	DS201 C2 A300	2CSR255180R3024	0.2	1
		4	062714	DS201 C4 A300	2CSR255180R3044	0.2	1
		6	007814	DS201 C6 A300	2CSR255180R3064	0.2	1
		8	007715	DS201 C8 A300	2CSR255180R3084	0.2	1
		10	062615	DS201 C10 A300	2CSR255180R3104	0.2	1
		13	886716	DS201 C13 A300	2CSR255180R3134	0.2	1
		16	886815	DS201 C16 A300	2CSR255180R3164	0.2	1
		20	886617	DS201 C20 A300	2CSR255180R3204	0.2	1
		25	886310	DS201 C25 A300	2CSR255180R3254	0.2	1
		32	886211	DS201 C32 A300	2CSR255180R3324	0.2	1
		40	326311	DS201 C40 A300	2CSR255180R3404	0.2	1

RCBOs

DS201 6000 A  type, K characteristic



DS201

Function: protection of end user single-phase circuits against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I\Delta n=30$ mA).

Application: residential, commercial, industrial.

Standard: IEC/EN 61009-1; IEC/EN 61009-2-1

$I_{cn} = 6000$ A

No. of poles	Rated residual current $I\Delta n$ mA	Rated current I_n A	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
				Type code	Order code		
1+N	10	10	647515	DS201 K10 A10	2CSR255180R0107	0.2	1
		13	061717	DS201 K13 A10	2CSR255180R0137	0.2	1
		16	295419	DS201 K16 A10	2CSR255180R0167	0.2	1
	30	1	295310	DS201 K1 A30	2CSR255180R1017	0.2	1
		2	498513	DS201 K2 A30	2CSR255180R1027	0.2	1
		4	305415	DS201 K4 A30	2CSR255180R1047	0.2	1
		6	647614	DS201 K6 A30	2CSR255180R1067	0.2	1
		8	643913	DS201 K8 A30	2CSR255180R1087	0.2	1
		10	587712	DS201 K10 A30	2CSR255180R1107	0.2	1
		13	575917	DS201 K13 A30	2CSR255180R1137	0.2	1
		16	564119	DS201 K16 A30	2CSR255180R1167	0.2	1
		20	586814	DS201 K20 A30	2CSR255180R1207	0.2	1
		25	575016	DS201 K25 A30	2CSR255180R1257	0.2	1
		32	563211	DS201 K32 A30	2CSR255180R1327	0.2	1
		40	775911	DS201 K40 A30	2CSR255180R1407	0.2	1
	300	1	773719	DS201 K1 A300	2CSR255180R3017	0.2	1
		2	771517	DS201 K2 A300	2CSR255180R3027	0.2	1
		4	587613	DS201 K4 A300	2CSR255180R3047	0.2	1
		6	575818	DS201 K6 A300	2CSR255180R3067	0.2	1
		8	564010	DS201 K8 A300	2CSR255180R3087	0.2	1
		10	586715	DS201 K10 A300	2CSR255180R3107	0.2	1
		13	574910	DS201 K13 A300	2CSR255180R3137	0.2	1
		16	563112	DS201 K16 A300	2CSR255180R3167	0.2	1
		20	775812	DS201 K20 A300	2CSR255180R3207	0.2	1
		25	773610	DS201 K25 A300	2CSR255180R3257	0.2	1
		32	771418	DS201 K32 A300	2CSR255180R3327	0.2	1
		40	587514	DS201 K40 A300	2CSR255180R3407	0.2	1

Metering EQ series - direct connection

Order Codes

A series - A41

80A SPN 4mod	Description	Order details	
		Type code	Order code
	Pulse output	A41 111 - 100	2CMA170554R1000
	Pulse output, RS-485	A41 112 - 100	2CMA170500R1000
	Pulse output, M-Bus	A41 113 - 100	2CMA100240R1000
	2 output, 2 input, RS-485	A41 312 - 100	2CMA170503R1000
	2 output, 2 input, M-Bus	A41 313 - 100	2CMA170504R1000

A series - A43

80A TPN 7mod	Description	Order details	
		Type code	Order code
	Pulse output	A43 111 - 100	2CMA170520R1000
	Pulse output, RS-485	A43 112 - 100	2CMA100244R1000
	Pulse output, M-Bus	A43 113 - 100	2CMA100245R1000
	2 output, 2 input, RS-485	A43 312 - 100	2CMA170525R1000
	2 output, 2 input, M-Bus	A43 313 - 100	2CMA170526R1000

B series - B21

65A SPN 2mod	Description	Order details	
		Type code	Order code
	Pulse output	B21 111 - 100	2CMA100149R1000
	Pulse output, RS-485	B21 112 - 100	2CMA100150R1000
	Pulse output, M-Bus	B21 113 - 100	2CMA100151R1000
	2 output, 2 input, RS-485	B21 312 - 100	2CMA100155R1000
	2 output, 2 input, M-Bus	B21 313 - 100	2CMA100156R1000

B series - B23

65A TPN 4mod	Description	Order details	
		Type code	Order code
	Pulse output	B23 111 - 100	2CMA100163R1000
	Pulse output, RS-485	B23 112 - 100	2CMA100164R1000
	Pulse output, M-Bus	B23 113 - 100	2CMA100165R1000
	2 output, 2 input, RS-485	B23 312 - 100	2CMA100169R1000
	2 output, 2 input, M-Bus	B23 313 - 100	2CMA100170R1000

Metering C series - Direct connection

Order Codes

C series - C11

		Order details	
40A SPN 1Mod	Description	Type code	Order code
	Pulse output	C11 110-101	2CMA103571R1000

C series - C13

		Order details	
40A TPN 3 Mod	Description	Type code	Order code
	Pulse output	C13 110-101	2CMA103574R1000

ESB installation contactors

Order Codes

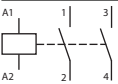
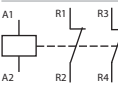
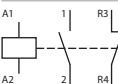


ESB20..N

The ESB20..N installation contactors are used to control single-phase loads up to 20 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environment. ESB20..N series is providing the following benefits:

- Hum-free operation, low power consumption and integrated overvoltage protection.
- Various contact combinations and accessories are available.

ESB20..N installation contactors - 20 A, AC-1 /AC-7a, AC/DC operated

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC/DC	Pkg qty	Weight (1 pc.) kg	Type	Order Code
Single packaging						
	1	24	1	0.14	ESB20-20N-01	1SBE121111R0120
		230	1	0.14	ESB20-20N-06	1SBE121111R0620
	1	24	1	0.14	ESB20-02N-01	1SBE121111R0102
		230	1	0.14	ESB20-02N-06	1SBE121111R0602
	1	24	1	0.14	ESB20-11N-01	1SBE121111R0111
		230	1	0.14	ESB20-11N-06	1SBE121111R0611

⁽¹⁾ Other control voltages: see voltage code table and contact ABB for availability of products.

ESB installation contactors

Order Codes



ESB25..N

2CDC221007V0017

The ESB25..N installation contactors are used to control single and three-phases loads up to 25 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environment. ESB25..N series is providing the following benefits:

- Hum-free operation, low power consumption and integrated overvoltage protection.
- Various contact combinations and accessories are available.

ESB25..N installation contactors - 25 A, AC-1/AC-7a, AC/DC operated

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC/DC	Pkg qty	Weight (1 pc.) kg	Type	Order Code
Single packaging						
	2	24	1	0.245	ESB25-40N-01	1SAE231111R0140
		230 ... 240	1	0.235	ESB25-40N-06	1SAE231111R0640
	2	24	1	0.245	ESB25-04N-01	1SAE231111R0104
		230 ... 240	1	0.235	ESB25-04N-06	1SAE231111R0604
	2	24	1	0.245	ESB25-22N-01	1SAE231111R0122
		230 ... 240	1	0.235	ESB25-22N-06	1SAE231111R0622
	2	24	1	0.245	ESB25-31N-01	1SAE231111R0131
		230 ... 240	1	0.235	ESB25-31N-06	1SAE231111R0631
	2	24	1	0.245	ESB25-13N-01	1SAE231111R0113
		230 ... 240	1	0.235	ESB25-13N-06	1SAE231111R0613

⁽¹⁾ Other control voltages: see voltage code table and contact ABB for availability of products.

ESB installation contactors

Order Codes



ESB40..N

The ESB40..N installation contactors are used to control single and three-phases loads up to 40 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environment. ESB40..N series is providing the following benefits:

- Hum-free operation, low power consumption and integrated overvoltage protection.
- Various contact combinations and accessories are available.

ESB40..N installation contactors - 40 A, AC-1/AC-7a, AC/DC operated

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC/DC	Pkg qty	Weight (1 pc.) kg	Type	Order Code
Single packaging						
	3	24	1	0.405	ESB40-40N-01	1SAE341111R0140
		230	1	0.405	ESB40-40N-06	1SAE341111R0640
	3	24	1	0.405	ESB40-22N-01	1SAE341111R0122
		230	1	0.405	ESB40-22N-06	1SAE341111R0622
	3	24	1	0.405	ESB40-31N-01	1SAE341111R0131
		230	1	0.405	ESB40-31N-06	1SAE341111R0631
	3	24	1	0.385	ESB40-30N-01	1SAE341111R0130
		230	1	0.385	ESB40-30N-06	1SAE341111R0630
	3	24	1	0.370	ESB40-20N-01	1SAE341111R0120
		230	1	0.370	ESB40-20N-06	1SAE341111R0620

⁽¹⁾ Other control voltages: see voltage code table and contact ABB for availability of products.

ESB installation contactors

Order Codes



ESB63..N

2CDC221009W0017

The ESB63..N installation contactors are used to control single and three-phases loads up to 63 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environment. ESB63..N series is providing the following benefits:

- Hum-free operation, low power consumption and integrated overvoltage protection.
- Various contact combinations and accessories are available.

ESB63..N installation contactors - 63 A, AC-1/AC-7a, AC/DC operated

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC/DC	Pkg qty	Weight (1 pc.) kg	Type	Order Code
Single packaging						
	3	24	1	0.405	ESB63-40N-01	1SAE351111R0140
		230	1	0.405	ESB63-40N-06	1SAE351111R0640
	3	230	1	0.405	ESB63-31N-06	1SAE351111R0631
	3	230	1	0.385	ESB63-30N-06	1SAE351111R0630
	3	24	1	0.37	ESB63-20N-01	1SAE351111R0120
		230	1	0.37	ESB63-20N-06	1SAE351111R0620

⁽¹⁾ Other control voltages: see voltage code table and contact ABB for availability of products.

ESB installation contactors

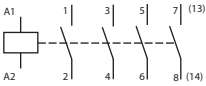
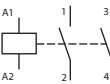
Order Codes



The ESB100..N installation contactors are used to control single and three-phases loads up to 100 A and can be operated by AC or DC voltages. These contactors are made for use in household applications as well as in industrial environment. ESB100..N series is providing the following benefits:

- Hum-free operation, low power consumption and integrated overvoltage protection.
- Various contact combinations and accessories are available.

ESB100..N installation contactors - 100 A, AC-1/AC-7a, AC/DC operated

Main contacts	Width in number of modular spacings	Rated control circuit voltage ⁽¹⁾ VAC/DC	Pkg qty	Weight (1 pc.) kg	Type	Order Code
Single packaging						
	6	24	1	0.810	ESB100-40N-01	1SAE661111R0140
		230	1	0.810	ESB100-40N-06	1SAE661111R0640
	3	24	1	0.405	ESB100-20N-01	1SAE361111R0120
		230	1	0.405	ESB100-20N-06	1SAE361111R0620

⁽¹⁾ Other control voltages: see voltage code table and contact ABB for availability of products.

DBT Timer digital time switches

Order Codes



DY365

DBT Timer digital time switches

The unique design, with white backlight LCD display, and extreme ease of use with only four buttons, make DBT Timer ideal to automate the installation functions. The possibility to configure all digital devices via DBT Timer APP and Bluetooth connection makes the configuration and installation time even shorter. DBT Timer digital time switches are equipped with large capacity internal battery to maintain operation without power supply in order to avoid the risk of program loss and to maintain the time settings in case of power failure, respective of its duration. DBT Timer digital time switches are equipped with various functions such as the impulse, cycle, random and holiday function.

Digital yearly time switch - DY365

DY365 is the digital yearly time switch with 2 channels from DBT Timer range. Thanks to the two extension channel units DY365 4CE and DY365 2CE, DY365 is able to control up to 8 channels. DY365 can be coupled with DY GPS antenna to allow synchronization received from the Global Positioning System or with DY DCF77 antenna that allows an automatic synchronization of the digital time switch with the Frankfurt DCF77 time signal.



DW1

Digital weekly time switch - DW

DW1 and DW2 are weekly digital time switches with 1 and 2 channels, respectively. They allow exclusion of the normal weekly program in every week with the same mode.



DWA1

Digital weekly astronomical time switch - DWA

The astronomical switches DWA1 and DWA2, respectively, with 1 and 2 channels, automatically control lighting circuits depending on the time of sunrise and sunset, greatly increasing energy efficiency. The programming is in fact based on a mathematical algorithm able to calculate the time of the rising and setting of the sun in a certain location for each day of the year. Once powered the device, simply insert date, time, geographical coordinates and time zone so that it is ready to work. These settings can also be automatically defined using the DBT Timer APP. The installation of astronomical digital time switches is particularly useful when using a twilight switch with external sensor is not recommended because it may be subject to malfunctions caused by air pollution, excessive brightness or vandalism. DWA1 and DWA2 are also indicated for the control of public lighting, shop windows of shops, neon signs, monuments, facades, illuminated fountains, ...



DWTL1

Digital weekly twilight time switch - DWTL1

DWTL1 is digital time switch with astronomical function and external luminosity probe DWS indicated for the management of the lighting system, luminous signs. Digital weekly twilight switch with 1 channel allows the exclusion of the weekly programming. DWTL1 can be configured as astronomical with probe switch which initial configuration requires the activation of the load from sunset to sunrise and during the daytime hours in case of low light. Also, it can be used as programmable twilight switch in which activation of the load occurs when the probe detects a low light condition in case that daily or weekly programming requires it.

Version	Order details		Weight 1 piece	Pack unit
	Type code	Order code	kg	pc.
Yearly time switch, 2 channels	DY365	2CSM221201R1000	0.250	1
Weekly time switch, 1 channel	DW1	2CSM222531R1000	0.129	1
Weekly time switch, 2 channels	DW2	2CSM222521R1000	0.152	1
Weekly astronomical time switch, 1 channel	DWA1	2CSM222511R1000	0.129	1
Weekly astronomical time switch, 2 channels	DWA2	2CSM222501R1000	0.152	1
Weekly twilight time switch, 1 channel	DWTL1	2CSM222491R1000	0.160	1

DBT Timer digital time switches

Order Codes



DY DCF77



DY GPS



DY365 2CE



DY365 4CE



DWS

Accessories for DBT Timer digital time switches

The DY365 2CE and DY365 4CE are extension channel units with 2 and 4 outputs relays. They are respectively coupled to the DY365 in order to expand number of contacts managed from 2 to maximum 8.

DY DCF77 antenna, used in conjunction with the device, enables it to be automatically synchronized with the official DCF77 Frankfurt time signal, broadcast via long wave radio. DY GPS antenna is available to ensure good coverage around the world in any weather condition. This antenna uses the synchronization from the Global Positioning System and provides more precise values than terrestrial transmissions.

DWS is external probe for light intensity which is coupled with digital weekly twilight switch, DWTL1.

Version	Order details		Weight	Pack
	Type code	Order code	1 piece	unit
			kg	pc.
DCF77 antenna	DY DCF77	2CSM250421R1000	0.100	1
GPS antenna	DY GPS	2CSM250411R1000	0.080	1
2 channel extension	DY365 2CE	2CSM221191R1000	0.185	1
4 channel extension	DY365 4CE	2CSM221181R1000	0.486	1
DWS external sensor	DWS	2CSM222481R1000	0.021	1

TL Line twilight switches

Order Codes



TL1

TL Line modular twilight switches

TL1 twilight switch allows to switch ON and switch OFF lighting devices according to a scheduled level of the ambient light. It is used in combination with an external sensor to detect if the ambient light is higher or lower than the set level . A switching delay prevents them from operating unnecessarily when the light intensity suddenly changes (e.g. lightning, moving vehicles, etc.). The TL1 twilight switch 1 channel is preset with a 10 LUX from factory and it is equipped with 2 signalling LEDs that indicate the setpoint value and display the status of the contact . The operating instructions are printed on the side of the product.

Brightness range	Order details		Weight 1 piece	Pack unit
	Type code	Order code	kg	pc.
lx 2:200	TL1	2CSM229921R1341	0.155	1



TLs

Accessories for TL Line modular twilight switches

The external sensor TLs is supplied in the same package of the switch, TL1, but it's also available separately as spare part. The upper part of the external case (with screw locking), made up of thermoplastic material, bears up against ultraviolet rays to guarantee an homogeneous diffusion of the daylight internally. The sensor is also equipped with a cable gland.

	Order details		Weight 1 piece	Pack unit
	Type code	Order code	kg	pc.
External sensor	TLs	2CSM229931R1341	0.008	1

TL Line twilight switches

Order Codes



TL1 Pole

Technical features		
		TL1 POLE
Rated supply voltage	[V]	110 ÷ 230 AC
Contact type		1NO polarized
Incandescent lamps cosφ 1	[W]	1000
Fluorescent lamps cosφ 0.8	[W]	300
Fluorescent- duo/electronic lamps	[W]	300
LED lamps	[W]	100
Rated frequency	[Hz]	50/60
Switching delay ON	[s]	25+/-10%
Switching delay OFF	[s]	35+/-10%
Brightness range (with tolerance of +/-20%)	[lx]	2...200
Protection degree twilight switch		IP54
Protection degree sensor		IP54
Operating temperature twilight switch	[°C]	-40...+70
Operating temperature sensor	[°C]	-40...+70
Storage temperature twilight switch	[°C]	-50...+80
Storage temperature sensor	[°C]	-50...+80
Power consumption	[W]	0.25 W cosφ 0.35 (idle) 0.8 W cosφ 0.4 (active)
Max terminal cross section	[mm²]	6
Terminals		loss-proof screw
Screw Type		PZ1
Tightening torque: terminals	[Nm]	1.2
screw sensor	[Nm]	1.2
Mounting		Pole/wall mounted
Switching status indication/ brightness range		red/green LEDs
Max wiring length		100
Modules		
Reference standards		EN 60669-1 EN 60662-2-1 EN60730-1

TL1 Pole mounting twilight switch

The TL1 Pole version is designed for installation on the pole/wall, with photocell inputs and integrated cabling including cable gland seals to ensure a high protection degree. Thanks also to the high quality, TL1 Pole provides excellent resistance to atmospheric agents and a long service life. TL1 Pole is also internally equipped with a preset sensor of 10 LUX. The sensor is extractable from the base and allows an easy and efficient maintenance without needing further wiring. TL1 Pole is the ideal solution to manage the external light systems such as the public ones, more precisely, in cases where there is a need of controlling the lighting of public or private roads, gardens, courtyards at the decline of solar radiation during twilight.

Brightness range	Order details		Weight 1 piece	Pack unit
lx	Type code	Order code	kg	pc.
2:200	TL1 Pole	2CSM229911R1341	0.135	1

Modular sockets

Order Codes

British standard modular sockets

				Order details	
	Colour	Modules	Type	Order Code	
M1363	Grey	3	M1363	2CSM259343R0721	
	Grey with light	3	M1363-L	2CSM258163R0721	



E 90 fuse switch disconnectors

Order Codes

E 90 series fuse switch disconnectors are designed for switching circuits under load, providing protection against short circuits and overloads. The case is made of self-extinguishing thermoplastic material resistant to high temperatures (all materials are UL listed) while the contact clips are in silver plated copper. E 90 fuse switch disconnectors can be sealed or

padlocked to ensure operator safety during maintenance. Versions with blown fuse indicator allow to check whether the fuse is still working correctly or not. For easy and quick installation E 90 range is totally compatible with connecting bars, terminals and caps of S 200 MCBs. Thanks to cURus approval, they can be installed in UL certified machines.

E 90 fuse switch disconnectors for 10.3 x 38 mm fuses (AC-22B)

				Order details	
	Number of poles	Rated current In	Modules	Type	Order Code
E91	1	32	1	E 91/32	2CSM200923R1801
	1	32	1	E 91/32s	2CSM202483R1801
	3	32	3	E 93/32	2CSM204753R1801
	3	32	3	E 93/32s	2CSM202063R1801



E93



s: version with blown fuse indicator light.
Fuses not included.

TM bell transformers

Order codes



TM 15/12



TM 40/12

Technical characteristics		
Primary rated voltage Un	[V]	230 a.c.
Secondary rated voltage Un	[V]	4, 8, 12, 24
Tolerance on secondary voltage (with load)	[%]	+/- 15% (according to standards)
Rated frequency	[Hz]	50/60
Rated power (discontinuous use)	[VA]	10, 15, 30, 40
Power loss (off load)	[W]	<2.5 (TM10, TM15), <3 (TM30, TM40), <1.25 (TM15 ES)
Modules	[No.]	2 (TM10, TM15), 3 (TM30, TM40)
Cable section	[mm ² -AWG]	2.5 - 14
Tightening torque	[Nm]	0.5
Protection degree		IP 20
Standards		IEC/EN 61558-2-8
Ambient temperature (operation)		+10 °C ... +40 °C
Approvals		

TM fail safe bell transformers

These transformers, with safety extremely-low voltage secondary (SELV), are suitable for loads that require a discontinuous supply, and in particular doorbells and chimes. Fail safe operation and excellent safety are assured thanks to the perfect isolation and separation between the primary and secondary circuits. In addition, the Energy Saving TM-ES version allows reducing power losses by 50%.

Maximum rated power a (discontinuous) VA	Secondary voltage rating V c.a.	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
10	4-8-12	287155	TM10/12	2CSM228715R0802	0.30	6
10	12-24	287254	TM10/24	2CSM228725R0802	0.30	6
15	4-8-12	287353	TM15/12	2CSM228735R0802	0.30	6
15	12-24	287452	TM15/24	2CSM228745R0802	0.30	6
15	4-8-12	285854	TM15/12 ES	2CSM228585R0802	0.30	1
30	4-8-12	287551	TM30/12	2CSM228755R0802	0.45	4
30	12-24	287650	TM30/24	2CSM228765R0802	0.45	4
40	4-8-12	287759	TM40/12	2CSM228775R0802	0.45	4
40	12-24	287858	TM40/24	2CSM228785R0802	0.45	4

① See diagrams below for the RMS power on each secondary output

ILTS-E D0 Fuse-switch-disconnectors

Order codes



ILTS-E1



ILTS-E1



ILTS-E3



ILTS-E/H11



ILTS-E/RE

Technical data

Reference standards	EN 60947-1, EN 60947-3
Approval	VDE
No. of poles	1, 2, 3 pole and 3 pole+N
Rated voltage	400 V AC, per pole 65 V DC (2 pole 130 V DC)
Operating current In	acc. to fuse link D0 2-63 A
Rated frequency	50/60 Hz
Rated short circuit capacity	50 kA for AC (8 kA for DC)
Power loss	5.5 W/pole
Utilization category	AC 22 B: 400 V AC 63 A according to IEC/EN 60947-3 (all versions) DC 22 B: 65 V DC 63 A according to IEC/EN 60947-3 (1 pole) DC 22 B: 130 V DC 63 A according to IEC/EN 60947-3 (2 pole)
Leakage current resistance	CTI 200
Overvoltage category in accordance with IEC / EN 61439-1	III
Ambient temperature	– 5 °C up to + 40 °C
Casing material	thermoplast; halogen-, phosphor-, silicone- and CFC-free
Fire classification	UL 94 (self-extinguishing)
Shock protection	according to DIN EN 50 274 (DIN VDE 0660 Part 514) BGV A3
Connection capacity	1.5 – 35 mm ² finely stranded, directly clamped or with connector sleeve Twin-function terminal for simultaneous connection of two conductors (35 mm ² and 16 mm ²) or conductor and busbar
Pick-up torque	2.5 – 3 Nm
Auxiliary switch indicating contact position	
Contacts	1 NO contact + 1 NC contact
Contact rating	AC 13: 2 A/400 V, 6 A/230 V DC 13: 1 A/220 V, 6 A/24 V

Switch-disconnector ILTS-E for D0 2-63 A fuse links “Drawer technology”

User-friendly fuse-switch-disconnector in “drawer technology”:

- Snap action
- Fuse can be replaced only if the system is de-energized.
- Captive fuse carrier
- For D02 fuse links, D01 fuse link with reducing piece
- Twin box terminal on both sides
- User-friendly installation of cross-wiring in lower terminal
- Auxiliary switch to indicate switching position

Fuse-switch-disconnector

Poles	Bbn 4016779	Order details		Weight 1 piece	Pack unit
	EAN	Type code	Order code	kg	pc.
1	65347 3	ILTS-E1	2CDE101001R1901	0.210	3
2	65348 0	ILTS-E2	2CDE102001R1901	0.420	2
3	65349 7	ILTS-E3	2CDE103001R1901	0.630	1
3+N*	65350 3	ILTS-E3+N	2CDE103101R1901	0.790	1
Reducing piece	65407 4	ILTS-E/RE	2CDE000011R1901	0.001	20
Auxiliary switch 1NO/1NC	65671 9	ILTS-E/H11	2CDE000012R1901	0.050	1

* N conductor leading make contact, late closing

S800P

Main benefits

The S800P range offers high rated current protection (80A, 100A, 125A) at a high breaking capacity level up to 50kA. It is available in all pole configurations (1P, 2P, 3P, 4P) and B, C, D, K tripping curves.



High Performance

Breaking capacity up to 50 kA and rated current up to 125 A. The first choice for satisfying heavy industrial applications worldwide.



Compact solution

S800P are the most compact devices able to protect lines up to 50 kA:

- Within 1.5 modules per pole*, 95 mm height and 82.5mm depth.
- Possibility to mount the device on the DIN – Rail with no need of adapter.



Expandability

Possibility of upgrading your applications with a wide range of available accessories.



Globally Certified

Certified according to main global and specific relevant standards:

- IEC60947-2
- EN45545-2 for Fire & Smoke
- IEC61373 for Vibration & Shock



High Performance



Compact solution



Expandability



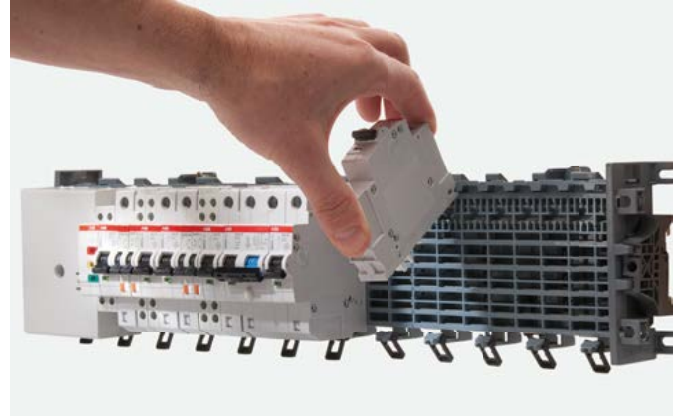
Globally Certified



* 125A multipole devices have an extra width of 9mm due to additional lateral spacers

SMISLINE TP plug-in system

Changes are never been easier



Even safer: Protection against electrical hazards

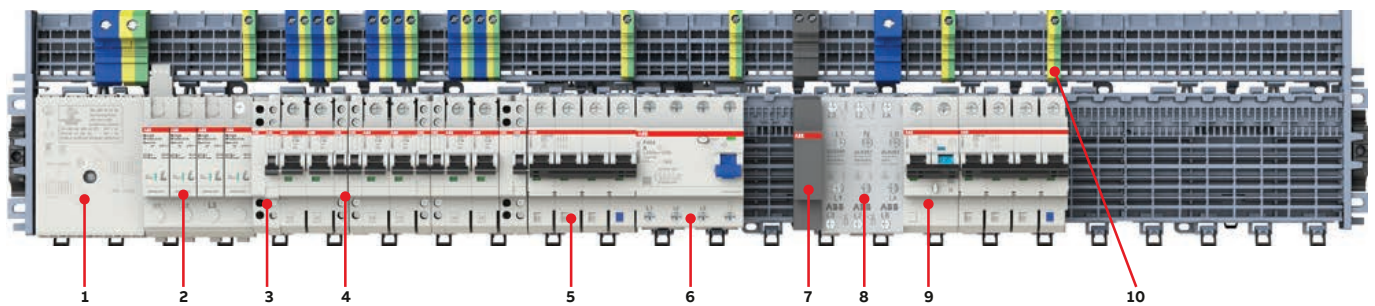
We have upgraded our unique SMISLINE socket system even further through the addition of a pioneering innovation. With the new SMISLINE TP system, components can now be plugged in or unplugged load-free without any risk from electrical current running through the body.

The SMISLINE TP pluggable socket system is completely finger-safe (IP2XB) – when devices are plugged in and unplugged, the system is always touch-proof. This means that SMISLINE TP prevents any danger to personnel from switching arcs or accidental arcing.

Even more flexible: make additions and changes during on-going operation

Pluggable devices can be added and changed quickly, safely and simply during ongoing operation. And this can be done without any need for personal protective equipment.

This means that you benefit from more flexibility, savings on installation and maintenance – and improved safety. SMISLINE TP provides greater availability and operating safety than conventional systems.



- | | |
|--|---|
| 1 Incoming block 125/160 A | 6 4-poles Residual current operated circuit breaker RCCBs |
| 2 Surge arrester | 7 Busbar insulator |
| 3 Auxiliary switch | 8 Incoming block 63 A |
| 4 Miniature circuit breaker (MCB) 1 pole | 9 2-pole Residual current operated circuit breaker (RCBO) |
| 5 Miniature circuit breaker (MCB) 4 pole | 10 N terminals and PE terminals |





Enclosed switching products

118	Introducing enclosed automatic transfer switches
122	Plug & play
124	Enclosed ATS
128	ATS accessories
132	TruONE
136	Technical data
138	TruONE accessories



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Enclosed automatic transfer switches

General specification

For ATS versions up to 125A the handle is a direct mounted type, and it can be padlocked in the “0” position with three padlocks with a 5 ... 6 mm hasp. It is possible to operate the switch with the manual handle in case of emergency, regardless of the position of switch and without any supply power.

Technical specifications according to IEC 60947-3 and IEC 60947-6-1

- | | |
|------------------------------------|------------------|
| • Type of equipment | ATSE |
| • Class of equipment | PC |
| • Rated operational voltage, | U_e Max. 415 V |
| • Rated impulse withstand voltage, | U_{imp} 6 kV |
| • Rated frequency | 50 - 60 Hz |

Bypass Requirement

In order to comply with BS8519 which states “Where the availability of the life safety and fire-fighting equipment is conditional to the occupation of the building, a bypass arrangement should be incorporated to enable the changeover device to be maintained without loss of service from the critical plant”.

The bypass switches consist of the following;

Single or mains bypass

Operate isolators to give a seamless transfer to the primary supply bypassing the ATS. The front of the panel should indicate that the ATS has been bypassed and is safe to carry out maintenance.

Dual Bypass

Operate isolators and change over switches to give a seamless transfer to bypass the ATS and to select either the primary supply or secondary supply.



The one ATS with all these advantages



Easy to Install

Reduces installation time by up to 80%.

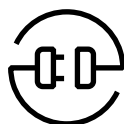
Why waste time piecing together an ATS from multiple components and as many as 20 connection wires, not to mention the time spent testing? TruONE® is the first automatic transfer switch to put it all together, including the controller with detachable HMI. It can be installed with a single wire using standard enclosures.



Safety and Protection

Reduces risk of operator injury.

TruONE® enables emergency manual operation — even under load — without opening the panel door when the HMI is mounted to the ATS frame. The HMI can be detached from the frame for door mounting, offering more flexibility for the panel designer. Best of all, regardless of the HMI installation method, there's no need for connecting dangerous line voltages to the door, so the risk of operator injury due to equipment malfunction is reduced.



Optimum Interface

Simplifies connectivity.

TruONE® features cloud-based connectivity through the ABB Ability™ Electrical Distribution Control System (EDCS). ABB Ability simplifies implementation and use of TruONE® in coordination with other ABB devices, ensuring one common user interface and one common software environment. Market-leading modular connectivity with seven communication protocols ensures easy installation and connectivity now and far into the future.

Even more advantages



Speed Up Your Project

Now you can speed up your project even more, thanks to TruONE® automatic commissioning capabilities. Pre-made configuration files can be uploaded from your PC to TruONE®, minimising the risk of human error and reducing programming time by 80%.



Continuous Operation

TruONE® features predictive maintenance, self-diagnostics and customer-replaceable critical modules to simplify service and significantly reduce downtime and service costs. Say goodbye to blinking lights and stopping motors. TruONE® provides a fast in-phase open transition of power, ensuring unnoticed generator use during business hours.



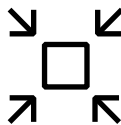
Energy Efficiency

Full compatibility with ABB Ability™ EDCS allows data processing from the site's electrical equipment to deliver analysis and make recommendations for optimising the electrical system's performance. This allows remote monitoring of plants, energy consumption and costs at a glance, making implementation of energy management strategies easier and faster.



Optimised Logistics

TruONE® features a wide voltage range from 200 to 480 Vac (with +/-20% tolerance), reducing the need to stock multiple SKUs, reducing inventory and saving space in the warehouse.



Space Saving

TruONE® features plug-in factory and field-mount accessorising, so you don't need extra space inside the panel. Even in the case of specialised customer needs, you can use standard cabinets.



Architecture

Truly plug & play

Embedded solution with Ekip Com Hub

Emax 2 equipped with the new Ekip Com Hub establishes the cloud connection for the whole switchboard.

This dedicated cartridge-type communication module just needs to be inserted into the terminal box and connected to the internet.

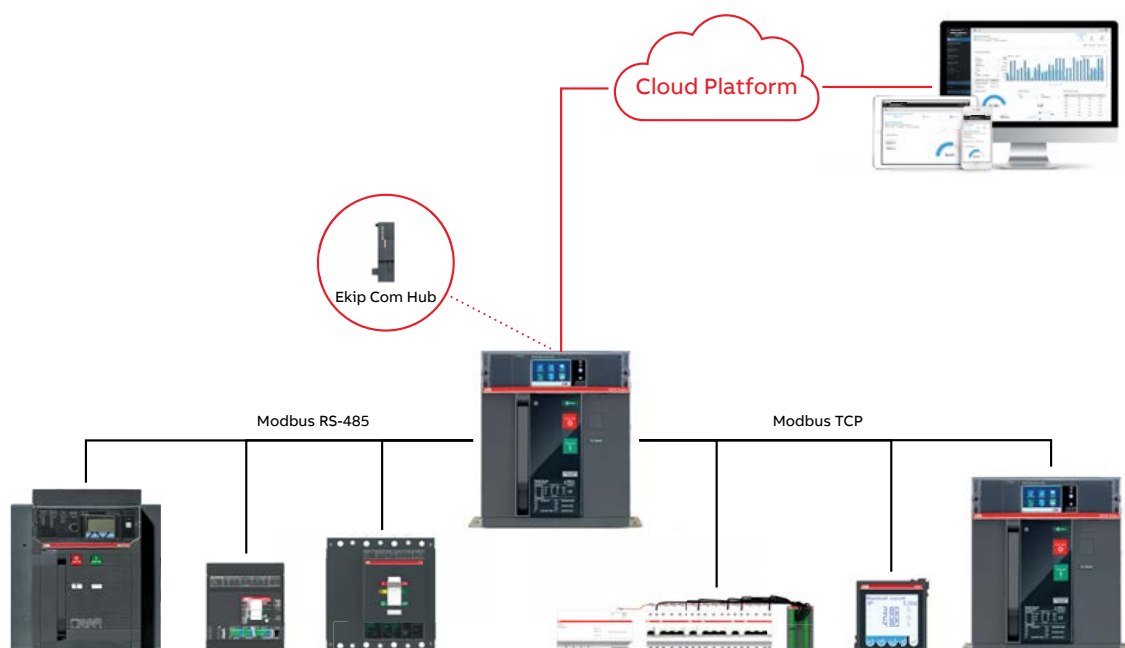


ABB showcases a further evolution in the low-voltage distribution business, setting a new benchmark in terms of simplicity and performance.

ABB Ability™ Electrical Distribution Control System enables the collection of relevant information from the ABB devices installed in the low-voltage power distribution system.

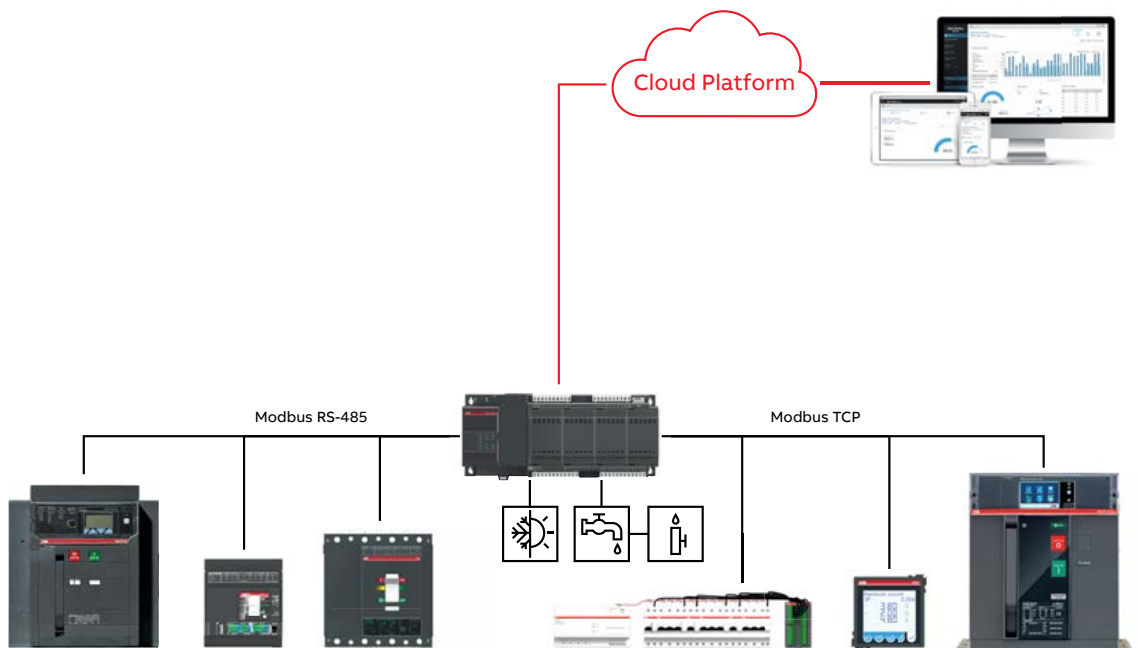
These devices can be connected, plug & play, to the cloud-computing platform by sharing data either with Emax 2 (equipped with Ekip Com Hub) or with Ekip E-Hub via Modbus RS-485, Modbus TCP and Ekip Link.

Family	Device	
ACB	Emax 2 (*)	
ACB	New Emax (*)	
MCCB	Tmax T (*)	
MCCB	Tmax XT (*)	
Metering device	M2M	
Metering device	CMS 700	
Fusegear	Slimline XR ITS 2	
Signalling module for digital inputs (e.g. for MCBs)	Ekip Signalling Modbus TCP	
Digital Meters/Sensor	Pulse meter (**)	
Analog Meters/Sensor	Analog meter (**)	
Arc guard	TVOC-2	
And many others to come...		

External solution with Ekip E-Hub

The Ekip E-Hub module can be mounted on DIN rail to collect data throughout the system. Moreover, it is possible to connect sensors for

environmental parameters (temperature, water, gas) via both analog and digital I/O. Modules for Wi-Fi or GPRS connection are provided as optional features.



INFORMATION													COMMUNICATION
	State	Current	Voltage	Power	Energy	Power Factor	Alarms	Maintenance & Diagnostics	Power Quality	Load management	Environmental parameters	General Info	Protocol
	•	•	•	•	•	•	•	•	•	•		•	Modbus RS-485, Modbus TCP, Ekip Link
	•	•	•	•	•	•	•	•				•	Modbus RS-485
	•	•	•	•	•	•	•	•				•	Modbus RS-485
	•	•	•	•	•	•	•	•				•	Modbus RS-485
		•	•	•	•	•			•			•	Modbus RS-485, Modbus TCP
		•	•	•	•	•						•	Modbus RS-485, Modbus TCP
	•	•	•	•	•	•	•	•				•	Modbus RS-485
	•											•	Modbus TCP
											•	•	Digital I/O
											•	•	Analog I/O
	•						•					•	Modbus RS-485
* Provided the product with dedicated accessories for communication and metering functions										** only with Ekip E-Hub module			

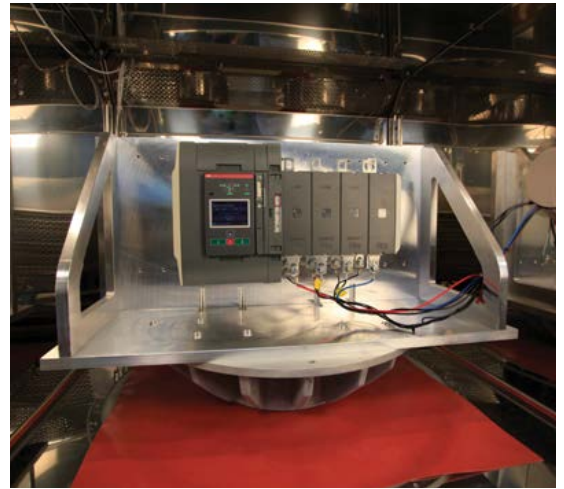
Reliable in extreme conditions

You can be sure TruONE® exceeds standard requirements for performance and reliability to bring you dependable operation in even the most challenging electrical, mechanical and environmental conditions.



TruONE® is the only ATS to guarantee safe and reliable operation during dramatic variations in temperature (-25–+70°C) and voltage (200–480 Vac with +/-20% tolerance), and it's tolerant of vibrations (acc. IEC 60068-2-6) and shocks (acc. IEC 60068-2-27). TruONE® also has true short-circuit resilience, able to take the hit and remain fully operational after exposure to even the most dangerous phenomena.

Site conditions can change due to unexpected situations, but the performance of TruONE® does not.



Testing for vibrations, shocks and a wide temperature range.

Enclosure

IP65 SR2 Sheet steel enclosures

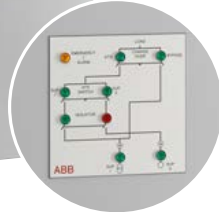
The SR2 enclosures come from years in building the experience IP65 metal structures (in accordance with the IEC 60529 Standard), together with the innovative new production process used for construction patented by ABB.

Conforming to EN 62208 standard for low voltage switchgear and controlgear assemblies and allow realisation of electrical equipment conforming to

IEC 60204-1 standard "Safety of machinery", electrical equipment of machines and of the EN 60439-1 Standard and the new EN 61439-1-2 standard "Low voltage protection switchgear and controlgear for assemblies". The degree of protection, in accordance with the IEC 60529 standard "Degrees of protection of enclosures (IP Code)", is IP65.

Enclosed ATS

Order Codes



Mimic panel on front door for easy identification.



Features and benefits:

- I-O-II –operation with stable OFF position between positions I and II
- HMI can be mounted on the door upon request, please add -H to Part no. (e.g. OTOne40E4L3SBSR-H)

I-O-II Delayed transition - Open style operation

Description	Enclosure Size (mm)	Order Code
40A 4 pole ATS with OMD300 controller	600 x 600 x 250	OTA40E4C3SR
63A 4 pole ATS with OMD300 controller	600 x 600 x 250	OTA63E4C3SR
125A 4 pole ATS with OMD300 controller	600 x 600 x 250	OTA125E4C3SR
40A 4 pole ATS with OMD800 controller	600 x 600 x 250	OTA40E4C8SR
63A 4 pole ATS with OMD800 controller	600 x 600 x 250	OTA63E4C8SR
125A 4 pole ATS with OMD800 controller	600 x 600 x 250	OTA125E4C8SR

Delayed transition – Open style, Level 2 DIP controls

Bottom entry - Source 1 and Source 2 connections on bottom, load connections on top

Description	Enclosure Size (mm)	Order Code
160A 4 pole ATS with level 2 controller	600 x 600 x 250	OTOne160E4L2SR
250A 4 pole ATS with level 2 controller	600 x 600 x 250	OTOne250E4L2SR
400A 4 pole ATS with level 2 controller	800 x 600 x 300	OTOne400E4L2SR
630A 4 pole ATS with level 2 controller	1000 x 800 x 400	OTOne630E4L2SR
800A 4 pole ATS with level 2 controller	1000 x 800 x 400	OTOne800E4L2SR
1000A 4 pole ATS with level 2 controller	1400 x 800 x 500	OTOne1000E4L2SR
1250A 4 pole ATS with level 2 controller	1400 x 800 x 500	OTOne1250E4L2SR
1600A 4 pole ATS with level 2 controller	1400 x 800 x 500	OTOne1600E4L2SR

Delayed transition – Open style, Level 3 LCD controls

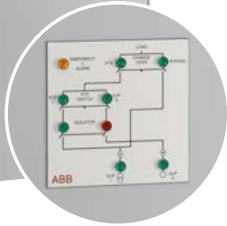
Bottom entry - Source 1 and Source 2 connections on bottom, load connections on top

Communication modules to be ordered separately.

Description	Enclosure Size (mm)	Order Code
160A 4 pole ATS with level 3 controller	600 x 600 x 250	OTOne160E4L3SR
250A 4 pole ATS with level 3 controller	600 x 600 x 250	OTOne250E4L3SR
400A 4 pole ATS with level 3 controller	800 x 600 x 300	OTOne400E4L3AM
630A 4 pole ATS with level 3 controller	1000 x 800 x 400	OTOne630E4L3AM
800A 4 pole ATS with level 3 controller	1000 x 800 x 400	OTOne800E4L3AM
1000A 4 pole ATS with level 3 controller	1400 x 800 x 500	OTOne1000E4L3AM
1250A 4 pole ATS with level 3 controller	1400 x 800 x 500	OTOne1250E4L3AM
1600A 4 pole ATS with level 3 controller	1400 x 800 x 500	OTOne1600E4L3SAM

Ordering Information

Enclosed ATS single and dual bypass



Mimic panel on front door for easy identification.

Features and benefits:

- I-O-II –operation with stable OFF position between positions I and II
- HMI can be mounted on the door upon request, please add -H to Part no. (e.g. OTOne40E4L3SBSR-H)



Delayed transition – I-O-II Level 3 LCD controller

Description	Enclosure Size (mm)	Order Code
40A 4 pole level 3 controller ATS, single bypass	1000 x 800 x 300	OTOne40E4L3SBSR
63A 4 pole level 3 controller ATS, single bypass	1000 x 800 x 300	OTOne63E4L3SBSR
100A 4 pole level 3 controller ATS, single bypass	1000 x 800 x 300	OTOne100E4L3SBSR
160A 4 pole level 3 controller ATS, single bypass	1200 x 1000 x 400	OTOne160E4L3SBSR
250A 4 pole level 3 controller ATS, single bypass	1200 x 1000 x 400	OTOne250E4L3SBSR
400A 4 pole level 3 controller ATS, single bypass	1200 x 1000 x 400	OTOne400E4L3SBAM
630A 4 pole level 3 controller ATS, single bypass	1600 x 1200 x 600	OTOne630E4L3SBAM
800A 4 pole level 3 controller ATS, single bypass	1600 x 1200 x 600	OTOne800E4L3DBAM

Description	Enclosure Size (mm)	Order Code
40A 4 pole level 3 controller ATS, dual bypass	1000 x 800 x 300	OTOne40E4L3DBSR
63A 4 pole level 3 controller ATS, dual bypass	1000 x 800 x 300	OTOne63E4L3DBSR
100A 4 pole level 3 controller ATS, dual bypass	1000 x 800 x 300	OTOne100E4L3DBSR
160A 4 pole level 3 controller ATS, dual bypass	1200 x 1000 x 400	OTOne160E4L3DBSR
250A 4 pole level 3 controller ATS, dual bypass	1200 x 1000 x 400	OTOne250E4L3SBSR
400A 4 pole level 3 controller ATS, dual bypass	1200 x 1000 x 400	OTOne400E4L3DBAM
630A 4 pole level 3 controller ATS, dual bypass	1600 x 1200 x 600	OTOne630E4L3DBAM
800A 4 pole level 3 controller ATS, dual bypass	1600 x 1200 x 600	OTOne800E4L3DBAM

Ordering Information

Enclosed ATS with overlapping neutral with no bypass, single bypass and dual bypass

Features and benefits:

- I-II operation without stable OFF position
- Delivery includes handle for manual operation
- HMI can be mounted on the door upon request, please add -H to Part no.
(e.g. OTOne40E4L3SBSR-H)

Open transition – Open style, Level 3 LCD controller with overlapping neutral. I-II Operation
Bottom entry - Source 1 and Source 2 connections on bottom, load connections on top

Description	Enclosure Size (mm)	Order Code
60A 4 pole with TruOne level 3 controller & overlapping neutral	600 x 600 x 250	OTOne60E4L3OLNSR
100A 4 pole with TruOne level 3 controller & overlapping neutral	600 x 600 x 250	OTOne100E4L3OLNSR
160A 4 pole with TruOne level 3 controller & overlapping neutral	600 x 600 x 250	OTOne160E4L3OLNSR
200A 4 pole with TruOne level 3 controller & overlapping neutral	600 x 600 x 250	OTOne200E4L3OLNSR
250A 4 pole with TruOne level 3 controller & overlapping neutral	600 x 600 x 250	OTOne250E4L3OLNSR
400A 4 pole with TruOne level 3 controller & overlapping neutral	800 x 600 x 300	OTOne400E4L3OLNSR
630A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 400	OTOne630E4L3OLNSR
800A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 400	OTOne800E4L3OLNSR

Description	Enclosure Size (mm)	Order Code
60A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 300	OTOne60E4L3OLNSBSR
100A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 300	OTOne100E4L3OLNSBSR
160A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 300	OTOne160E4L3OLNSBSR
200A 4 pole with TruOne level 3 controller & overlapping neutral	1200 x 1000 x 400	OTOne200E4L3OLNSBSR
250A 4 pole with TruOne level 3 controller & overlapping neutral	1200 x 1000 x 400	OTOne250E4L3OLNSBSR
400A 4 pole with TruOne level 3 controller & overlapping neutral	1200 x 1000 x 400	OTOne400E4L3OLNSBAM
630A 4 pole with TruOne level 3 controller & overlapping neutral	1600 x 1200 x 600	OTOne630E4L3OLNSBAM
800A 4 pole with TruOne level 3 controller & overlapping neutral	1600 x 1200 x 600	OTOne800E4L3OLNSBAM

Description	Enclosure Size (mm)	Order Code
60A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 300	OTOne60E4L3OLNDBSR
100A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 300	OTOne100E4L3OLNDBSR
160A 4 pole with TruOne level 3 controller & overlapping neutral	1000 x 800 x 300	OTOne160E4L3OLNDBSR
200A 4 pole with TruOne level 3 controller & overlapping neutral	1200 x 1000 x 400	OTOne200E4L3OLNDBSR
250A 4 pole with TruOne level 3 controller & overlapping neutral	1200 x 1000 x 400	OTOne250E4L3OLNDBSR
400A 4 pole with TruOne level 3 controller & overlapping neutral	1200 x 1000 x 400	OTOne400E4L3OLNDBAM
630A 4 pole with TruOne level 3 controller & overlapping neutral	1600 x 1200 x 600	OTOne630E4L3OLNDBAM
800A 4 pole with TruOne level 3 controller & overlapping neutral	1600 x 1200 x 600	OTOne800E4L3OLNDBAM

Accessories

Automatic transfer switches



OXEA1

Auxiliary power supply module

The OXEA1 auxiliary power supply module is used for: a) connecting connectivity modules (signalling and communication) to the switch b) powering the ATS controller and connectivity modules from auxiliary 12-24 Vdc power supply, to keep them operational during power failures. A 12-24 Vdc power supply is not required when line power is available but it is necessary to keep the modules operational during power failures.

Suitable for switches	Aux voltage	Type	Weight/unit kg	Order Code
OX30...1600	12-24Vdc	OXEA1	0.04	1SCA148926R1001



Connectivity modules

The connectivity modules are used in combination with OXEA1 auxiliary power supply module to enable communication capabilities (Ekip Com modules) and increase the number of digital inputs and outputs (Ekip Signalling modules). The maximum number of additional modules depends on the TruONE switch size: IEC 200-400 Amps and UL 30-260 Amps can fit three additional modules and IEC 500-1600 Amps and UL 400-1200 Amps can fit four additional modules. These modules are available with TruONE Level 3 and Level 4 controllers.



EKIP COM

Communication modules for Level 3 and Level 4 controllers

The Ekip Com modules enable TruONE to be integrated in an industrial communication network for remote supervision and control of the switch. Several Ekip Com modules can be installed at the same time, thereby enabling connection to communication systems that use different protocols. The Ekip Com modules for Modbus RTU, Profibus-DP and DeviceNet contain a terminating resistor and DIP switch for optional activation to terminate the serial network or bus. The Profibus-DP module also contains a polarisation resistor and DIP switch for its activation.

Suitable for switches	Protocol	Type	Weight/unit kg	Order Code
OX30...1600	Modbus RTU	Ekip Com Modbus RTU-OX	0.2	1SDA104051R1
OX30...1600	Modbus TCP	Ekip Com Modbus TCP-OX	0.2	1SDA104052R1
OX30...1600	Profibus DP	Ekip Com Profibus	0.2	1SDA074152R1
OX30...1600	Profinet	Ekip Com Profinet	0.2	1SDA074153R1
OX30...1600	EtherNet/IP	Ekip Com EtherNet / IP	0.2	1SDA074155R1
OX30...1600	DeviceNet	Ekip Com DeviceNet	0.2	1SDA074154R1

Accessories

Automatic transfer switches



EKIP 2K SIGNALLING

The Ekip 2K Signalling modules add two input and two output contacts for controlling and remote signalling. They can be programmed with the HMI unit's display or with the Ekip Connect software. Three versions of the Ekip 2K Signalling modules are available: Ekip 2K-1, Ekip 2K-2, Ekip 2K-3. Simultaneous usage of same types is not possible.

Signalling modules for Level 3 and Level 4 controllers

Suitable for switches	No. of DI/DO	DI/DO numbering	Type	Weight/unit kg	Order Code
OX30...1600	2/2	11,12/11,12	Ekip Signalling 2K-1-OX	0.2	1SDA104053R1
OX30...1600	2/2	21,22/21,22	Ekip Signalling 2K-2-OX	0.2	1SDA104054R1
OX30...1600	2/2	31,32/31,32	Ekip Signalling 2K-3-OX	0.2	1SDA104055R1



EKIP PROGRAMMING

The Ekip Programming module is used for programming TruONE via USB to a PC using the Ekip Connect software that can be downloaded online. It enables both online (line power available) and offline (no line power available) programming. Available for TruONE Level 3 and Level 4 controllers.

Ekip programming module

Suitable for switches	Type	Weight/unit kg	Order Code
OX30...1600	Ekip Programming	0.2	1SDA076154R1



EKIP COM HUB

Ekip Com Hub is a communication module for cloud-based connectivity through the ABB Ability™ Electrical Distribution Control System (EDCS). TruONE equipped with Ekip Com Hub can establish the connection to ABB Ability for the whole low-voltage power distribution panel. This dedicated cartridge-type communication module just needs to be inserted into the TruONE and connected to the internet. For further information related to ABB Ability and Electrical Distribution Control System, please visit the dedicated website <https://new.abb.com/low-voltage/launches/abb-ability-edcs>. Available for TruONE Level 3 and Level 4 controllers.

Ekip com hub

Suitable for switches	Type	Weight/unit kg	Order Code
OX30...1600	Ekip Programming	0.2	1SDA076154R1

Accessories

Automatic transfer switches



OXEB_
Phase barriers

Grey plastic barriers for maintaining 1" clearance between the phases without terminal shrouds. Snap-on mounting. Included as standard for the LOAD side terminals with IEC 500-1600 Amps and UL 400-1200 Amps.

Suitable for switches	No. of poles	Units/type [pcs]	Type	Weight/unit kg	Order Code
OX30...1600	3	4	OXEB1600/4	0.5	1SCA150201R1001
OX30...1600	4	6	OXEB1600/6	0.7	1SCA150202R1001

Note: Phase barriers cannot be used together with terminal shrouds.



OXEW1600_
Wide blade kit

This is required for IEC 1000-1600 A and UL 800-1200 A switches on the LOAD side terminals, when wiring is done with four cables and using mechanical compression lugs.

Suitable for switches	No. of poles	Units/type [pcs]	Type	Weight/unit kg	Order Code
IEC 1000-1600 Amps	3	6	OXEW1600/3	1.38	1SCA150204R1001
UL 800-1200 Amps	4	8	OXEW1600/4	1.83	1SCA150205R1001

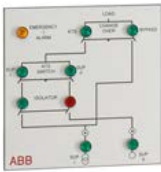
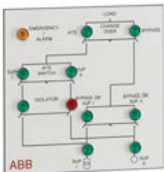
Note: These codes are only for spare part purposes as the items are already included in the standard delivery.



OXEC21
Wide blade kit

IP54 padlockable transparent cover, providing protection against accidental contact.

Suitable for switches	Type	Weight/unit kg	Order Code
OX30...1600	OXEC21	0.18	1SCA147308R1001



Mimic panels (Single/Dual Bypass)

Description	Dimensions (mm)	Order Code
Mimic Panel for Dual ByPass ATS	200 x 200 x 80	01MimicDB
Mimic Panel for Single ByPass ATS	200 x 200 x 80	01MimicSB

Note: Other options available upon request.

Accessories

Automatic transfer switches



OA1G01AU

Mounting on the right side of the switch: Max. 4 auxiliary contact blocks / Source 1 and Source 2 position indication (totally 8 blocks). Types _AU have gold plated contacts for harsh environments and low operating voltages. Simultaneous action with the main contacts, IP20.

Auxiliary contacts

Suitable for switches	Contact functions	Installation side	Delivery batch [pcs]	Type	Weight/unit kg	Order Code
OX30...1600	1NO	Right	10	OA1G10	0.03	1SCA022353R4970
OX30...1600	1NC	Right	10	OA3G01	0.03	1SCA022456R7410
OX30...1600	1NO	Right	10	OA1G10AU	0.03	1SCA022436R7910
OX30...1600	1NC	Right	10	OA3G01AU	0.03	1SCA022819R5260



OA1G10

Auxiliary contacts - Technical data for auxiliary contacts according to IEC 60947-5-1, for OA1G_, OA3G_

AC15				DC12		DC13
Ue/[V]	Ie/[A]	Ue/[V]	Ie/[A]	P/[W]	Ie/[A]	P/[W]
230	6	24	10	240	2	50
400	4	72	4	290	0.8	60
415	4	125	2	250	0.55	70
690	2	250	0.55	140	0.27	70
		440	0.1	44		



OA3G01

Auxiliary contacts - Function table for auxiliary contacts / Source 1 position (max. 2+2)

Switch position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	closed	open
0	open	open	closed
II	closed	open	closed



OA3G01AU

Auxiliary contacts - Function table for auxiliary contacts / Source 2 position (max. 2+2)

Switch position	Main contacts	OA1G10 NO	OA3G01 NC
I	closed	open	closed
0	open	open	closed
II	closed	closed	open

TruONE™ Part no. key

Example key and product description:

AXB1000E3S4Q54B

ABB TruONE™ automatic transfer switch, delayed transition, 1000 amperes, IEC, 3 phase + Neutral (3ph, 4 wire), Level 4 controls, 200–480 VAC voltage area, enclosed style IP54 – bottom in/bottom out.

ABB TruONE™ ATS

OX

ATS type

A Open transition I - II (without stable OFF position for load disconnection)

B Delayed transition I - O - II (with stable OFF position for load disconnection)

ATS size

30, 60, 100, 125, 160, 200, 250, 260, 315, 400, 500, 600, 630, 800, 1000, 1200, 1250, 1600

Standard

E IEC

U UL

Phase poles

1 1-pole

2 2-pole

3 3-pole

Neutral

S Switched Neutral

O Overlapping Neutral

X None

Controller

2 Level 2 controls (DIP)

3 Level 3 controls (LCD)

4 Level 4 controls (Touch)

Voltage code

Q 200–480 VAC

Enclosure rating

54 IP54 (IEC)

_ (blank) Open style, no enclosure

Cabling direction

Open style, no enclosure

B Bottom entry (sources on bottom, load on top)

T Top entry (sources on the top, load on the bottom)

Enclosed style

B Bottom in / Bottom out

D Bottom in / Top out

Note: Contact ABB for more details on the available versions.

—
01 Open style ATS
UL 30-200 A
IEC 200-250 A



—
02 Open style ATS
UL 260 A
IEC 315-400 A



—
03 Open style ATS
UL 400-600 A
IEC 500-800 A



—
04 Open style ATS
UL 800-1200 A
IEC 1000-1600 A



—
05 Enclosed style ATS
IEC 200-1600 A



Targeted product performance

ATS Frame Size	30-400 A	260-800 A	800-1600 A
IEC 60947-6-1, GB 14048-11: AC-33B	200-400 A	630-800 A	1000-1600 A
GB 14048-11: AC-33iA	30-200 A	260-600 A	800-1200 A
UL1008: Emergency systems—total system load	30-200 A	260-600 A	800-1200 A
I _{cc} (rated conditional short-circuit current)	100 kA	100 kA	100 kA
I _{cw} (rated short-time withstand current)/Short-time current ratings, 100ms	18-30 kA	42 kA	50 kA
I _{cw} (rated short-time withstand current)/Short-time current ratings, 500ms		30 kA	50 kA
Withstand and Close-on ratings (any breaker) 480V	42 kA	50 kA	85 kA
Withstand and Close-on ratings, with current limiting fuses	200 kA	200 kA	200 kA

TruONE™ feature comparison

Main features in the table below. Consult ABB for more information.



Feature comparison

	Level 2 controls	Level 3 controls	Level 4 controls
Ampere sizes available	IEC: 200-1600 A UL: 30-1200 A	IEC: 200-1600 A UL: 30-1200 A	IEC: 200-1600 A UL: 30-1200 A
Rated voltage	200-480Vac	200-480Vac	200-480Vac
Rated frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Phase system	Single and Three	Single and Three	Single and Three
Number of poles	2, 3 and 4	2, 3 and 4	3 and 4
Neutral configuration			
Switched	Yes	Yes	Yes
Overlapping	No	Yes	Yes
Product type			
Open transition (I-II)	Yes	Yes	Yes
Delayed transition (I-O-II)	Yes	Yes	Yes
Voltage and frequency settings			
Pick up Voltage Source 1	Fixed 2% above drop out	81...99%, 101...119%	81...99%, 101...119%
Drop out Voltage Source 1	+/-5, 10, 15, 20%	80...98%, 102...120%	80...98%, 102...120%
Pick up Voltage Source 2	Fixed 2% above drop out	81...99%, 101...119%	81...99%, 101...119%
Drop out Voltage Source 2	+/-5, 10, 15, 20%	80...98%, 102...120%	80...98%, 102...120%
Pick up Frequency Source 1	Fixed 1% above drop out	80,5...99,5%, 100,5...119,5%	80,5...99,5%, 100,5...119,5%
Drop out Frequency Source 1	+/-5, 10 %	80...99%, 101...120%	80...99%, 101...120%
Pick up Frequency Source 2	Fixed 1% above drop out	80,5...99,5%, 100,5...119,5%	80,5...99,5%, 100,5...119,5%
Drop out Frequency Source 2	+/-5, 10 %	80...99%, 101...120%	80...99%, 101...120%
Time delay settings			
Override momentary Source 1 Outage, sec	0, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30	0...60	0...60
Transfer from Source 1 to Source 2, sec	Fixed 2 seconds	0...3600	0...3600
Override momentary Source 2 Outage, sec	Fixed 1,5 seconds	0...60	0...60
Transfer from Source 2 to Source 1, min	0, 1, 2, 3, 4, 5, 10, 15, 20, 25, 30	0...120	0...120
Generator stop delay, min	30 secs or 4 mins	0...60	0...60
Center-OFF delay, sec	0 or 4	0...300	0...300
Pre-transfer delay S1 to S2, sec	No	0...60	0...60
Post-transfer delay S1 to S2, sec	No	0...60	0...60
Pre-transfer delay S2 to S1, sec	No	0...60	0...60
Post-transfer delay S2 to S1, sec	No	0...60	0...60
Load shed delay, sec	No	0...60	0...60
Source failure detections			
No voltage	Yes	Yes	Yes
Undervoltage	Yes	Yes	Yes
Overvoltage	Yes	Yes	Yes
Phase missing	Yes	Yes	Yes
Voltage unbalance	Yes	Yes	Yes
Invalid frequency	Yes	Yes	Yes
Incorrect phase sequence	Yes	Yes	Yes

TruONE™ feature comparison

Main features in the table below. Consult ABB for more information.



Feature comparison

	Level 2 controls	Level 3 controls	Level 4 controls
Features			
Controls	DIP + keys	LCD + keys	Touch + keys
LED indications for ATS, S1 and S2 status	Yes	Yes	Yes
Open transition - Standard digital inputs/outputs	0 / 1	1 / 1	2 / 1
Delayed transition - Standard digital inputs/outputs	1 / 1	2 / 1	3 / 1
Programmable digital inputs/outputs	No	Yes	Yes
Auto config (voltage, frequency, phase system)	Yes	Yes	Yes
Source priority	Source 1, No priority	Source 1/2, No priority	Source 1/2, No priority
Manual re-transfer	Yes	Yes	Yes
In-phase monitor	Yes	Yes	Yes
Genset exercising: on-load, off-load	Yes	Yes	Yes
In-built power meter module	No	No	Yes
Load shedding	No	Yes	Yes
Real time clock	No	Yes	Yes
Event log	No	Yes	Yes
Predictive maintenance	No	No	Yes
Field-mount accessories			
Auxiliary contacts for position indication	Yes	Yes	Yes
Digital input/output modules	No	Yes	Yes
12-24 Vdc aux supply module for controller	No	Yes	Yes
Communication modules	No	Yes	Yes
Connectivity			
Modbus RS485	No	Yes	Yes
Modbus/TCP	No	Yes	Yes
Profibus DP	No	Yes	Yes
ProfiNet	No	Yes	Yes
DeviceNet	No	Yes	Yes
Ethernet IP	No	Yes	Yes
IEC 61850	No	Yes	Yes
Monitoring via ABB Ability™: EDCS	No	Yes	Yes
Enclosures			
Open style	Yes	Yes	Yes
IP54	No	Yes	Yes
For applications			
Mains - Mains	Yes	Yes	Yes
Mains - Generator	Yes	Yes	Yes

Compact ATS

Easy to use and installation

01 Easy manual operation with the handle in case of emergency.

02 DIN- rail mounting.

03 Base mounting with screws.



01



02



03

Technical data

OTM_C_D products overview



OTM_C20D

For Network/Network application.

Fixed version with pre-defined delay times and voltage thresholds.

Fixed version

Number of poles	Rated current (A)	Rated voltage (V)	Voltage sensing	Type	Order Code	Weight (kg)
2	63	230:220-240	Top in	OTM63F2C20D230C	1SCA151421R1001	1.75
2	125	230:220-240	Top in	OTM125F2C20D230C	1SCA151417R1001	1.75
3	63	400:380-415	Top in	OTM63F3C20D400C	1SCA151423R1001	1.75
3	125	400:380-415	Top in	OTM125F3C20D400C	1SCA151419R1001	1.75
4	40	400:380-415	Top in	OTM40F4C20D400C	1SCA151252R1001	2.00
4	63	400:380-415	Top in	OTM63F4C20D400C	1SCA151254R1001	2.00
4	125	400:380-415	Top in	OTM125F4C20D400C	1SCA151250R1001	2.00



OTM_C21D

For Network/Network and Network/Genset applications.

Adjustable version with configurable transfer and back-switching delays.

Adjustable over and under-voltage thresholds.

Adjustable version

Number of poles	Rated current (A)	Rated voltage (V)	Voltage sensing	Type	Order Code	Weight (kg)
2	63	230:220-240	Top in	OTM63F2C21D230C	1SCA151422R1001	1.75
2	125	230:220-240	Top in	OTM125F2C21D230C	1SCA151418R1001	1.75
3	63	400:380-415	Top in	OTM63F3C21D400C	1SCA151424R1001	1.75
3	125	400:380-415	Top in	OTM125F3C21D400C	1SCA151420R1001	1.75
4	40	400:380-415	Top in	OTM40F4C21D400C	1SCA151253R1001	2.00
4	63	400:380-415	Top in	OTM63F4C21D400C	1SCA151255R1001	2.00
4	125	400:380-415	Top in	OTM125F4C21D400C	1SCA151251R1001	2.00
4	40	400:380-415	Bottom in	OTM40F4CB21D400C	1SCA150580R1001	2.00
4	63	400:380-415	Bottom in	OTM63F4CB21D400C	1SCA150586R1001	2.00
4	125	400:380-415	Bottom in	OTM125F4CB21D400C	1SCA150574R1001	2.00

Accessories

Order Codes

Handles, direct mounting

Plastic I - O - II handle

Suitable for switches	Colour	Installation side	Type	Order Code	Units/type (pcs)	Weight/unit (kg)
OTM40...125F_CM	Black	Shaft incl.	OHB65D6CM	1SCA022807R9430	1	0.12



Handle storage clip

The handle can be stored in the handle storage clip OTVS0. The handle storage clip can be fixed to a panel frame using the included adhesive tape.

Suitable for switches	Type	Order Code	Units/type (pcs)	Weight/unit (kg)
OTM40...125F_CM	OTVS0	1SCA117524R1001	1	0.02



OA1G01
OA7G10



OA1G10
OA8G01

Auxiliary contacts

Snap-on mounting to the switch, IP 20, max. 2 blocks/ side. $I_{th} = 16\text{ A}$, suitable for cable cross sections max. $2 \times 2.5\text{ mm}^2$. Simultaneous action with the main contacts. The type and ordering number is for one piece.

Suitable for switches	Contact function	Installation side	Type	Order Code	Units/type (pcs)	Weight/unit (kg)
OTM40...125F_CM	1NO	Right	OA1G10	1SCA022353R4970	1	0.03
OTM40...125F_CM	1NC	Right	OA8G01	1SCA022744R2240	1	0.03
OTM40...125F_CM	1NO	Left	OA7G10	1SCA022673R1140	1	0.03
OTM40...125F_CM	1NC	Left	OA1G01	1SCA022353R4890	1	0.03

Accessories

Order Codes



OTS_T3



OTS_T1

Terminal shrouds

Transparent plastic, snap-on mounting to the switches, IP20. The full shrouding of a 3-pole change-over switch is achieved with four 3-pole shrouds.*

Suitable for switches	Type	Order Code	Units/type (pcs)	Weight/unit (kg)
For three pole switches				
OTM40...125F_CM	OTS125T3	1SCA022379R9680	1	0.03
For fourth pole				
OTPS60FP, OTPS125FP	OTS125T1	1SCA022379R9760	1	0.03



OZXT1



OZXT6

OZXT2...3

Terminal clamp sets

Suitable for switches	Contact function	Type	Order Code	Units/type (pcs)	Weight/unit (kg)
Terminal clamp sets for Al- and Cu-cables insulated versions					
OTM40...125F_CM	16...50 Al / 2.5...50 Cu	OZXT1	1SCA022469R6310	3	0.06
OTM63...125F_CM	16...120 Al/Cu	OZXT2	1SCA022620R7200	3	0.21
OTM63...125F_CM	2x(16...50) Al/Cu	OZXT3	1SCA022639R0720	3	0.21
Including 0.75...2.5 mm² voltage sensing connection. Voltage sensing wires are not included in the delivery					
OTM40...125F_CM	16...50 Al/2.5...50 Cu	OZXT6	1SCA122537R1001	3	0.06
Terminal clamp sets for Al- and Cu-cables					
OTM40...125F_CM	10...70 Al/Cu	OZXL1	1SCA022439R6770	3	0.14



OMZC_

Parallel connection kits

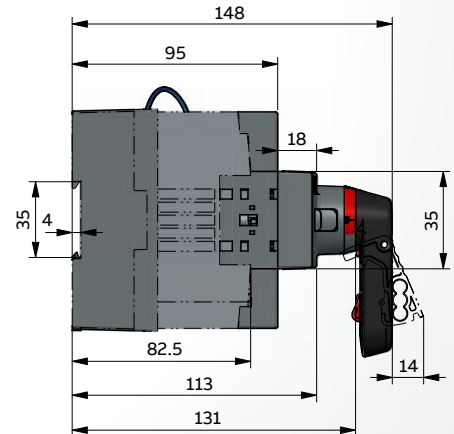
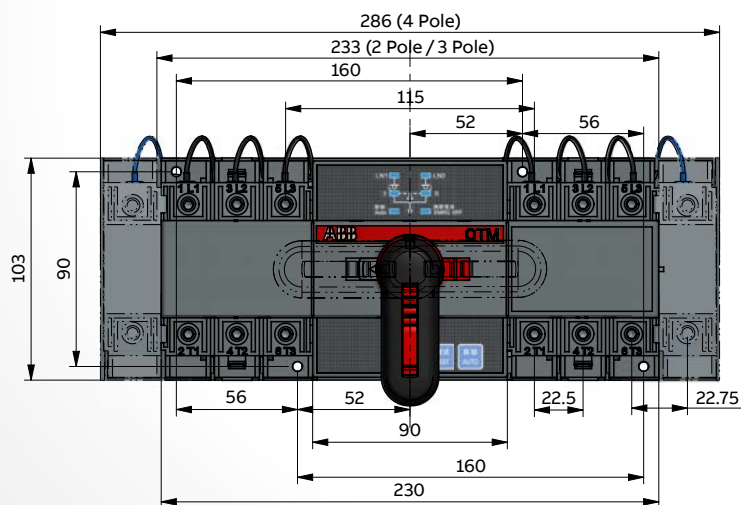
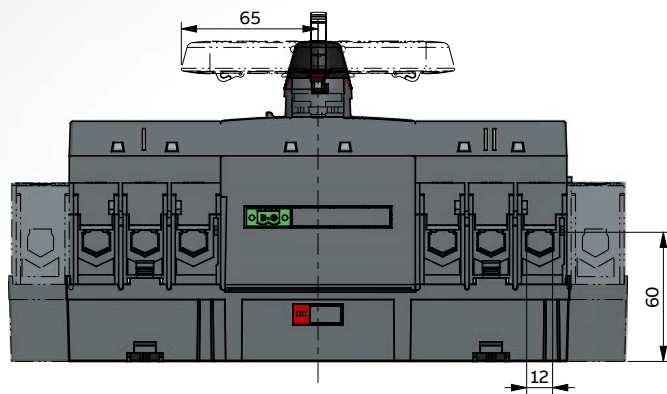
Finger protected connection bars for parallel connection of the upper or lower terminals. The bars accept additional cables, the maximum size is stated below.

Suitable for switches	Cable crosssection (mm ²)	Type	Order Code	Units/type (pcs)	Weight/unit (kg)
OTM40F3CM_	2.5...25/2x2.5...16	OMZC003	1SCA121324R1001	1	0.5
OTM40F4CM_	2.5...25/2x2.5...16	OMZC004	1SCA121325R1001	1	0.65
OTM40...125F3CM_	10...70	OMZC03	1SCA117037R1001	1	0.5
OTM40...125F4CM_	10...70	OMZC04	1SCA117038R1001	1	0.65

* Terminal shrouds can also be mounted on parallel connection kits.

Compact ATS

Dimensional drawings



Technical data

Compact automatic transfer switches OTM40...125_

Compact automatic transfer switches

Data according to IEC 60947-3				Switch size		
				OTM40_	OTM63_	OTM125_
Rated insulation voltage and rated operational voltage AC20/DC20	Pollution degree 3	V		800	800	800
Dielectric strength	50 Hz 1min.	kV		6	6	6
Rated impulse withstand voltage		kV		8	8	8
Rated thermal current and rated operational current AC20/DC20	/ ambient 40°C	In open air	A	40	63	125
	/ ambient 40°C	In enclosure	A	40	63	125
	/ ambient 60°C	In enclosure	A	32	50	100
..with minimum conductor cross section	Cu	mm ²		10	16	50
Rated operational current, AC-21A	up to 500 V	A		40	63	125
	690 V	A		40	63	125
Rated operational current, AC-22A	up to 500 V	A		40	63	125
	690 V	A		40	63	125
Rated operational current, AC-23A	up to 415 V	A		40	63	90
	500 V	A		40	60	70
	690 V	A		40	40	50
Rated operational current / poles in series, DC-21A	up to 48 V	A		40/1	63/1	125/1
	110 V	A		40/2	63/2	125/2
	220 V	A		40/4	63/4	100/4
Rated operational current / poles in series, DC-22A	up to 48 V	A		40/1	63/1	125/1
	110 V	A		40/2	63/2	125/2
	220 V	A		40/4	63/4	80/4
Rated operational current / poles in series, DC-23A	up to 48 V	A		40/1	63/1	125/1
	110 V	A		40/2	63/2	125/2
	220 V	A		40/4	63/4	63/4
Rated operational power, AC-23A ¹⁾	230 V	kW		7.5	15	22
The kW-ratings are accurate for 3-phase 1500 R.P.M. standard asynchronous motors	400 V	kW		18.5	30	45
	415 V	kW		18.5	30	45
	500 V	kW		22	37	45
	690 V	kW		37	37	45
Rated breaking capacity in category AC-23	up to 415 V	A		320	504	720
	500 V	A		320	480	560
	690 V	A		320	320	400
Rated conditional short-circuit current I _p (r.m.s.) and corresponding max. allowed cut-off current I _c (peak) value.	I _p (r.m.s.) 50 kA, 415 V	I _c (peak)	kA	16.5	16.5	16.5
	Max. OFA_ fuse size	gG/aM	A/A	125/125	125/125	125/125
The cut-off current I _c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269).	I _p (r.m.s.) 18 kA, 690 V	I _c (peak)	kA	11	11	11
	Max. OFA_ fuse size	gG	A	125	125	125
	I _p (r.m.s.) 50 kA, 690 V	I _c (peak)	kA	10	10	10
	Max. OFA_ fuse size	gG/aM	A/A	63/63	63/63	63/63
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 1s	kA	2.5	2.5	2.5
Rated short-time making capacity ²⁾	I _{cm} (peak)	690 V	kA	3.6	3.6	3.6
Power loss / pole	With rated current		W	1.6	2.8	6.3
Mechanical endurance	Number of oper. cycles ³⁾	Cycles		10 000	10 000	10 000
Cable size	Cu-wire size suitable for terminal clamps	mm ²		2.5-25/2x2.5-16	10-70	10-70
		AWG		14-4/2x14-6	8-00	8-00
Terminal tightening torque	Counter torque required	Nm		6	6	6
Operating torque	Typical for 3-pole switches	Nm		5	5	5
Weight without accessories	3-pole switch	kg		1.75	1.75	1.75

Technical data

Compact automatic transfer switches

Automatic transfer switches functionality

OTM_C_D products overview	OTM_C20D_	OTM_C21D_
Features	x	x
Rated operational voltage Ue	154 V AC - 480 V AC +/- 20% + N	
Rated frequency	50 / 60 Hz +/- 10%	
Voltage sensing precision	5%	
Frequency sensing precision	1%	
Rated impulse withstand voltage, Uimp	6 kV	
Overvoltage category	III	
Pollution degree	2	
Protection rating for the front panel	IP20	
Operating temperature	- 20...+ 60 °C	
Transportation and storage temperature	- 25...+ 80 °C	
Altitude	Max. 2000m	
Humidity With condensation	5 %...98 %	
Humidity Without condensation	5 %...90 %	
Operation Types		
Manual operation with handle	x	x
Local operation with front panel keypad		x
Automatic transfer switching equipment (ATSE)	x	x
Applications		
Transfer between two Transformers	x	x
Transfer between a Transformers and a generator		x
Operation modes		
Automatic transfer and back-switching operation	x	x
Automatic transfer and manual back-switching operation	x	x
Source failure detections		
No voltage	x	x
Undervoltage	Fixed 0.7Ue	0.7-0.95 Ue
Overvoltage	Fixed 1.3Ue	1.05-1.3 Ue
Phase missing	x	x
Voltage unbalance		x
Invalid frequency		x
Configuration		
By DIP switches	x	x
By rotary switches		x
Two power status display	x	x
Two switches status display	x	x
Auto status display	x	x
Alarm display	x	x

Technical data

Compact automatic transfer switches

Automatic transfer switches functionality

OTM_C_D products overview	OTM_C20D_	OTM_C21D_
Time delays		
Delay on transfer ³⁾		0-30s
Back-switching delay		0-900s
Generator stop delay		30s,400s
Signals input and output		
Emergency Off with 24VDC signal input	x	x
Test signal input		x
Switch position signal	With Auxiliary contacts	Without Auxiliary contact
Alarm output signal		x

³⁾ Overvoltage and undervoltage conditions

Technical data

Compact automatic transfer switches OTM40...125_

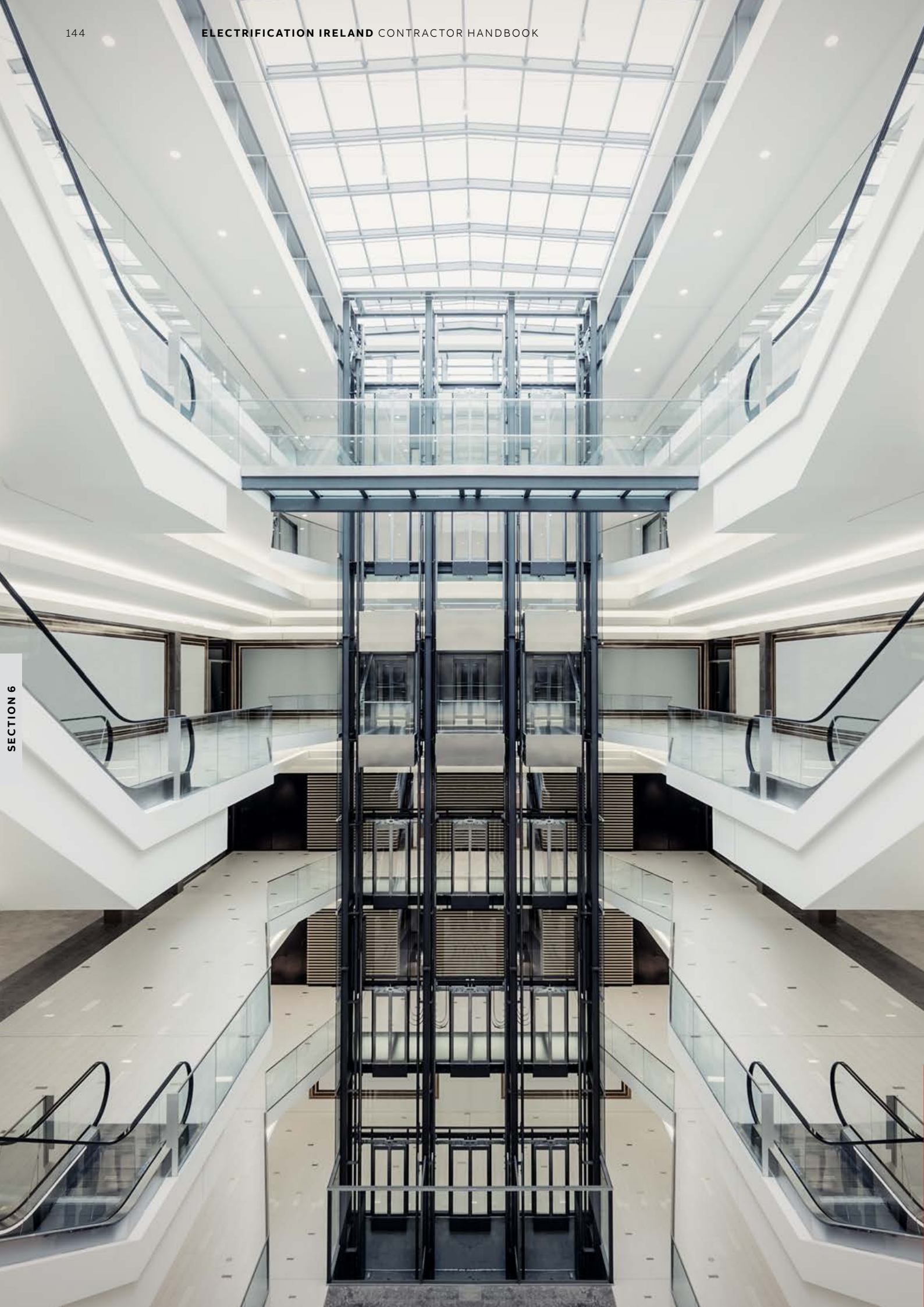
Compact automatic transfer switches

Data according to IEC 60947-6-1				Switch size		
				OTM40_	OTM63_	OTM125_
Class of equipment				PC	PC	PC
Rated short-time withstand current	I _{cw} (r.m.s.)	690 V 0.1s	kA	5	5	5
Conditional short-circuit current	I _{cc} (r.m.s.)	415 V	kA	50	50	50
Corresponding fuse rating	gG/aM fuse	415 V	A	125	125	125
Rated operational current, AC-31B		up to 415 V	A	40	63	125
Rated operational current, AC-32B		up to 415 V	A	40	63	125

¹⁾ These values are given for guidance and may vary according to the motor manufacturer.

²⁾ Short circuit duration > 50ms, without fuse protection.

³⁾ Operating cycle: O - I - O - II - O.



Enclosed switches

146	Loadbreak and safety switches
149	Switch fuses



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Enclosed switches

Switch solutions - Functionality and features

Enclosed switches are designed and used as main switches for applications, which need to be isolated from the network. The range includes front operated and side operated switch disconnectors, switch fuses and changeover switches enclosed in plastic, steel sheet or stainless steel sheet and aluminium enclosures. They are rated for utilisation categories including disconnecting as well as making and breaking the load. In addition the switch fuses equipped with fuse links protects the application and the cables from overload currents and short circuits.

Plastic enclosures

The plastic enclosures are most suitable for locations with high chemical and moisture requirements. In addition they are light and easy to install and handle.

Steel sheet enclosures

The steel sheet enclosures are hot dip galvanised and the surface is polyester powder painted. The enclosures are durable and robust for various environments.

Stainless steel sheet enclosures

The stainless steel sheet enclosures are made of AISI 304 stainless steel. They are used particularly in the food and beverage industry and in locations where high hygiene is required. The smooth surface does not require any painting and is easy to clean.

Aluminium alloy enclosures

Aluminium enclosures have very good impact strength and protection against UV light. They are suitable both for indoor and outdoor use in medium to heavy-duty applications.

Safety for personnel – reliable position indication

- Padlocking in the OFF-position with one, three or six (with the shackle L6) padlocks against unintentional start-up.
- The handle cannot be padlocked in the OFF-position if one of the contacts is not in the OFF-position.
- The cover cannot be removed if the handle is padlocked.
- Door interlock in the ON-position.
- Arc proof, short circuit durability function: Expander washers in aluminium enclosures with $I_e > 160$ A and door locking release in large metal sheet enclosures type MSC.
- Door interlock defeatable with rectangular and pistol type handles.



Switchgear - Loadbreak and safety switches

IP65 Double insulated enclosure



Load Break Switches 4 pole 9...37kW

- IP65 rated
- Grey plastic enclosure
- Standard handle - Red/Yellow (padlockable in the off position)
- Cable entries top and bottom
- All OTP16 (excluding 3p) /25/32 all have 25/20mm reducers

Polycarbonate enclosure 9kW ... 37kW 4 pole

Rating@415v				Dimensions (mm)				
1th A	AC22	AC23	kW	No. Poles	H	W	D	Order Code
25	16	16	7.5	3 + solid neutral	150	130	60	OTP16BA3M
				4				OTP16BA4M
				6				OTP16BA6M
32	25	20	9	3 + solid neutral	150	130	60	OTP25BA3M
				4				OTP25BA4M
				6				OTP25BA6M
40	40	23	11	3 + neutral	150	130	60	OTP32BA3M
				4				OTP32BA4M
				6				OTP32BA6M
63	63	45	22	3 + solid neutral	200	145	90	OTP45BA3M
				4				OTP45BA4M
				6				OTP45BA6M
80	80	75	37	3 + solid neutral	200	145	90	OTP63BA3M
				4				OTP63BA4M
				6				OTP63BA6M
125	125	90	45	3 + solid neutral	400	200	140	OTP125BA3U
				4				OTP125BA4U
				6				OTP125BA6U
Safety switches 3 pole 16...40 amps								
25	16	16	7.5	3	150	130	60	OTP16B3M
32	25	20	9	3	150	130	60	OTP16B3M
40	40	23	11	3	150	130	60	OTP32B3U

Switchgear - Loadbreak switches

IP65 Steel enclosure

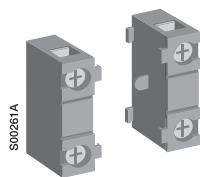


- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Removable gland plates fitted top and bottom (see below for knockout configurations)
- Spreader boxes available see below

Load break switches 3 - 4 pole 9...37kW

Rating@415v			Dimensions (mm)			No. Poles	Order Code
1 th A	AC22	AC23	H	W	D		
32	25	20	300	200	150	3 + solid neutral	OT20TPN-A
						4	OT20FP-A
40	40	23	300	200	150	3 + solid neutral	OT32TPN-A
						4	OT32FP-A
80	80	75	300	300	150	3 + solid neutral	OT63TPN-A
						4	OT63FP-A
115	100	80	400	300	150	3 + solid neutral	OT100TPN-A
						4	OT100FP-A
125	125	90	400	300	150	3 + solid neutral	OT125TPN-A
						4	OT125FP-A
160	160	135	500	400	200	3 + solid neutral	OT160TPN-A
						4	OT160FP-A
200	200	200	500	400	200	3 + solid neutral	OT200TPN-A
						4	OT200FP-A
315	315	315	500	400	200	3 + solid neutral	OT315TPN-A
						4	OT400FP-A
500	500	500	500	400	200	3 + solid neutral	OT400TPN-A
						4	OT400TPN-A
630	630	630	600	400	250	3 + solid neutral	OT630TPN-A
						4	OT630FP-A
800	800	800	600	400	250	3 + solid neutral	OT800TPN-A
						4	OT800TPN-A

Spreader boxes



Suitable for Loadbreak Switches	Spreader box	Spreader box gasket
	Order Code	Order Code
OT20, OT32, OT63, OT100, OT125	Not Required	Not Required
OT160, OT200, OT315, OT400	SRN5420K	GZ4020
OT630, OT800	SRN6425K	GZ4025
Wall Mounting Brackets (Pack of 4)	–	AA1206
Auxiliary Contacts		
1 N/O	OA1G10	OA1G10
1 N/C - only for OT20-125_	OA1G01	OA1G01
1 N/C - only for OT200 and above	OA3G01	OA3G01
1 N/O - 1 N/C - OT20-125 and OT160 only	OA2G11	OA2G11

Switchgear - Switch fuses

IP65 Steel enclosure

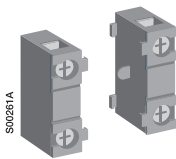
- IP65 rated (not suitable for external installation)
- Powder coated textured finish (RAL 7035)
- All switches are supplied with fuses and removable gland plates
- All 3 pole switches include detachable neutral link (OT160 solid link)
- Switch Fuses are internally rated IP20 on incoming terminals up to 63A
- Hinged lid complete with lock
- Padlockable pistol grip handle as standard
- Switch Fuses 100A are supplied with incoming terminal shrouds (NOT FITTED) to allow customer connections
- Spreader boxes available see below

3 - 4 pole 20 ... 800A

	AC23 [kW]				Dimensions (mm)			No. Poles	Fuse Type	Order Code
	1 st A	400V	500V	690V	H	W	D			
 	20	7.5	11	15	300	300	150	3+detach neutral 4	A1	OS20TPN-A OS20FP-A
	32	15	18	25	300	300	150	3+detach neutral 4	A2	OS32TPN-A OS32FP-A
	63	30	37	55	400	300	150	3+detach neutral 4	A2/A3	OS63TPN-A OS63FP-A
	100	55	55	90	400	300	150	3+detach neutral 4	A2/A3	OS100TPN-A OS100FP-A
	125	55	75	110	400	300	150	3+detach neutral 4	A2/A3	OS125TPN-A OS125FP-A
	160	75	90	132	500	400	200	3 + solid neutral 4	A3/A4	OS160TPN-A OS160FP-A
	200	110	132	200	600	400	250	3+detach neutral 4	B1/B2	OS200TPN-A OS200FP-A
	315	160	220	220	600	400	250	3+detach neutral 4	B1/B4	OS315TPN-A OS315FP-A
	400	220	280	400	600	400	250	3+detach neutral 4	B1/B4	OS400TPN-A OS400FP-A
	630	355	450	560	600	600	300	3+detach neutral 4	C1/C2	OS630TPN-A OS630FP-A
	800	450	560	710	600	800	300	3+detach neutral 4	C1/C2	OS800TPN-A OS800FP-A

Note: OT630 & OT800 TPN/FP products are made to order and are non-stock items.

Spreader boxes

	Suitable for Loadbreak Switches	Spreader box		Spreader box gasket	
		Order Code	Order Code	Order Code	Order Code
	OS20 - OS125	Not Required	–	Not Required	Not Required
	OS160	SRN5420K	SRN5420K	GZ4020	GZ4020
	OS200 - OS400	SRN6425K	SRN6425K	GZ4025	GZ4025
	OS630 - OS800	SRN8530K	SRN8530K	GZ6030	GZ6030
	Wall Mounting Brackets (Pack of 4)	–	–	AA1206	AA1206
	Auxiliary Contacts				
	1 N/O			OA1G10	OA1G10
	1 N/C			OA1G01	OA1G01
	1 N/O - 1 N/C			OA3G01	OA3G01
	1 x CO contact - only for products OS20_/OS32_			OA2G11	OA2G11



Cable management products

152	Adaptaflex® Flexible Cable Protection - Introduction
155	Adaptaflex - Convenience packs
156	Adaptaflex - Metallic flexible conduit systems
165	Adaptaflex - Non-metallic flexible conduit systems
175	Industrial cable glands
197	Hazardous area cable glands
220	Ty-Rap® Cable ties
223	Ty-Met™ Stainless steel cable ties
225	Ty-Fast® Cable ties
231	E-Klips® Spring Steel Fasteners



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Adaptaflex® Flexible Cable Protection

Company overview

Established in 1972, Adaptaflex® flexible conduit systems are used to protect critical power and data cabling.

Adaptaflex® Flexible Cable Protection is part of ABB Installation Products with their conduit solutions found in applications all over the world. Combining innovative design with dedicated manufacture it offers customers one of the world's broadest ranges of cable protection products and solutions. With a choice of over 6000 products the range covers metallic and non-metallic flexible conduit systems for the protection of critical power and data cable.

The system solutions from Adaptaflex need to perform in a wide variety of environments, from high temperature to freezing conditions. The products are designed and tested to withstand constant vibrations, water ingress and offer corrosion and chemical resistance. Products are available in many different materials, including halogen free, low smoke and low toxicity materials.

An extensive range of engineered solutions are designed to withstand the rigours of some of the most technically-demanding markets. So whatever your project involves, our experience will provide the answer, helping you to specify the correct flexible conduit system.

Markets and industries

Adaptaflex flexible conduit systems are used to protect critical power and data cabling throughout a wide range of markets including:

- Commercial contracting
- Machine & automation
- Rail/Infrastructure
- Marine
- Mechanical
- Security/CCTV
- Data cabling/Data centres
- Critical power
- Renewable energy
- Food & Beverage
- Construction

Our products are designed and engineered to meet a variety of market application requirements, providing product innovation that saves installation and component costs, improves quality and delivers integrity in the end product.



Quality approvals and third party testing

Quality approvals

The company's commitment to independent testing across a wide range of applications has led to an impressive range of certifications and quality approvals:

- BSI Kitemark
- BS EN ISO14001 Environmental standard
- IEC 61386 Conduit standard covering the performance characteristics of flexible conduits
- ISO 60529 IP69 Rated, standard with its Adaptalok range of non metallic fittings
- Offer non-metallic conduit that is fully compliant to the new dual listed UL 1696 standard. Required for any equipment destined for export to the USA and Canada

Industry standards

As one of the world's leading flexible conduit system manufacturers, Adaptaflex has achieved many international approvals, for our manufacturing as well as our product ranges.

Adaptaflex are able to use our experience and knowledge to ensure safety and quality levels are maintained now and in the future.

BSI Kitemark

Adaptaflex manufacture to third party accreditation through the BSI Kitemark scheme. The Kitemark is one of the world's premier symbols of trust, integrity and quality. Manufacturers with the Kitemark are an elite club of some of the world's best companies being annually tested to ensure continued compliance. Having the Kitemark associated with our products illustrates that we have satisfied the most rigorous of quality processes.

ISO9001 Quality standard

Adaptaflex conform to ISO 9001:2000, the internationally recognised standard for Quality Management Systems. This standard reflects the procedures and management processes throughout the whole of the company.

ISO14001 and ISO45001 Environmental standard

Controlling the impact of manufacturing activities on the environment is a major challenge. Again Adaptaflex lead the way by being the first conduit manufacturer to comply with this Standard.

Customer support

All our products are backed up by a full technical support team, sales teams, customer care team and in-house marketing specialists. All dedicated teams working together to ensure that you have the best support in the market place.

cmg.conduitsystems@abb.com
for technical support.

Third party testing & approvals

IEC61386 Performance classification standard

Adaptaflex has achieved third party accreditation to the IEC61386 Standard from the British Standards Institution (BSI). IEC61386 conformance guarantees that products meet performance specifications for fatigue life, operating temperature, non-flame propagation, IP ratings amongst other criteria.



Flexible conduit systems

Quick selection guide



Metallic conduit					Non-metallic conduit		
Type	Corrugated Metallic	Corrugated Metallic	Smooth Liquid-Tight Metallic	Anti-microbial Liquid Tight Metallic	Corrugated Plastic	Corrugated Plastic	Corrugated Plastic
Series	S	SP	SPL	SAM	PP	PR	PA
Usage	Heavy weight conduit for commercial building, light industrial or outdoor applications	Heavy-duty industrial, confined space and moving applications	Heavy-duty industrial, marine, extreme condition and hazardous explosive area applications	Food, Beverage, Pharmaceutical, Hygienic and high temperature applications	Medium weight conduit for commercial building, light industrial or outdoor applications	Standard weight conduit for construction, transport and rail infrastructures.	Commercial building, light industrial or outdoor applications
Core material	Galvanised Steel	Galvanised Steel	Galvanised Steel	Galvanised or Stainless Steel	Polypropylene	Modified nylon PA6	Nylon PA6
Jacket material	None	PVC	PVC	Thermoplastic	None	None	None
IP rating	Up to IP40	Up to IP65	Up to IP69	Up to IP69	Up to IP66	Up to IP69	Up to IP69
Temperature range	-50 to +300	-25 to +70	-20 to +105	-30 to +150	-20 to +90	-40 to +120	-40 to +120
Flexibility	High	High	Medium	Medium	High	High	High
Mechanical strength	Very High?	Very High	Very High	Very High	Low	Medium	Medium
UV Resistance	Very High	Very High	Very High	High	Medium	Very High	Very High
Zero Halogen	No	No	No	Yes	Yes	Yes	Yes
Self Extinguishing	Yes	Yes	Yes	Yes	No	Yes	Yes

- This book contains an overview of conduit and fittings from the ABB adaptaflex range.
- Several more Conduit ranges available including Stainless Steel, Low fire hazard, Braided EMI screening, Food & Beverage specific, Accessories, etc.
- Please contact our office or visit <http://new.abb.com/low-voltage/products/conduit-fittings/adaptaflex>.

Convenience packs

Professional installer conduit systems

LFH Convenience



Part no.	Type	Conduit/fitting diameter (mm)	One-piece conduit fittings	Locknuts	IP rating
CP-AF20A	10m Black Type PA LFH Nylon 6, 20mm diameter	20	10	10	IP66
CP-AF25A	10m Black Type PA LFH Nylon 6, 25mm diameter	25	10	10	IP66

Convenience pack / Nylon Conduit with Adaptalok One-Piece, Fast Fit, Push & Twist Fittings.
Materials: Polyamide Nylon 6 / Colour: Black (BL).



Polypropylene Convenience



Part no.	Type	Conduit/fitting diameter (mm)	One-piece conduit fittings	Locknuts	IP rating
CP-AF20BS-PP	10m Grey Type PP Polypropylene conduit, 20mm diameter	20	10	10	IP54
CP-AF25BS-PP	10m Grey Type PP Polypropylene conduit, 25mm diameter	25	10	10	IP54

Convenience Pack / Type PP Polypropylene Conduit with One-Piece, Fast Fit, Push & Twist Fittings.
Materials: PP Polypropylene / Colour: Grey (GR).

Retail / Office Convenience



Part no.	Type	Conduit/fitting diameter (mm)	One-piece conduit fittings	Locknuts	IP rating
CP-AF20BS	10m Grey Type KF PVCu, 20mm diameter	20	10	10	IP66
CP-AF25BS	10m Grey Type KF PVCu, 20mm diameter	25	10	10	IP66
CP-KF20BS	10m White Type KF PVCu, 25mm diameter	20	10	10	IP66
CP-KF25BS	10m White Type KF PVCu, 25mm diameter	25	10	10	IP66

Convenience Pack / Self-Extinguishing PVC Conduit & One-Piece Fittings & Locknuts.
Materials: PVC Pliable / Colour: White (W).

Anti-microbial metallic conduit systems

SAMHL series - Smooth anti-microbial liquid-tight conduit



Anti-microbial liquid tight high temperature covered steel flexible conduit. Suitable for indoor splash zone areas or food processing equipment. The biocidal coating attacks bacteria that comes into contact with it, including MRSA, E.coli, etc eliminating 99% in 2 hours.

Features

- **Type SAMHL** - Galvanised steel core string packed with Anti-microbial protection incorporated into a FDA, EC and FSA compliant DuPont Hytrel® thermoplastic jacket
- **Type SSAMHL** - Stainless steel string with Anti-microbial protection incorporated into a FDA, EC and FSA compliant DuPont Hytrel® thermoplastic jacket
- IP40 – IP69 rated
- Temperature range up to -50°C to +130°C
- Approvals: CE, BS EN 61386-1,-23, NSF 14159-1-2014 & NSF 169-2009

Type SAMHL and SSAMHL - Anti-microbial liquid tight conduit

Part no.		Conduit size (mm)	Diameter Dimensions (mm)			Coil lengths	
Galvanised Steel Core	Stainless Steel Core		Outside	Inside	Bend radius	Galvanised Steel Core	Stainless Steel Core
SAMHL16/25M	SSAMHL16/25M	16	17.8mm	12.5mm	50mm	25	25
SAMHL20/25M	SSAMHL20/25M	20	21.1mm	15.9mm	80mm	25	25
SAMHL25/25M	SSAMHL25/25M	25	26.4mm	21.0mm	110mm	25	25
SAMHL32/25M	SSAMHL32/25M	32	33.1mm	26.7mm	144mm	25	25
SAMHL40/25M	SSAMHL40/25M	40	41.8mm	35.4mm	180mm	25	25
SAMHL50/25M	SSAMHL50/25M	50	47.5mm	40.4mm	240mm	25	25
SAMHL63/25M	SSAMHL63/25M	63	59.7mm	51.6mm	345mm	25	25

Note: Conduit is fully cleanable and will maintain full ingress protection under normal wet cleaning conditions with associated fittings.

Type SAMHL

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance
   NSF 14159-1-2014 NSF 169-2009	For use with: Type SPL, SSPL and SAM		Static applications: -50°C to +130°C	–
	IP66	Type M, C45 & C90	Moving applications: -5°C to +150°C	
	IP67	Type A, B, M, C45 & C90	Flexibility & fatigue life	
	IP68	Type M, C45 & C90 (10 bar 30mins)	High flexibility - High fatigue life	
	IP69	Type M, C45 & C90	Fire Performance & EMI Screen	
			Self extinguishing	

Type SSAMHL

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance
   NSF 14159-1-2014 NSF 169-2009	For use with: Type SPL, SSPL and SAM		Static applications: -50°C to +130°C	–
	IP66	Type M, C45 & C90	Moving applications: -5°C to +150°C	
	IP67	Type A, B, M, C45 & C90		
	IP68	Type M, C45 & C90 (10 bar 30mins)		
	IP69	Type M, C45 & C90		

Anti-microbial metallic conduit systems

Type SAM for SAMHL series conduit



Single piece, liquid tight, high temperature Stainless Steel fitting suitable for indoor splash zone areas or food processing equipment

Features

- Unique single piece design
- 316 Stainless Steel
- Face seal materials adhere to FDA (Food and Drug Administration) and European Food Contact regulations
- IP67, IP68 & IP69 protection
- Approvals CE, BS EN 61386-1,-23, NSF14159-1-2014, NSF169-2009, UL514b
- Multiple thread type Metric/NPT

Fittings for SAMHL series conduit

METRIC Part no.	Conduit size		Nominal Dimensions						
	METRIC (mm)	US (NPT)	B	C	D	E	F	G	Weight (g)
SPL16/M16/SAM	16	3/8"	7.0	32.8	30.0	31.9	14.0	10.5	9.98
SPL20/M20/SAM	20	1/2"	10.0	35.6	32.0	35.0	18.0	14.5	11.34
SPL25/M25/SAM	25	3/4"	14.0	43.0	38.0	41.0	23.0	18.3	16.78
SPL32/M32/SAM	32	1"	15.0	51.5	45.0	49.0	30.0	24.1	29.94
SPL40/M40/SAM	40	1 1/4"	16.0	53.3	57.0	61.5	38.0	32.7	39.92
SPL50/M50/SAM	50	1 1/2"	18.0	60.2	64.0	69.0	48.0	37.7	45.36
SPL63/M63/SAM	63	2"	20.0	71.4	80.0	87.0	61.0	49.0	52.16

Note: Parts are maintenance free, face seal can be replaced if damaged. Parts are fully cleanable and will maintain full ingress protection under normal wet cleaning conditions.

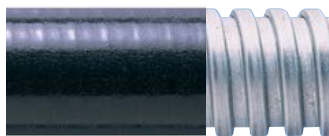
Approvals	IP rating	Temperature range	UV resistance
  NSF 14159-1-2014 NSF 169-2009  UL514b File No. E60625	For use with: All liquidtight conduit	Static applications: -50°C to +130°C	-
	IP66 Yes	Moving applications: -5°C to +150°C	
	IP68 Yes (10 bar 30mins)	Flexibility & fatigue life High flexibility - High fatigue life	
	IP69 Yes	Fire Performance & EMI Screen Self extinguishing	

Metallic conduit systems

Type LFH-SPL & SPL - Adaptasteel

- Low fire hazard performance covered steel flexible conduit
- Material: Low fire hazard jacket covered galvanised steel
- Colour: Black (BL) only

Type LFH-SPL - Adaptasteel

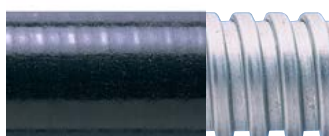
	Part no.	Nominal Conduit Size	Outside Diameter	US Conduit Size	Inside Diameter	Min. Bend Radius	Reel Length
	LFH- SPL16	16mm	17.0mm	3/8"	13.0mm	50mm	10, 25m
	LFH- SPL20	20mm	21.5mm	1/2"	16.9mm	80mm	10, 25m
	LFH- SPL25	25mm	26.0mm	3/4"	21.4mm	110mm	10, 25m
	LFH- SPL32	32mm	34.0mm	1"	28.1mm	145mm	10, 25m
	LFH- SPL40	40mm	44.5mm	1 1/4"	37.7mm	180mm	10m

To order quote Order Code, colour & reel length, e.g. LFH-SPL16/BL/25M.

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance
     NSF 14159-1-2014 NSF 169-2009 EN45545-2 HL3 - R22 & R23 ASTM E 162 ASTM E 662 Bombardier SMP 800-C	For use with: Type SPL, SSPL and SAM		Static applications: -20°C to +90°C	High
	IP66	Type M, C45 & C90	Moving applications: -5°C to +105°C	
	IP67	Type A, B, M, C45 & C90	Flexibility & fatigue life	
	IP68	Type M, C45 & C90 (10 bar 30mins)	Medium flexibility – Medium fatigue life	
	IP69	Type M, C45 & C90	Fire performance & EMI screen	
			Self extinguishing	
			Halogen free	

- Liquid tight oil resistant covered steel flexible conduit
- Material: PVC covered galvanised steel
- Colour: Black (BL), Grey (GR), Orange (OR)

Type SPL - Adaptasteel

	Part no.	Nominal Conduit Size	Outside Diameter	US Conduit Size	Inside Diameter	Min. Bend Radius	Reel Length
	SPL12	12mm	14.2mm	5/16"	10.0mm	45mm	10, 25, 50m
	SPL16	16mm	17.8mm	3/8"	12.5mm	50mm	10, 25, 50m
	SPL20	20mm	21.1mm	1/2"	15.9mm	80mm	10, 25, 50m
	SPL25	25mm	26.4mm	3/4"	21.0mm	110mm	10, 25, 50m
	SPL32	32mm	33.1mm	1"	26.7mm	145mm	10, 25m
	SPL40	40mm	41.8mm	1 1/4"	35.4mm	180mm	10, 25m

To order quote Order Code, colour & reel length, e.g. SPL12/BL/50M.

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance
   File No. E135398  NSF 14159-1-2014 NSF 169-2009	For use with: Type SPL, SSPL and SAM		Static applications: -20°C to +105°C	Very high
	IP66	Type M, C45 & C90	Moving applications: -5°C to +105°C	
	IP67	Type A, B, M, C45 & C90	Flexibility & fatigue life	
	IP68	Type M, C45 & C90 (10 bar 30mins)	Medium flexibility – Medium fatigue life	
	IP69	Type M, C45 & C90	Fire performance & EMI screen	
			Self extinguishing	

Metallic conduit systems

Type A, B, M & U coupler - Adaptasteel

- **Type M** Straight fitting – Fixed external male thread
- **Type B** Straight fitting – Swivel external male thread
- **Type C90** Combined fitting and elbow
- For insertion into threaded entries & knockouts using a locknut (order locknuts separately)
- Materials: Nickel plated brass
- **Coupler** for coupling separate lengths of SPL conduit
- Materials: Nickel Plated Brass, Co-Polyester Seals

Type M - Adaptasteel

	Part no.	Nominal conduit size	US conduit size	Thread
	Metric thread			
	SPL10/M12/M	10mm	3/4"	M12
	SPL10/M16/M	10mm	3/4"	M16
	SPL12/M16/M	12mm	5/16"	M16
	SPL16/M16/M	16mm	3/8"	M16
	SPL16/M20/M	16mm	3/8"	M20
	SPL20/M20/M	20mm	1/2"	M20
	SPL25/M25/M	25mm	3/4"	M25
	SPL32/M32/M	32mm	1"	M32
	SPL40/M40/M	40mm	1 1/4"	M40
	SPL50/M50/M	50mm	1 1/2"	M50
	SPL63/M63/M	63mm	2"	M63
	PG thread			
	SPL10/PG7/M	10mm	3/4"	PG7
	SPL12/PG9/M	12mm	5/16"	PG9
	SPL16/PG11/M	16mm	3/8"	PG11
	SPL16/PG13/M	16mm	3/8"	PG13,5
	SPL20/PG16/M	20mm	1/2"	PG16
	SPL25/PG21/M	25mm	3/4"	PG21
	SPL32/PG29/M	32mm	1"	PG29
	SPL40/PG36/M	40mm	1 1/4"	PG36
	SPL50/PG42/M	50mm	1 1/2"	PG42
	SPL63/PG48/M	63mm	2"	PG48
	NPT thread			
	SPL16/038/M	16mm	3/8"	3/8
	SPL20/050/M	20mm	1/2"	1/2
	SPL25/075/M	25mm	3/4"	3/4
	SPL32/100/M	32mm	1"	1
	SPL40/125/M	40mm	1 1/4"	1 1/4
	SPL50/150/M	50mm	1 1/2"	1 1/2
	SPL63/200/M	63mm	2"	2

Type B - Adaptasteel

	Part no.	Nominal Conduit Size	US Conduit Size	Metric Thread
	SPL16/M16/B	16mm	3/8"	M16
	SPL16/M20/B	16mm	3/8"	M20
	SPL20/M20/B	20mm	1/2"	M20
	SPL25/M25/B	25mm	3/4"	M25
	SPL32/M32/B	32mm	1"	M32

Type C90 - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	SPL16/M16/C90*	16mm	M16
	SPL16/M20/C90*	16mm	M20
	SPL20/M20/C90*	20mm	M20
	SPL25/M25/C90*	25mm	M25
	SPL32/M32/C90*	32mm	M32

* These parts are not UL listed.

Type U coupler - Adaptasteel

	Part no.	Nominal Conduit Size	US Conduit Size	Bore
	SPL16/U/M	16mm	3/8"	M20
	SPL20/U/M	20mm	1/2"	M25
	SPL25/U/M	25mm	3/4"	M32
	SPL32/U/M	32mm	1"	
	SPL40/U/M	40mm	1 1/4"	
	SPL50/U/M	50mm	1 1/2"	
	SPL63/U/M	63mm	2"	

Approvals



IP rating

For use with: All liquidtight conduit

IP66	Yes
IP67	Yes
IP68	Yes (10 bar 30 mins)
IP69	Yes

Temperature range

Static applications: -65°C to +150°C
Moving applications: -45°C to +150°C

Fitting characteristics

This applies to the Type U coupler only

UV resistance



Metallic conduit systems

Type LFH-SP & SP - Adaptasteel

- Liquid resistant enhanced low fire hazard covered steel flexible conduit
- Material: Polyolefin covered galvanised steel
- Colour: Black (BL) only

Type LFH-SP - Adaptasteel

	Part no.	Nominal Conduit Size	Outside Diameter	Inside Diameter	Min. Bend Radius	Reel Length
	LFH- SP12	12mm	14.0mm	10.3mm	30mm	25, 50m
	LFH- SP16	16mm	17.0mm	13.0mm	35mm	10, 25, 50m
	LFH- SP20	20mm	21.5mm	16.9mm	45mm	10, 25, 50m
	LFH- SP25	25mm	26.0mm	21.4mm	55mm	10, 25, 50m
	LFH- SP32	32mm	34.0mm	28.1mm	60mm	10, 25m
	LFH- SP40	40mm	44.5mm	37.7mm	80mm	10, 25m

To order quote Order Code, colour & reel length, e.g. LFH-SP16/BL/50M.

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance	Fire Performance & EMI Screen
   	For use with: Type SP		Static applications: -25°C to +90°C	High	Self extinguishing
	IP54	Type SP - Type A, B, C, E & F	Moving applications: -5°C to +105°C		Halogen free
	IP65	Type SP - Type M & C90	Flexibility & fatigue life High flexibility - Medium fatigue life		
EN45545-2 HL3 - R22 & R23 					

- Liquid resistant general purpose covered steel flexible conduit
- Material: PVC covered galvanised steel
- Colour: Black, Grey and Orange

Type SP - Adaptasteel

	Part no.	Nominal Conduit Size	Outside Diameter	Inside Diameter	Min. Bend Radius	Reel Length
	SP10	10mm	10.0mm	6.8mm	25mm	25, 50m
	SP12	12mm	14.0mm	10.3mm	30mm	25, 50m
	SP16	16mm	17.0mm	13.0mm	35mm	10, 25, 50m
	SP20	20mm	21.5mm	16.9mm	45mm	10, 25, 50m
	SP25	25mm	26.0mm	21.4mm	55mm	10, 25, 50m
	SP32	32mm	34.0mm	28.1mm	60mm	10, 25m
	SP40	40mm	44.5mm	37.7mm	80mm	10, 25m
	SP50	50mm	55.0mm	48.4mm	90mm	10, 25m
	SP63	63mm	64.5mm	57.5mm	115mm	10m
	SP75	75mm	79.0mm	70.0mm	150mm	10m

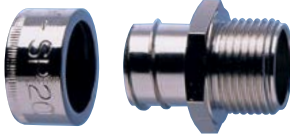
To order quote Order Code colour & reel length, e.g. SP12/BL/25M.

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance
 	For use with: Type SP		Static applications: -25°C to +70°C	Very high
	IP54	Type SP - Type A, B, C, E & F	Moving applications: -5°C to +90°C	
	IP65	Type SP - Type M & C90	Flexibility & fatigue life High flexibility - Medium fatigue life	
Fire Performance & EMI Screen				Self extinguishing

Metallic conduit systems

Type A, B, & C90 - Adaptasteel

Type A - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	SP10/M12/A	10mm	M12
	SP12/M16/A	12mm	M16
	SP16/M16/A	16mm	M16
	SP16/M20/A	16mm	M20
	SP20/M20/A	20mm	M20
	SP25/M25/A	25mm	M25
	SP32/M32/A	32mm	M32
	SP40/M40/A	40mm	M40
	SP50/M50/A	50mm	M50
	SP63/M63/A	63mm	M63
	SP75/M75/A	75mm	M75

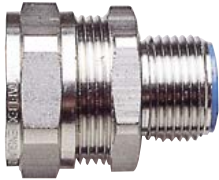
Approvals	IP Rating	Appropriate Conduit
	For use with: Type SP / SN / LFH-SP	
	IP54	Yes

Temperature Range

Static Applications: -50°C to +300°C

Moving Applications: -45°C to +250°C

Type M - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	SP12/M16/M	12mm	M16
	SP16/M16/M	16mm	M16
	SP16/M20/M	16mm	M20
	SP20/M20/M	20mm	M20
	SP25/M25/M	25mm	M25
	SP32/M32/M	32mm	M32
	SP40/M40/M	40mm	M40
	SP50/M50/M	50mm	M50

Approvals	IP Rating	Appropriate Conduit
	For use with: Type SP / SN / LFH-SP	
	IP65	Yes

Temperature Range

Static Applications: -50°C to +150°C

Moving Applications: -45°C to +150°C



- **Type A / M** - Straight fitting - fixed external male thread
- For insertion into knockouts using a locknut
- **Type B** - Straight fitting - Fixed external male thread
- For insertion into threaded entries & knockouts using a locknut
- **Type F** - Straight swivel fitting - For external threads and other fittings
- Material: Nickel Plated Brass

Type B - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	SP10/M12/B	10mm	M12
	SP12/M16/B	12mm	M16
	SP16/M16/B	16mm	M16
	SP16/M20/B	16mm	M20
	SP20/M20/B	20mm	M20
	SP25/M25/B	25mm	M25
	SP32/M32/B	32mm	M32
	SP40/M40/B	40mm	M40
	SP50/M50/B	50mm	M50

Approvals	IP Rating	Appropriate Conduit
	For use with: Type / SN / LFH-SP	
	IP54	Yes

Temperature Range

Static Applications: -50°C to +300°C

Moving Applications: -45°C to +250°C

Type F - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	SP20/M20/F	20mm	M20
	SP25/M25/F	25mm	M25
	SP32/M32/F	32mm	M32

Approvals	IP Rating	Appropriate Conduit
	For use with: Type SP / SN / LFH-SP	
	IP54	Yes

Temperature Range

Static Applications: -50°C to +300°C

Moving Applications: -45°C to +250°C

Metallic conduit systems

Type S & SS - Adaptasteel

- Inherent low fire hazard steel conduit
- Material: Stainless steel 316 - corrosion resistant

Type SS - Adaptasteel

	Part no.	Nominal Conduit Size	Outside Diameter	Inside Diameter	Min. Bend Radius	Reel Length
	SS10	10mm	9.0mm	6.8mm	25mm	25, 50m
	SS12	12mm	13.0mm	10.3mm	30mm	10, 25, 50m
	SS16	16mm	16.0mm	13.0mm	35mm	10, 25, 50m
	SS20	20mm	20.5mm	16.9mm	45mm	10, 25, 50m
	SS25	25mm	25.0mm	21.4mm	55mm	10, 25, 50m
	SS32	32mm	32.0mm	28.1mm	60mm	10, 25m

To order quote Order Code & reel length, e.g. SS12/25M.

Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance	Fire Performance & EMI Screen
 	For use with: Type S		Static applications: -50°C to +350°C	Very high	
	IP40	Type S - Type A, B, F & C	Moving applications: -45°C to +250°C		
			Flexibility & fatigue life High flexibility - High fatigue life		

- Inherent low fire hazard steel conduit
- Material: Galvanised steel - general purpose

Type S - Adaptasteel

	Part no.	Nominal Conduit Size	Outside Diameter	Inside Diameter	Min. Bend Radius	Reel Length
	S10	10mm	9.1mm	7.0mm	25mm	25, 50m
	S12	12mm	13.0mm	10.3mm	30mm	10, 25, 50m
	S16	16mm	16.0mm	13.0mm	35mm	10, 25, 50m
	S20	20mm	20.5mm	16.9mm	45mm	10, 25, 50m
	S25	25mm	25.0mm	21.4mm	55mm	10, 25, 50m
	S32	32mm	32.0mm	28.1mm	60mm	10, 25m
	S40	40mm	42.5mm	37.7mm	80mm	10, 25m
	S50	50mm	53.0mm	48.4mm	90mm	10, 25m
	S63	63mm	62.5mm	57.5mm	115mm	10m
	S75	75mm	77.0mm	70.0mm	150mm	10m

To order quote Order Code & reel length, e.g. S12/25M.

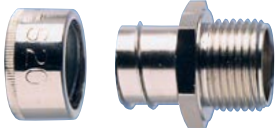
Approvals	IP rating	Appropriate fitting	Temperature range	UV resistance	Fire Performance & EMI Screen
 	For use with: Type S		Static applications: -50°C to +300°C	Very high	
	IP40	Type S - Type A, B, F & C	Moving applications: -45°C to +250°C		
			Flexibility & fatigue life High flexibility - High fatigue life		

Metallic conduit systems

Type A, B, C & F - Adaptasteel

- **Type A** - Straight fitting - fixed external male thread
- For insertion into knockouts using a locknut
- Order locknuts separately
- Material: Nickel Plated Brass
- **Type B** - Straight fitting - swivel external male thread
- For insertion into threaded entries & knockouts using a locknut (order locknuts separately)
- Material: Nickel Plated Brass

Type A - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	S10/M12/A	10mm	M12
	S12/M16/A	12mm	M16
	S16/M16/A	16mm	M16
	S16/M20/A	16mm	M20
	S20/M20/A	20mm	M20
	S25/M25/A	25mm	M25
	S32/M32/A	32mm	M32
	S40/M40/A	40mm	M40
	S50/M50/A	50mm	M50
	S63/M63/A	63mm	M63
	S75/M75/A	75mm	M75

Approvals



IP Rating

For use with: Type S / SS

IP40

Appropriate Conduit

Yes

Type B - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	S10/M12/B	10mm	M12
	S12/M16/B	12mm	M16
	S16/M16/B	16mm	M16
	S16/M20/B	16mm	M20
	S20/M20/B	20mm	M20
	S25/M25/B	25mm	M25
	S32/M32/B	32mm	M32
	S40/M40/B	40mm	M40
	S50/M50/B	50mm	M50

Temperature Range

Static Applications: -50°C to +300°C

Moving Applications: -45°C to +250°C

Fitting Characteristics



- Smooth entry bush
- For locking conduit into plain holes in enclosures
- Materials: Nickel Plated Brass

- Straight fitting - swivel external male thread

Type C - Adaptasteel

	Part no.	Nominal Conduit Size	Hole Size
	S10/9/C	10mm	9mm
	S12/12/C	12mm	12mm
	S16/16/C	16mm	16mm
	S20/20/C	20mm	20mm
	S25/25/C	25mm	25mm
	S32/32/C	32mm	32mm
	S40/40/C	40mm	40mm
	S50/51/C	50mm	50mm
	S63/61/C	63mm	63mm
	S75/75/C	75mm	75mm

Approvals



IP Rating

For use with: Type S / SS

IP40

Appropriate Conduit

Yes

Temperature Range

Static Applications: -50°C to +300°C

Moving Applications: -45°C to +250°C

Type F - Adaptasteel

	Part no.	Nominal Conduit Size	Metric Thread
	S20/M20/F	20mm	M20
	S25/M25/F	25mm	M25
	S32/M32/F	32mm	M32

Approvals



IP Rating

For use with: Type S / SS

IP40

Appropriate Conduit

Yes

Temperature Range

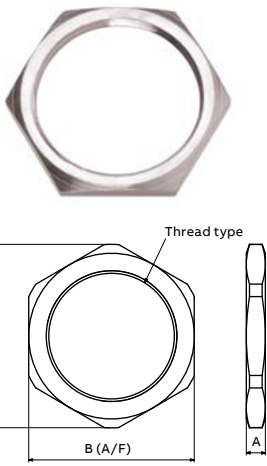
Static Applications: -50°C to +300°C

Metallic conduit systems

Accessories

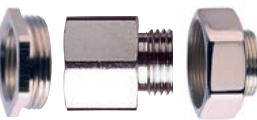
Stainless steel locknut

Female threaded locknut / Materials: 316 stainless steel

	Part no.	Thread size	Nominal dimensions (mm)		
			A	B	C
	Metric				
	LNSS/M16	M16 x 1.5	3.0	20.0	21.1
	LNSS/M20	M20 x 1.5	3.5	24.0	26.6
	LNSS/M25	M25 x 1.5	4.0	30.0	33.2
	LNSS/M32	M32 x 1.5	5.0	36.0	39.9
	LNSS/M40	M40 x 1.5	5.0	47.2	52.3
	LNSS/M50	M50 x 1.5	5.0	60.3	66.5
	LNSS/M63	M63 x 1.5	6.0	69.8	77.6
NPSL					
LNSS/038	3/8"	3.0	20.0	21.1	
LNSS/050	1/2"	3.0	27.0	30.0	
LNSS/075	3/4"	3.5	30.0	33.2	
LNSS/100	1"	5.0	38.0	42.0	
LNSS/125	1 1/4"	5.5	52.0	57.5	
LNSS/150	1 1/2"	6.0	60.0	66.5	
LNSS/200	2"	7.0	69.8	77.0	

Enlargers, Reducers, Converters

Materials: Nickel Plated Brass

		External thread	Internal thread					
		To M10	To M12	To M16	To M20	To M25	To M32	To M40
	M16	–	B/M16-M12/R	–	B/M16-M20/E	–	–	–
	M20	B/M20-M10/R	B/M20-M12/R	B/M20-M16/R	–	B/M20-M25/E	–	–
	M25	–	–	–	B/M25-M20/R	–	B/M25-M32/E	–
	M32	–	–	–	–	B/M32-M25/R	–	–
	M40	–	–	–	–	–	B/M40-M32/R	–
	M50	–	–	–	–	–	–	B/M50-M40/R

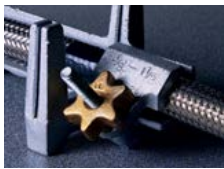
Type P P-clip conduit support / Materials: Plated Steel construction with PVC Insert

	Plated steel Part no.	Nominal conduit size (mm)
	PCLIP/10	10
	PCLIP/12	12
	PCLIP/16	16
	PCLIP/20	20
	PCLIP/25	25
	PCLIP/32	32
	PCLIP/40	40
	PCLIP/50	50
	PCLIP/63	63
	PCLIP/75	75

Female Coupler Brass internal female coupler / Materials: Nickel plated brass

	Part no.	Metric thread	Part no.	Metric thread
	B/M16/C	M16	B/M40/C	M40
	B/M20/C	M20	B/M50/C	M50
	B/M25/C	M25	B/M63/C	M63
	B/M32/C	M32	B/M75/C	M75

Conduit cutting tool

Order Code	Features
CUT-VICE	Cut-vice offers the ability to produce a clean cut for conduit sizes 16mm to 40mm.
	Place the conduit along the vice body and tighten the clamp. Holding the conduit and integral handle together, insert a hacksaw blade into the guide and cut. For braided conduit, wrap adhesive tape around the cutting point to secure braid. Remove tape after cutting.

Non-metallic conduit systems

Type PR & PA

Type PR

Standard weight conduit / Materials: Modified polyamide (nylon) 6 / Colour: Black (BL) only

	Part no.	Nominal conduit size (mm)	NW conduit size (mm)	Conduit pitch	Outside diameter (mm)	Inside diameter (mm)	Minimum bend radius (mm)	Reel length (m)
	PRFS13/BL/50M	10	7.5	Fine	10.0	6.2	20	50
	PRFS16/BL/50M	13	10	Fine	13.0	9.9	30	50
	PRFS21/BL/50M	16	13	Fine	15.8	11.7	35	50
	PRCS21/BL/50M	21	17	Fine	21.2	16.6	40	50
	PRCS28/BL/50M	28	23	Coarse	28.5	21.7	50	50
	PRCS34/BL/50M	34	29	Coarse	34.5	27.7	60	50
	PRCS42/BL/25M	42	36	Coarse	42.5	35.5	65	25
	PRCS54/BL/25M	54	48	Coarse	54.5	46.6	75	25

If interested in different coil lengths, do not hesitate to inquire.

Approvals



EN45545-2 HL3 - R22 & R23

IP rating

Appropriate fitting

For use with: PC / ATS / Adaptalok AL / Adaptaseal / Adapting

IP40	Adapting
IP66	PC, ATS, Adaptalok AL, Adaptaseal
IP67	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal
IP68	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal
IP69	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal

Temperature range

Static applications: -40°C to +120°C
Moving applications: -5°C to +120°C

Flexibility & fatigue life

High flexibility - Medium fatigue life

Fire performance & EMI screen

Self extinguishing
Halogen free

UV resistance

Very high



Type PA - H

Heavy weight conduit / Materials: Polyamide (nylon) 6 / Colour: Black (BL), Grey (GR)

	Part no.	Nominal conduit size (mm)	NW conduit size (mm)	Conduit pitch	Outside diameter (mm)	Inside diameter (mm)	Minimum bend radius (mm)	Reel length (m)
	PAFH13/BL/50M*	13	10	Fine	13.0	9.0	35	50
	PAFH16/BL/50M	16	13	Fine	15.8	11.3	45	50
	PACH21/BL/50M	21	17	Coarse	21.2	14.5	60	50
	PACH28/BL/50M	28	23	Coarse	28.5	21.3	70	50
	PACH34/BL/25M	34	29	Coarse	34.5	26.8	75	50
	PACH42/BL/25M	42	36	Coarse	42.5	34.6	90	25
	PACH54/BL/25M	54	48	Coarse	54.5	46.0	95	25

For grey color version state "GR" instead of "BL" in Part no. If interested in different coil lengths, do not hesitate to inquire.

*These parts are not covered by the UR certification.

Approvals



EN45545- HL2

IP rating

Appropriate fitting

For use with: Type PC / ATS / Adaptalok AL / Adaptaseal / Adapting

IP40	Adapting
IP66	PC, ATS, Adaptalok AL, Adaptaseal
IP67	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal
IP68	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal

Temperature range

Static applications: -40°C to +120°C
Moving applications: -5°C to +120°C

Flexibility & fatigue life

High flexibility – High fatigue life

Fire performance & EMI screen

Self extinguishing
Halogen free

UV resistance

Very high



Non-metallic conduit systems

Type PA & PA-Slit

Type PA - S

Standard weight conduit / Materials: Polyamide (nylon) 6 / Colour: Black (BL), Grey (GR)

	Part no.	Nominal conduit size (mm)	NW conduit size	Conduit pitch	Outside diameter (mm)	Inside diameter (mm)	Minimum bend radius (mm)	Reel length (m)
	PAFS10/BL/50M*	10	7.5	Fine	10.0	6.5	15	50
	PAFS13/BL/50M*	13	10	Fine	13.0	9.6	25	50
	PAFS16/BL/50M	16	13	Fine	15.8	11.8	35	50
	PAFS21/BL/50M	21	17	Fine	21.2	16.5	45	50
	PAFS28/BL/50M	28	23	Fine	28.5	22.6	50	50
	PACS28/BL/50M	28	23	Coarse	28.5	21.7	50	50
	PAFS34/BL/50M	34	29	Fine	34.5	28.8	60	50
	PACS34/BL/50M	34	29	Coarse	34.5	27.7	60	50
	PACS42/BL/25M	42	36	Coarse	42.5	35.2	65	25
	PACS48/BL/25M	48	42	Coarse	48.2	40.9	70	25
	PACS54/BL/25M	54	48	Coarse	54.5	46.5	75	25
	PACS80/BL/10M	80	70	Coarse	79.3	67.0	160	10
	PACS106/BL/10M	106	95	Coarse	106.0	91.5	210	10

For grey color version state "GR" instead of "BL" in Part no. If interested in different coil lengths, do not hesitate to inquire.

*These parts are not covered by the UR certification.

Approvals



EN45545- HL2

IP rating

Appropriate fitting

For use with: Type PC / ATS / Adaptalok AL / Adaptaseal / Adaptaring

IP40	Adaptaring & Jumbo
IP65	Adaptalok AL Jumbo + SK Seal
IP66	PC, ATS, Adaptalok AL, Adaptaseal
IP67	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal
IP68	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal
IP69	PC, ATS, Adaptalok AL + ALS Seal, Adaptaseal

Temperature range

Static applications: -40°C to +120°C

Moving applications: -25°C to +150°C

Flexibility & fatigue life

High flexibility – High fatigue life

Fire performance & EMI screen

Self extinguishing

Halogen free



Very high

Type PA-Slit

Slit conduit / Materials: Polyamide (nylon) 6 / Colour: Black (BL) only

	Part no.	Nominal conduit size (mm)	NW conduit size	Conduit pitch	Outside diameter (mm)	Inside diameter (mm)	Minimum bend radius (mm)	Reel length (m)
	PAFL13-S/BL/50M	13	10	Fine	13.0	10.0	25	50
	PAFL16-S/BL/50M	16	13	Fine	15.8	11.9	35	50
	PAFL21-S/BL/50M	21	17	Fine	21.2	16.8	45	50
	PACL28-S/BL/50M	28	23	Coarse	28.5	22.2	50	50
	PACL34-S/BL/50M	34	29	Coarse	34.5	27.9	60	50
	PACL42-S/BL/25M	42	36	Coarse	42.5	35.2	65	25
	PACL54-S/BL/25M	54	48	Coarse	54.5	46.9	75	25

If interested in different coil lengths, do not hesitate to inquire.

Approvals



IP rating

Appropriate fitting

N/A

Temperature range

Static applications: -40°C to +120°C

Moving applications: -5°C to +120°C

Flexibility & fatigue life

High flexibility – High fatigue life

Fire performance & EMI screen

Self extinguishing

Halogen free

Very high

Non-metallic conduit systems

Type A, C90 & 45 - Adaptalok ATS™

- Straight, 45° and 90° fittings available - fixed external male thread
- For insertion into knockouts using a locknut
- Locknut supplied with metric thread
- Materials: Polyamide (Nylon) 66 / TPE
- Colours: Black (BL), Grey (GR) / Yellow (Y) Elastomer

Type A - Adaptalok ATS™

	Part no.	Nominal Conduit Size	Metric Thread
	AT13/M16/A	13mm	M16
	AT16/M16/A	16mm	M16
	AT16/M20/A	16mm	M20
	AT21/M20/A	21mm	M20
	AT21/M25/A	21mm	M25
	AT28/M25/A	28mm	M25
	AT28/M32/A	28mm	M32
	AT34/M32/A	34mm	M32
	AT34/M40/A	34mm	M40
	AT42/M40/A	42mm	M40
	AT42/M50/A	42mm	M50
	AT48/M50/A	48mm	M50
	AT54/M50/A	54mm	M50
	AT54/M63/A	54mm	M63

To order quote Order Code, body colour & Elastomer colour, e.g. AT21/M20/A/BLY.

Type 45 - Adaptalok ATS™

	Part no.	Nominal Conduit Size	Metric Thread
	AT13/M16/45	13mm	M16
	AT16/M16/45	16mm	M16
	AT16/M20/45	16mm	M20
	AT21/M20/45	21mm	M20
	AT28/M25/45	28mm	M25
	AT34/M32/45	34mm	M32
	AT42/M40/45	42mm	M40
	AT48/M50/45	48mm	M50
	AT54/M50/45	54mm	M50

To order quote Order Code, body colour & Elastomer colour, e.g. AT54/M50/45/BLY.

Type C90 - Adaptalok ATS™

	Part no.	Nominal Conduit Size	Metric Thread
	AT13/M16/C90	13mm	M16
	AT16/M16/C90	16mm	M16
	AT16/M20/C90	16mm	M20
	AT21/M20/C90	21mm	M20
	AT28/M25/C90	28mm	M25
	AT34/M32/C90	34mm	M32
	AT42/M40/C90	42mm	M40
	AT48/M50/C90	48mm	M50
	AT54/M50/C90	54mm	M50
	AT54/M63/C90	54mm	M63

To order quote Order Code, body colour & Elastomer colour, e.g. AT21/M20/C90/BLY.

Approvals



IP rating

For use with: Type PA / PR / PADL / PF

IP40	Yes
IP65	Yes
IP68	Yes
	4 bar 30mins with Heavy Weight Conduits
	2 bar 30mins with Standard Weight Conduits
IP69	Yes

Temperature Range

Static Applications: -50°C to +120°C

Moving Applications: -45°C to +120°C

Non-metallic conduit systems

Type SA, CS90 & S45 - Adaptalok ATS™

- Straight, 45° and 90° fittings available - metal swivel external male thread
- For insertion into threaded entries & knockouts
- Order locknuts separately
- Materials: Polyamide (Nylon) 66, Nickel plated Brass thread/TPE
- Colours: Black (BL), Grey (GR) / Yellow (Y), Blue (B) Elastomer

Type SA - Adaptalok ATS™

	Part no.	Nominal Conduit Size	Metric Thread
	AT13/M16/SA	13mm	M16
	AT16/M16/SA	16mm	M16
	AT21/M20/SA	21mm	M20
	AT28/M25/SA	28mm	M25
	AT34/M32/SA	34mm	M32
	AT42/M40/SA	42mm	M40
	AT48/M50/SA	48mm	M50
	AT54/M50/SA	54mm	M50
	AT54/M63/SA	54mm	M63

To order quote Order Code, body colour & Elastomer colour, e.g. AT16/M16/SA/BLB.

Type S45 - Adaptalok ATS™

	Part no.	Nominal Conduit Size	Metric Thread
	AT13/M16/S45	13mm	M16
	AT16/M16/S45	16mm	M16
	AT21/M20/S45	21mm	M20
	AT28/M25/S45	28mm	M25
	AT34/M32/S45	34mm	M32
	AT42/M40/S45	42mm	M40
	AT48/M50/S45	48mm	M50
	AT54/M50/S45	54mm	M50
	AT54/M63/S45	54mm	M63

To order quote Order Code, body colour & Elastomer colour, e.g. AT54/M63/S45/BLB.

Type CS90 - Adaptalok ATS™

	Part no.	Nominal Conduit Size	Metric Thread
	AT13/M16/CS90	13mm	M16
	AT16/M16/CS90	16mm	M16
	AT21/M20/CS90	21mm	M20
	AT28/M25/CS90	28mm	M25
	AT34/M32/CS90	34mm	M32
	AT42/M40/CS90	42mm	M40
	AT48/M50/CS90	48mm	M50
	AT54/M50/CS90	54mm	M50
	AT54/M63/CS90	54mm	M63

To order quote Order Code, body colour & Elastomer colour, e.g. AT16/M16/SA/BLB.

Approvals	Blue Elastomer version only	IPrating	Appropriate conduit	
 IEC 61386	 LOW VOLTAGE DIRECTIVE	 C ETL US Intertek	For use with: Type PA / PR / PADL / PF	
			IP40	Yes
			IP65	Yes
			IP68	Yes
			4 bar 30mins with Heavy Weight Conduits	
 NF	 C UL US	2 bar 30mins with Standard Weight Conduits		
		IP69	Yes	
Temperature Range		Fitting Characteristics		
Static Applications:-50° C to +120° C				
Moving Applications: -45° C to +120° C				





Non-metallic conduit systems

Type A, C90 & 45 - Adaptalok

- Straight, 45° and 90° fittings available - fixed external male thread
- For insertion into knockouts using a locknut
- Locknut supplied with metric thread only
- Materials: Polyamide (Nylon) 66
- Colours: Black (BL), Grey (GR)

Type A - Adaptalok

	Part no.	Nominal Conduit Size	Metric Thread
	AL10/M12/A	10mm	M16
	AL13/M16/A	13mm	M16
	AL13/M20/A	13mm	M20
	AL16/M16/A	16mm	M16
	AL16/M20/A	16mm	M20
	AL21/M20/A	21mm	M20
	AL21/M25/A	21mm	M25
	AL28/M25/A	28mm	M25
	AL28/M32/A	28mm	M32
	AL34/M32/A	34mm	M32
	AL34/M40/A	34mm	M40
	AL42/M40/A	42mm	M40
	AL42/M50/A	42mm	M50
	AL54/M50/A	54mm	M50
	AL54/M63/A	54mm	M63

Type C90 - Adaptalok

	Part no.	Nominal Conduit Size	Metric Thread
	AL10/M12/C90*	10mm	M12
	AL13/M16/C90*	13mm	M16
	AL16/M16/C90	16mm	M16
	AL16/M20/C90	16mm	M20
	AL21/M20/C90	21mm	M20
	AL28/M25/C90	28mm	M25
	AL34/M32/C90	34mm	M32
	AL42/M40/C90	42mm	M40
	AL54/M50/C90	54mm	M50
	AL54/M63/C90	54mm	M63

*These parts are not covered by the RU certification.

Type 45 - Adaptalok

	Part no.	Nominal Conduit Size	Metric Thread
	AL13/M16/45*	13mm	M16
	AL16/M16/45	16mm	M16
	AL16/M20/45	16mm	M20
	AL21/M20/45	21mm	M20
	AL28/M25/45	28mm	M25
	AL34/M32/45	34mm	M32
	AL42/M50/45	42mm	M40
	AL54/M50/45	54mm	M50
	AL54/M63/45	54mm	M63

To order quote Order Code & body colour, e.g. AL21/M20/45/BL.

*These parts are not covered by the RU certification.

Approvals



IP rating

For use with: Type PA / CP / PR / PF

IP66	Yes
IP67	Yes + ALS Seal
IP68	Yes + ALS Seal
IP69	Yes + ALS Seal

Temperature Range

Static Applications: -50°C to +120°C

Moving Applications: -45°C to +120°C

Fitting Characteristics



Non-metallic conduit systems

Type A & C90 - Adaptalok

- Straight, 45° and 90° fittings available - swivel external male thread
- For insertion into knockouts using a locknut
- Locknut supplied with metric thread only
- Materials: Polyamide (Nylon) 66
- Colours: Black (BL), Grey (GR)

Type SA - Adaptalok

	Part no.	Nominal Conduit Size	Metric Thread
	AL13/M16/SA*	13mm	M16
	AL16/M16/SA	16mm	M16
	AL21/M20/SA	16mm	M20
	AL28/M25/SA	28mm	M25
	AL34/M32/SA	34mm	M32
	AL42/M40/SA	42mm	M40
	AL54/M50/SA	54mm	M50
	AL54/M63/SA	54mm	M63

Type CS90 - Adaptalok

	Part no.	Nominal Conduit Size	Metric Thread
	AL13/M16/CS90*	13mm	M16
	AL16/M16/CS90	16mm	M16
	AL21/M20/CS90	21mm	M20
	AL28/M25/CS90	28mm	M25
	AL34/M32/CS90	34mm	M32
	AL42/M40/CS90	42mm	M40
	AL54/M50/CS90	54mm	M50
	AL54/M63/CS90	54mm	M63

To order quote Order Code & body colour, e.g. AL13/M16/CS90/BL. NPT also available.
*These parts are not covered by the RU certification.

Type S45 - Adaptalok

	Part no.	Nominal Conduit Size	Metric Thread
	AL13/M16/S45*	13mm	M16
	AL16/M16/S45	16mm	M16
	AL21/M20/S45	21mm	M20
	AL28/M25/S45	28mm	M25
	AL34/M32/S45	34mm	M32
	AL42/M40/S45	42mm	M40
	AL54/M50/S45	54mm	M50
	AL54/M63/S45	54mm	M63

To order quote Order Code & body colour, e.g. AL21/M20/45/BL.
*These parts are not covered by the RU certification.

Approvals



NF

IP rating

For use with: Type PA / PI / CP / PR / PF

IP66	Yes
IP67	Yes + ALS Seal
IP68	Yes + ALS Seal
IP69	Yes + ALS Seal

Temperature Range

Static Applications: -50°C to +120°C

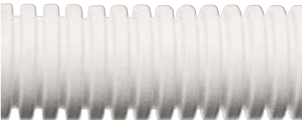
Moving Applications: -45°C to +120°C

Non-metallic conduit systems

Type KF PVCu conduits, Type KFA & Coupler - Korifit

Type KF

Lightweight, Standard weight & Medium weight conduit /
Materials: PVCu / Colour: Grey (GR), White (W), Black (BL)

	Part no.	Nominal conduit size (mm)	NW conduit size (mm)	Conduit pitch	Outside diameter (mm)	Inside diameter (mm)	Min. bend radius (mm)	Reel length (m)
	Lightweight conduit - Grey (GR)							
	KFL16/50M	16	13	Fine	15.8	12.1	25	50
	KFL20/50M	20	17	Fine	19.8	14.5	30	50
	KFL25/50M	25	22	Fine	24.8	19.9	40	50
	Standard weight conduit - White (W)							
	KFS16/W/50M	16	13	Fine	15.8	11.9	25	50
	KFS20/W/50M	20	17	Fine	19.8	14.3	30	50
	KFS25/W/50M	25	22	Fine	24.8	19.7	40	50
	Medium weight conduit - Black (BL)							
	KFM16/50M	16	13	Fine	15.8	11.9	25	50
	KFM20/50M	20	17	Fine	19.8	14.3	30	50
	KFM25/50M	25	22	Fine	24.8	19.7	40	50

Approvals



IP rating

For use with: Korifit KC & KF

IP40

Korifit KC

IP65

Korifit KC

Appropriate fitting

Temperature range

Static applications: -5°C to +60°C

Moving applications: -5°C to +60°C

UV resistance

High

Flexibility & fatigue life

Pliable - Low fatigue life

Fire performance & EMI screen

Self extinguishing

Type KFA - Korifit

Straight fitting - fixed external male thread /
Materials: Polyamide (Nylon) 66 /
Colours: Black (BL), Grey (GR) or White (W)

	Part no.	Nominal Conduit Size	Metric Thread
	KF16/M16/A	16mm	M16
	KF16/M20/A	16mm	M20
	KF20/M20/A	20mm	M20
	KF25/M25/A	25mm	M25

To order quote Order Code & body colour, e.g. KF16/M16/A/BL.

Coupler - Korifit

Straight one piece coupler /
Materials: Polyamide (Nylon) 66 /
Colour: White (W) only

	Part no.	Nominal Conduit Size	NW Conduit Size
	KF2020	20mm	17

To order quote Order Code & body colour, e.g. KF2020/W.

Approvals



IP rating

For use with: Korifit Type KF

IP65

Appropriate conduit

Yes

Temperature range

Static applications: -5°C to +60°C

Moving applications: -5°C to +60°C

Fitting characteristics



Non-metallic conduit systems

Type KC/A, KC/C90 - Korifit

- Straight fitting - fixed external male thread
 - For insertion into threaded entries & knockouts
 - Locknut supplied
 - Materials: Polyamide (Nylon) 66
 - Colours: Black, Grey or White
- 90° Elbow fitting - fixed external male thread
 - For insertion into knockouts
 - Locknut supplied
 - Materials: Polyamide (Nylon) 66
 - Colour: Black only

Type KC/A - Korifit

	Part no.	Nominal Conduit Size	Metric Thread
	KC16/M16/A	16mm	M16
	KC16/M20/A	16mm	M20
	KC20/M20/A	20mm	M20
	KC25/M25/A	20mm	M25

To order quote Order Code & body colour, e.g. KC16/M16/A/BL.

Type KC/C90 - Korifit

	Part no.	Nominal Conduit Size	Metric Thread
	KC16/M16/C90	16mm	M16
	KC20/M20/C90	20mm	M20
	KC25/M25/C90	25mm	M25

To order quote Order Code & body colour, e.g. KC16/M16/C90/BL.

Approvals	IP rating	Appropriate conduit	Temperature range	Fitting characteristics
 IEC 61386	For use with: Korifit Type KF	IP40	Static applications: -5°C to +60°C	
 CE			Moving applications: -5°C to +60°C	
 RoHS				

Non-metallic conduit systems

Accessories

- Inspection T-piece
- Material: Polyamide (Nylon) 66
- Colour: Black (BL) only

Type T



Part no.	Nominal conduit size (mm)
ASF10X3/T/BL	10
ASF13X3/T/BL	13
ASF16X3/T/BL	16
ASF21X3/T/BL	21
ASC21X3/T/BL	21
ASF28X3/T/BL	28
ASC28X3/T/BL	28
ASF34X3/T/BL	34
ASC34X3/T/BL	34

For connection to corrugated flexible conduit.

Approvals



IP rating

Appropriate conduit

Temperature range

For use with: Type PA / CP / PR / PF

Static applications: -50°C to +120°C

IP66 Yes

Moving applications: -45°C to +120°C

IP67 Yes

Type AC

Conduit clips with integral lid / Material: Polyamide (nylon)66, impact modified Nylon - ST version only / Colour: Black (BL), Grey (GR)



Part no.	Black	Grey	Impact Modified (Black only)	Nominal Conduit Size
ACB10		ACG10	–	10mm
ACB13		ACG13	ACB13/ST	13mm
ACB16		ACG16	ACB16/ST	16mm
ACB21V2		ACG21V2	ACB21V2/ST	21mm
ACB28		ACG28	ACB28/ST	28mm
ACB34		ACG34	ACB34/ST	34mm
ACB42V2		ACG42V2	ACB42V2/ST	42mm
ACB54V2		ACG54V2	ACB54V2/ST	54mm

Type LNP

Nylon Locknuts / Material: Polyamide (nylon) 6 / Colour: Black (BL), Grey (GR)



Part no.	Black	Grey	Metric Thread
LNPB/M12	–		M12
LNPB/M16		LNPG/M16	M16
LNPB/M20		LNPG/M20	M20
LNPB/M25		LNPG/M25	M25
LNPB/M32		LNPG/M32	M32
LNPB/M40		LNPG/M40	M40
LNPB/M50		LNPG/M50	M50
LNPB/M63		LNPG/M63	M63

Kwikcut

Kwikcut cutting tool

Part no.

KWIKCUT



Kwikcut is the ideal cutting tool for non-metallic conduits (PA, PF, PR, PADL, CP, KFL, KFS, KFM, PP, XF & PK) up to 32mm.

Place the conduit between the cutting blade and lower support, squeeze the handles and rotate the conduit for a clean, easy cut. Spare blades are available.

Non-metallic conduit systems

Accessories

- Reducing kit
- Materials: Polyamide (Nylon) 66 & neoprene rubber
- Colour: Black (BL) only

Type RK

	Nominal conduit size (mm)	Conduit pitch	Reducing to conduit size					Part no.
			10	13	16	21	28	Reducing to conduit size 28
	10	Fine	–	–	–	–	–	–
	13	Fine	RK13-10	–	–	–	–	–
	16	Fine	RK16-10	RK16-13	–	–	–	–
	21	Fine	RK21-10	RK21-13	RK21-16	–	–	–
	21	Coarse	RK21-10	RK21-13	RK21-16	–	–	–
	28	Fine	–	RK28-13	RK28-16	RK28-21	–	–
	28	Coarse	–	RK28-13	RK28-16	RK28-21	–	–
	34	Fine	–	–	–	RK34-21	RK34-28	–
	34	Coarse	–	–	–	RK34-21	RK34-28	–

For connection to a reduced conduit size.

Approvals	IP rating	Appropriate conduit	Temperature range
  	For use with: Type PA / CP / PR / PF		Static applications: -40°C to +120°C
	IP66	Yes	Moving applications: -5°C to +120°C
	IP67	Yes	
	IP68	Yes (2 bar 30mins)	
	IP69	Yes	

End sleeves

Materials: Polyamide (nylon) 6 / Colour: Black (BL) only

	Part no.	Nominal conduit size (mm)
	GZ9	13
	GZ11	16
	GZ13	21
	GZ21	28
	GZ29	34
	GZ36	42

For sealing cables to non-metallic conduit

Removal tool for Adaptalok fittings

Materials: Polyamide (nylon) 6 / Colour: Black (BL) only

	Part no.	Adaptalok fitting size (mm)
	AL13RT	13
	AL16RT	16
	AL21RT	21
	AL28RT	28
	AL34RT	34
	AL42RT	42
	AL54RT	54

To provide easy removal of Adaptalok & ATS Fittings.

Industrial Cable glands

Supported by global certifications and our commitment to quality and research, ABB offers industrial cable glands for a broad array of applications anywhere you need them.

With varieties designed to withstand wet or dry locations, indoor or outdoor use and corrosive conditions, ABB offers a general purpose industrial gland to meet your need. Backed by thorough testing, ABB glands meet or exceed regulatory and certification standards, no matter where on the globe you need to use them.

Cable glands provide sealed entry into enclosures, motors, panels or any other device, limiting the ingress of water and dust. Regardless of the configuration, ABB's high quality standards help to extend system life and minimise downtime.

Available in stainless steel, nickel-plated brass, aluminum or nylon, our cable glands are available in a variety of thread types, shapes and hole configurations. Self-grounding varieties are available, along with a full array of accessories.

ABB industrial cable glands can be installed anywhere. Supported by global certifications and type approvals, we have a solution for most applications.



Cable glands for industrial applications

Selection guide

Selection guide



Type	NPG	NCG	BCG	Rail Specific applications		
				RNCG	RBCG	RBSG
General						
Commercial Building	•	•	–	–	–	–
Residential Building	•	•	–	•	•	•
Industrial MRO	–	•	•	–	–	–
Low Ingress	–	•	•	–	–	–
OEM						
General Applications	•	•	•	–	–	–
Industrial Machinery	–	–	–	–	–	–
Commerical Machinery	–	–	–	–	–	–
Panel Building	•	•	•	–	–	–
Lighting	–	•	–	–	–	–
Rail						
Traction - Exterior	–	–	•	•	•	•
Traction - Interior	–	•	–	•	•	•
Infrastructure - Exterior	–	–	•	•	•	•
Infrastructure - Interior	–	•	–	•	•	•
Automation						
Robotics	•	•	•	–	–	–
Control systems	•	–	•	–	–	–
Enclosures and Motors	•	•	•	–	–	–
Marine						
General Applications	–	•	–	–	–	–
Outdoor Applications	–	•	–	–	–	–
Passenger/Crew Areas	–	•	–	–	–	–
Oil and Gas						
IEC standards	–	–	–	–	–	–
NEC Standards	–	–	–	–	–	–
Other						
Solar	•	•	•	–	–	–
Food and Beverage	–	–	–	–	–	–
Chemical Plants	–	–	–	–	–	–
Data Centres	–	–	•	–	–	–
Waste Water Management	–	–	–	–	–	–

Other cable gland ranges are available
for other types of industries and applications.
Please contact us to find out more.



Food & Beverage applications	
FSCG	FSEM
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
•	•
•	•
-	-
-	-

NPG Quick-Connect™

Cable glands



ABB's latest cable gland offering, the NPG Quick-Connect™, allows for fast and effective fitting without access to the inside of an enclosure, greatly speeding installation. The speed and ease of installation makes the NPG ideal for panel builders and volume installers of all types. NPG Quick-Connect™ is a single-piece, corrosion resistant nylon gland suitable for non-armoured, portable and tray cable types. When installed, the NPG achieves ingress protection of IP66 or IP68 (5 bar 30 mins).

Quick-Connect™ - NPG Series - Nylon cable gland

Approvals & certifications		Conformity
		Conforms to:
		EN 62444
		UL514B (see table for details)
		CSA C22.2 No 18.3
Temperature range		
Normal Use: -20°C to +100°C (-4°F to +212°F)		
Short Term: -30°C to +150°C (-22°F to +302°F)		
IP Rating	Material	
IP66	Halogen free nylon (PA6)	
IP68 (5-Bar 30 mins)	construction	
	Available in black, grey and light grey	
	Chloroprene seals	

Under normal use, NPG Quick-Connect™ glands are rated to perform from -20°C to 100°C (-4°F to 212°F), but in shorter bursts can withstand -30°C to 150°C (-22°F to 302°F).

Dimensions

	Metric thread Part no.	Metric thread	Cable size		Hole size		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NPG-M161x (cURus)	M16	5.0 0.197	10.0 0.394	16.2 0.638	16.4 0.646	9.0 0.354	42.5 1.673	26.5 1.043	22.0 0.866	22.0 0.866
	NPG-M201x (cURus)	M20	6.0 0.236	12.0 0.472	20.2 0.795	20.4 0.803	9.0 0.354	41.5 1.634	30.3 1.193	24.0 0.945	24.0 0.945
	NPG-M202x (cURus)	M20	7.0 0.276	13.0 0.512	20.2 0.795	20.4 0.803	9.0 0.354	41.5 1.634	30.3 1.193	25.0 0.984	25.0 0.984
	NPG-M251x (cURus)	M25	11.0 0.433	17.0 0.669	25.2 0.992	25.4 1.000	9.0 0.354	43.5 1.713	36.3 1.429	29.0 1.142	29.0 1.142
	NPG-M321x (cURus)	M32	15.0 0.591	21.0 0.827	32.2 1.268	32.4 1.276	9.0 0.354	49.5 1.949	43.2 1.701	36.0 1.417	36.0 1.417
	NPT thread Part no.	NPT thread	Cable size		Hole size		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NPG-0381x	3/8"	5.0 0.197	10.0 0.394	17.65 0.695	18.85 0.742	10.0 0.394	41.2 1.673	26.5 1.043	22.0 0.866	22.0 0.866
	NPG-0501x	1/2"	6.0 0.236	12.0 0.472	21.84 0.860	23.01 0.906	10.0 0.394	39.2 1.543	30.5 1.201	24.0 0.945	24.0 0.945
	NPG-0502x	1/2"	10.0 0.394	14.0 0.551	21.84 0.860	23.01 0.906	10.0 0.394	39.8 1.689	30.5 1.201	27.0 1.063	27.0 1.063
	NPG-0751x	3/4"	13.0 0.512	18.0 0.709	27.78 1.094	28.98 1.141	10.0 0.394	41.9 1.650	39.0 1.535	33.0 1.299	33.0 1.299
	NPG-1001x	1"	18.0 0.709	25.0 0.984	34.51 1.359	35.71 1.406	10.0 1.972	50.1 1.972	47.5 1.870	42.0 1.654	42.0 1.654

Note for colour: x in part number - B-Black (RAL 9001), G-Grey (RAL 7001), LG-Light grey (RAL 7035). M40 Metric Thread available on request.

Nylon cable glands for general purpose use

NCG Series



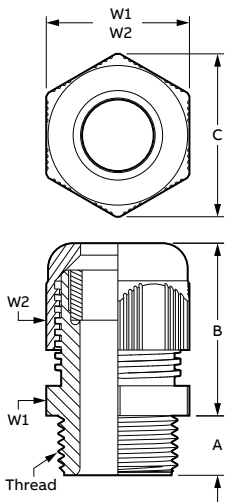
Features and benefits:

- Low profile cable glands
- Wide cable clamping range
- Corrosion resistant

NCG Series - Nylon cable glands

Approvals & certifications		Conformity	Temperature range	
  		EN 62444	Normal Use: -20°C to +100°C (-4°F to +212°F)	
		UL514B (see table for details)	Short Term: -30°C to +150°C (-22°F to +302°F)	
		CSA C22.2 No 18.3		
			IP Rating	Material
			IP66	Halogen free nylon construction
			IP68 (5-Bar 30 mins)	Chloroprene seals
			NEMA 4	Available in black, grey and light grey

Dimensions

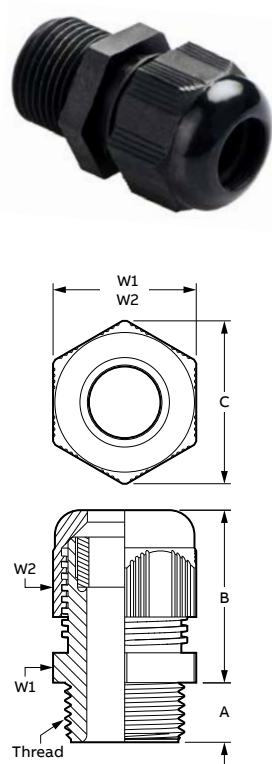
Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NCG-M121x	M12x1.5	2.0	5.0	8.0	23.0	16.9	15.0	15.0
			0.079	0.197	0.315	0.906	0.665	0.591	0.591
	NCG-M122x (cURus)	M12x1.5	3.0	6.5	8.0	23.0	16.9	15.0	15.0
			0.118	0.256	0.315	0.906	0.665	0.591	0.591
	NCG-M161x	M16x1.5	2.0	6.0	8.0	26.5	21.9	19.0	19.0
			0.079	0.236	0.315	1.043	0.862	0.748	0.748
	NCG-M161x-L	M16x1.5	2.0	6.0	15.0	26.5	21.9	19.0	19.0
			0.079	0.236	0.591	1.043	0.862	0.748	0.748
	NCG-M162x (cURus)	M16x1.5	4.0	8.0	8.0	26.5	21.9	19.0	19.0
			0.157	0.315	0.315	1.043	0.862	0.748	0.748
	NCG-M162x-L	M16x1.5	4.0	8.0	15.0	26.5	21.9	19.0	19.0
			0.157	0.315	0.591	1.043	0.862	0.748	0.748
	NCG-M163x (cURus)	M16x1.5	5.0	10.0	10.0	30.0	25.0	22.0	22.0
			0.197	0.394	0.394	1.181	0.984	0.866	0.866
	NCG-M163x-L (cURus)	M16x1.5	5.0	10.0	15.0	30.0	25.0	22.0	22.0
			0.157	0.315	0.591	1.043	0.862	0.748	0.748
	NCG-M201x	M20x1.5	5.0	9.0	10.0	30.0	27.0	24.0	24.0
			0.197	0.354	0.394	1.043	1.063	0.945	0.945
	NCG-M201x-L	M20x1.5	5.0	9.0	15.0	30.0	27.0	24.0	24.0
			0.197	0.354	0.591	1.043	1.063	0.945	0.945

Note for colour: x in part number - B-Black (RAL 9001), G-Grey (RAL 7001), LG-Light grey (RAL 7035).

Nylon cable glands for general purpose use

NCG Series

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NCG-M202x (cULus)	M20x1.5	6.0	12.0	10.0	30.0	27.0	24.0	24.0
			0.236	0.472	0.394	1.181	1.063	0.945	0.945
	NCG-M202x-L (cULus)	M20x1.5	6.0	12.0	15.0	30.0	27.0	24.0	24.0
			0.236	0.472	0.591	1.181	1.063	0.945	0.945
	NCG-M203x (cULus)	M20x1.5	10.0	14.0	10.0	33.5	31.0	27.0	27.0
			0.394	0.551	0.394	1.319	1.22	1.063	1.063
	NCG-M203x-L (cULus)	M20x1.5	10.0	14.0	15.0	33.5	31.0	27.0	27.0
			0.394	0.551	0.591	1.319	1.22	1.063	1.063
	NCG-M251x	M25x1.5	9.0	16.0	10.0	38.0	38.0	33.0	33.0
			0.354	0.63	0.394	1.496	1.496	1.299	1.299
	NCG-M251x-L	M25x1.5	9.0	16.0	15.0	38.0	38.0	33.0	33.0
			0.354	0.63	0.591	1.496	1.496	1.299	1.299
	NCG-M252x (cULus)	M25x1.5	11.0	17.0	8.0	38.0	32.5	29.0	29.0
			0.433	0.669	0.315	1.496	1.28	1.142	1.142
	NCG-M252x-L	M25x1.5	11.0	17.0	15.0	36.0	32.5	29.0	29.0
			0.433	0.669	0.591	1.417	1.28	1.142	1.142
	NCG-M253x (cULus)	M25x1.5	13.0	18.0	10.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.394	1.496	1.496	1.299	1.299
	NCG-M253x-L	M25x1.5	13.0	18.0	15.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.591	1.496	1.496	1.299	1.299
	NCG-M321x	M32x1.5	11.0	15.0	10.0	42.5	41.0	36.0	36.0
			0.433	0.591	0.394	1.673	1.614	1.417	1.417
	NCG-M321x-L	M32x1.5	11.0	15.0	15.0	42.5	36.0	36.0	36.0
			0.433	0.591	0.591	1.673	1.417	1.417	1.417
	NCG-M322x (cULus)	M32x1.5	15.0	21.0	10.0	42.5	41.0	36.0	36.0
			0.591	0.827	0.394	1.673	1.614	1.417	1.417
	NCG-M322x-L	M32x1.5	15.0	21.0	15.0	42.5	41.0	36.0	36.0
			0.591	0.827	0.591	1.673	1.614	1.417	1.417
	NCG-M323x (cULus)	M32x1.5	18.0	25.0	15.0	42.0	47.3	42.0	42.0
			0.709	0.984	0.591	1.654	1.862	1.654	1.654
	NCG-M401x	M40x1.5	16.0	23.0	10.0	47.5	52.4	46.0	46.0
			0.63	0.906	0.394	1.870	2.063	1.811	1.811
	NCG-M401x-L	M40x1.5	16.0	23.0	18.0	47.5	52.4	46.0	46.0
			0.63	0.906	0.709	1.870	2.063	1.811	1.811
	NCG-M402x (cULus)	M40x1.5	19.0	28.0	10.0	47.5	52.4	46.0	46.0
			0.748	1.102	0.394	1.870	2.063	1.811	1.811
	NCG-M402x-L	M40x1.5	19.0	28.0	18.0	47.5	52.4	46.0	46.0
			0.748	1.102	0.709	1.870	2.063	1.811	1.811
	NCG-M403x (cULus)	M40x1.5	22.0	32.0	18.0	52.0	60.0	53.0	53.0
			0.866	1.26	0.709	2.047	2.362	2.087	2.087
	NCG-M501x	M50x1.5	25.0	31.0	18.0	53.5	67.8	60.0	60.0
			0.984	1.22	0.709	2.106	2.669	2.362	2.362
	NCG-M502x (cULus)	M50x1.5	30.0	38.0	18.0	53.5	67.8	60.0	60.0
			1.181	1.496	0.709	2.106	2.669	2.362	2.362
	NCG-M631x	M63x1.5	29.0	35.0	18.0	53.0	72.9	65.0	65.0
			1.142	1.378	0.709	2.087	2.870	2.559	2.559
	NCG-M632x (cULus)	M63x1.5	34.0	44.0	18.0	53.0	72.9	65.0	65.0
			1.339	1.732	0.709	2.087	2.87	2.559	2.559
	NCG-M751x (cULus)	M75x1.5	48.0	55.0	25.0	55.0	89.0	75.0	80.0
			1.89	2.165	0.984	2.165	3.504	2.953	3.15

Note for colour: x in part number - B-Black (RAL 9001), G-Grey (RAL 7001), LG-Light grey (RAL 7035).

Nylon cable glands for industrial applications

NCG Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NCG-0381x	3/8"	3.0	7.0	15.0	30.0	25.0	22.0	22.0
			0.118	0.276	0.591	1.181	0.984	0.866	0.866
	NCG-0382x (cURus)	3/8"	5.0	10.0	15.0	30.0	25.0	22.0	22.0
			0.197	0.394	0.591	1.181	0.984	0.866	0.866
	NCG-0501x	1/2"	5.0	9.0	15.0	30.0	27.0	24.0	24.0
			0.197	0.354	0.591	1.181	1.063	0.945	0.945
	NCG-0502x (cULus)	1/2"	6.0	12.0	15.0	30.0	27.0	24.0	24.0
			0.236	0.472	0.591	1.181	1.063	0.945	0.945
	NCG-0503x (cULus)	1/2"	10.0	14.0	11.0	33.5	30.9	27.0	27.0
			0.394	0.551	0.433	1.319	1.217	1.063	1.063
	NCG-0504x	1/2"	9.0	16.0	15.0	38.0	38.0	33.0	33.0
			0.354	0.63	0.591	1.496	1.496	1.299	1.299
	NCG-0505x	1/2"	13.0	18.0	15.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.591	1.496	1.496	1.299	1.299
	NCG-0751x	3/4"	9.0	16.0	15.0	38.0	38.0	33.0	33.0
			0.354	0.63	0.591	1.496	1.496	1.299	1.299
	NCG-0752x (cULus)	3/4"	13.0	18.0	15.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.591	1.496	1.496	1.299	1.299
	NCG-1001x	1"	12.0	20.0	18.0	42.0	47.3	42.0	42.0
			0.472	0.787	0.709	1.654	1.862	1.654	1.654
	NCG-1002x (cULus)	1"	18.0	25.0	18.0	42.0	47.3	42.0	42.0
			0.709	0.984	0.709	1.654	1.862	1.654	1.654

Note for colour: x in part number - B-Black (RAL 9001), G-Grey (RAL 7001), LG-Light grey (RAL 7035).

Nylon cable glands for industrial applications

NCG Series

Dimensions

PG thread	Part no.	PG thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NCG-PG71x (cURus)	PG07	3.0	6.5	8.0	23.0	16.9	15.0	15.0
			0.118	0.256	0.315	0.906	0.665	0.591	0.591
	NCG-PG91x (cURus)	PG09	4.0	8.0	8.0	26.5	21.9	19.0	19.0
			0.157	0.315	0.315	1.043	0.862	0.748	0.748
	NCG-PG111x	PG11	3.0	7.0	8.0	29.0	25.0	22.0	22.0
			0.118	0.276	0.315	1.142	0.984	0.866	0.866
	NCG-PG112x (cURus)	PG11	5.0	10.0	8.0	29.0	25.0	22.0	22.0
			0.197	0.394	0.315	1.142	0.984	0.866	0.866
	NCG-PG131x (cULus)	PG13	6.0	12.0	10.0	29.0	27.0	24.0	24.0
			0.236	0.472	0.394	1.142	1.063	0.945	0.945
	NCG-PG161x (cULus)	PG16	10.0	14.0	10.0	33.5	30.9	27.0	27.0
			0.394	0.551	0.394	1.319	1.217	1.063	1.063
	NCG-PG211x (cULus)	PG21	13.0	18.0	11.0	37.0	38.0	33.0	33.0
			0.512	0.709	0.433	1.457	1.496	1.299	1.299
	NCG-PG291x (cULus)	PG29	18.0	25.0	11.0	42.0	47.3	42.0	42.0
			0.709	0.984	0.433	1.654	1.862	1.654	1.654

Note for colour: x in part number - B-Black (RAL 9001), G-Grey (RAL 7001), LG-Light grey (RAL 7035).

Dimensions

GAS thread	Part no.	GAS thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	NCG-G0251x	1/4"	3.0	6.5	10.0	23.0	16.9	15.0	15.0
			0.118	0.256	0.394	0.906	0.665	0.591	0.591
	NCG-G0381x	3/8"	5.0	10.0	11.0	30.0	25.0	22.0	22.0
			0.197	0.394	0.433	1.181	0.984	0.866	0.866
	NCG-G0501x	1/2"	6.0	12.0	10.0	30.0	27.0	24.0	24.0
			0.236	0.472	0.394	1.181	1.063	0.945	0.945
	NCG-G0502x	1/2"	10.0	14.0	11.0	30.0	30.9	27.0	27.0
			0.394	0.551	0.433	1.181	1.217	1.063	1.063
	NCG-G0751x	3/4"	13.0	18.0	12.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.472	1.496	1.496	1.299	1.299
	NCG-G1001x	1"	18.0	25.0	13.0	42.0	47.3	42.0	42.0
			0.709	0.984	0.512	1.654	1.862	1.654	1.654

Note for colour: x in part number - B-Black (RAL 9001), G-Grey (RAL 7001), LG-Light grey (RAL 7035).

Brass cable glands (general purpose)

BCG Series



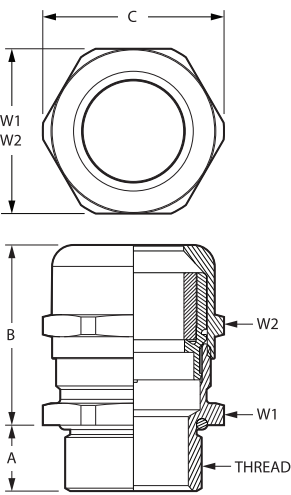
Features and benefits:

- Low profile cable glands
- Wide cable clamping range
- Good corrosion resistance

BCG Series - Brass cable glands

Approvals & certifications	Conformity Conforms to:	Temperature range	
		Normal use: -20°C to +100°C (-4°F to +212°F)-	
  	EN 62444	Short Term: -30°C to +150°C (-22°F to +302°F)	
	UL514B		
		IP Rating	Material
		IP66	Nickel plated brass construction
		IP68 (5-Bar 30 mins)	Chloroprene seals
		NEMA 4	

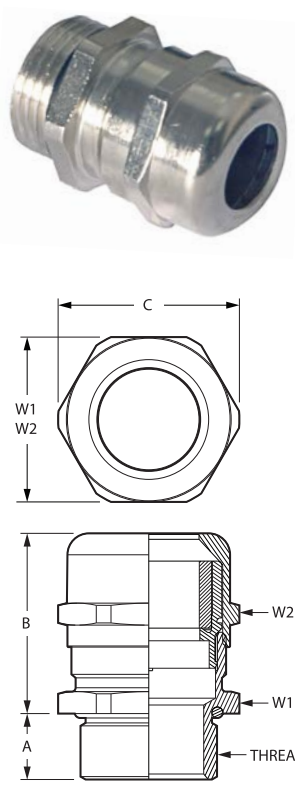
Dimensions

Metric thread	Part no.	Metric thread	Cable size		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	BCG-M121	M12x1.5	2.0	5.0	6.0	22.0	15.5	14.0	14.0
			0.079	0.197	0.236	0.866	0.610	0.551	0.551
	BCG-M122 (cURus)	M12x1.5	3.0	6.5	6.0	22.0	15.5	14.0	14.0
			0.118	0.256	0.236	0.866	0.610	0.551	0.551
	BCG-M122-L	M12x1.5	3.0	6.5	12.0	22.0	15.5	14.0	14.0
			0.118	0.256	0.472	0.866	0.610	0.551	0.551
	BCG-M161	M16x1.5	2.0	6.0	7.0	23.0	20.0	18.0	17.0
			0.079	0.236	0.276	0.906	0.787	0.709	0.669
	BCG-M161-L	M16x1.5	2.0	6.0	12.0	23.0	20.0	18.0	17.0
			0.079	0.236	0.472	0.906	0.787	0.709	0.669
	BCG-M162 (cURus)	M16x1.5	4.0	8.0	7.0	23.0	20.0	18.0	17.0
			0.157	0.315	0.276	0.906	0.787	0.709	0.669
	BCG-M162-L	M16x1.5	4.0	8.0	12.0	23.0	20.0	18.0	17.0
			0.157	0.315	0.472	0.906	0.787	0.709	0.669
	BCG-M163 (cURus)	M16x1.5	5.0	10.0	7.0	28.5	22.0	20.0	20.0
			0.197	0.394	0.276	1.122	0.866	0.787	0.787
	BCG-M163-L (cURus)	M16x1.5	5.0	10.0	12.0	28.5	22.0	20.0	20.0
			0.197	0.394	0.472	1.122	0.866	0.787	0.787
	BCG-M201	M20x1.5	5.0	9.0	8.0	26.0	24.5	22.0	22.0
			0.197	0.354	0.315	1.024	0.965	0.866	0.866
	BCG-M201-L	M20x1.5	5.0	9.0	12.0	26.0	24.5	22.0	22.0
			0.197	0.354	0.472	1.024	0.965	0.866	0.866
	BCG-M202 (cULus)	M20x1.5	6.0	12.0	8.0	26.5	24.5	22.0	22.0
			0.236	0.472	0.315	1.043	0.965	0.866	0.866

Brass cable glands (general purpose)

BCG Series

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	BCG-M202-L (cULus)	M20x1.5	6.0	12.0	12.0	26.0	24.5	22.0	22.0
			0.236	0.472	0.472	1.024	0.965	0.866	0.866
	BCG-M203 (cULus)	M20x1.5	10.0	14.0	8.0	28.0	26.8	24.0	24.0
			0.394	0.551	0.315	1.102	1.055	0.945	0.945
	BCG-M203-L	M20x1.5	10.0	14.0	12.0	28.0	26.8	24.0	24.0
			0.394	0.551	0.472	1.102	1.055	0.945	0.945
	BCG-M251	M25x1.5	7.0	12.0	8.0	28.0	29.8	27.0	24.0
			0.276	0.472	0.315	1.102	1.173	1.063	0.945
	BCG-M251-L	M25x1.5	7.0	12.0	12.0	28.0	29.8	27.0	24.0
			0.276	0.472	0.472	1.102	1.173	1.063	0.945
	BCG-M252	M25x1.5	9.0	16.0	8.0	33.0	33.0	30.0	30.0
			0.354	0.630	0.315	1.299	1.299	1.181	1.181
	BCG-M252-L	M25x1.5	9.0	16.0	12.0	33.0	33.0	30.0	30.0
			0.354	0.630	0.472	1.299	1.299	1.181	1.181
	BCG-M253 (cULus)	M25x1.5	10.0	14.0	8.0	28.0	29.8	27.0	24.0
			0.394	0.551	0.315	1.102	1.173	1.063	0.945
	BCG-M253-L	M25x1.5	10.0	14.0	12.0	28.0	29.8	27.0	24.0
			0.394	0.551	0.472	1.102	1.173	1.063	0.945
	BCG-M254 (cULus)	M25x1.5	13.0	18.0	8.0	33.0	32.0	30.0	30.0
			0.512	0.709	0.315	1.299	1.260	1.181	1.181
	BCG-M254-L	M25x1.5	13.0	18.0	12.0	33.0	32.0	30.0	30.0
			0.512	0.709	0.472	1.299	1.260	1.181	1.181
	BCG-M321	M32x1.5	9.0	16.0	9.0	33.0	37.5	34.0	30.0
			0.354	0.630	0.354	1.299	1.476	1.339	1.181
	BCG-M321-L	M32x1.5	9.0	16.0	15.0	33.0	37.5	34.0	30.0
			0.354	0.630	0.591	1.299	1.476	1.339	1.181
	BCG-M322	M32x1.5	12.0	20.0	9.0	44.0	44.5	40.0	40.0
			0.472	0.787	0.354	1.732	1.752	1.575	1.575
	BCG-M322-L	M32x1.5	12.0	20.0	15.0	44.0	44.5	40.0	40.0
			0.472	0.787	0.591	1.732	1.752	1.575	1.575
	BCG-M323 (cULus)	M32x1.5	13.0	18.0	9.0	33.0	37.5	34.0	30.0
			0.512	0.709	0.354	1.299	1.476	1.339	1.181
	BCG-M323-L	M32x1.5	13.0	18.0	15.0	33.0	37.5	34.0	30.0
			0.512	0.709	0.591	1.299	1.476	1.339	1.181
	BCG-M324 (cULus)	M32x1.5	15.0	21.0	8.0	36.0	37.0	34.0	34.0
			0.591	0.827	0.315	1.417	1.457	1.339	1.339
	BCG-M324-L (cULus)	M32x1.5	15.0	21.0	15.0	36.0	37.0	34.0	34.0
			0.591	0.827	0.591	1.417	1.457	1.339	1.339
	BCG-M325 (cULus)	M32x1.5	18.0	25.0	9.0	44.0	44.5	40.0	40.0
			0.709	0.984	0.354	1.732	1.752	1.575	1.575
	BCG-M325-L	M32x1.5	18.0	25.0	15.0	44.0	44.5	40.0	40.0
			0.709	0.984	0.591	1.732	1.752	1.575	1.575
	BCG-M401	M40x1.5	12.0	20.0	9.0	38.5	48.5	43.0	40.0
			0.472	0.787	0.354	1.516	1.909	1.693	1.575
	BCG-M401-L	M40x1.5	12.0	20.0	15.0	38.5	48.5	43.0	40.0
			0.472	0.787	0.591	1.516	1.909	1.693	1.575
	BCG-M402	M40x1.5	16.0	23.0	9.0	43.5	48.4	43.0	43.0
			0.630	0.906	0.354	1.713	1.906	1.693	1.693

Brass cable glands (general purpose)

BCG Series

Dimensions

Metric thread	Part no.	Metric thread	Cable size		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	BCG-M403 (cULus)	M40x1.5	19.0	28.0	9.0	43.5	48.4	43.0	43.0
			0.748	1.102	0.354	1.713	1.906	1.693	1.693
	BCG-M403-L (cULus)	M40x1.5	19.0	28.0	15.0	43.5	48.4	43.0	43.0
			0.748	1.102	0.591	1.713	1.906	1.693	1.693
	BCG-M404 (cULus)	M40x1.5	22.0	32.0	9.0	52.5	55.5	50.0	50.0
			0.866	1.260	0.354	2.067	2.185	1.969	1.969
	BCG-M404-L	M40x1.5	22.0	32.0	15.0	52.5	55.5	50.0	50.0
			0.866	1.260	0.591	2.067	2.185	1.969	1.969
	BCG-M501	M50x1.5	20.0	26.0	9.0	48.0	61.0	55.0	50.0
			0.787	1.024	0.354	1.890	2.402	2.165	1.969
	BCG-M502 (cULus)	M50x1.5	22.0	32.0	9.0	48.0	61.0	55.0	50.0
			0.866	1.260	0.354	1.890	2.402	2.165	1.969
	BCG-M502-L	M50x1.5	22.0	32.0	15.0	48.0	61.0	55.0	50.0
			0.866	1.260	0.591	1.890	2.402	2.165	1.969
	BCG-M503 (cULus)	M50x1.5	27.0	38.0	9.0	52.0	64.0	58.0	58.0
			1.063	1.496	0.354	2.047	2.520	2.283	2.283
	BCG-M503-L (cULus)	M50x1.5	27.0	38.0	15.0	52.0	64.0	58.0	58.0
			1.063	1.496	0.591	2.047	2.520	2.283	2.283
	BCG-M504	M50x1.5	34.0	44.0	9.0	52.8	75.0	68.0	64.0
			1.339	1.732	0.354	2.079	2.953	2.677	2.520
	BCG-M504-L	M50x1.5	34.0	44.0	15.0	52.8	75.0	68.0	64.0
			1.339	1.732	0.591	2.079	2.953	2.677	2.520
	BCG-M631	M63x1.5	29.0	35.0	10.0	54.0	75.0	68.0	64.0
			1.142	1.378	0.394	2.126	2.953	2.677	2.520
	BCG-M631-L	M63x1.5	29.0	35.0	18.0	54.0	75.0	68.0	64.0
			1.142	1.378	0.709	2.126	2.953	2.677	2.520
	BCG-M632 (cULus)	M63x1.5	34.0	44.0	10.0	54.0	75.0	68.0	64.0
			1.339	1.732	0.394	2.126	2.953	2.677	2.520
	BCG-M632-L (cULus)	M63x1.5	34.0	44.0	18.0	53.0	75.0	68.0	64.0
			1.339	1.732	0.709	2.087	2.953	2.677	2.520
	BCG-M633	M63x1.5	37.0	53.0	10.0	51.0	83.0	75.0	75.0
			1.457	2.087	0.394	2.008	3.268	2.953	2.953
	BCG-M633-L	M63x1.5	37.0	53.0	18.0	51.0	83.0	75.0	75.0
			1.457	2.087	0.709	2.008	3.268	2.953	2.953

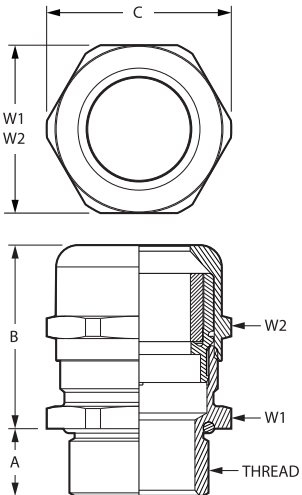
Brass cable glands (general purpose)

BCG Series

Dimensions

NPT thread	Part no.	NPT thread	Cable size		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	BCG-0381	3/8" NPT	2.0	6.0	11.5	23.0	21.0	19.0	17.0
			0.079	0.236	0.453	0.906	0.827	0.748	0.669
	BCG-0382	3/8" NPT	5.0	10.0	11.5	29.5	22.0	20.0	20.0
			0.197	0.394	0.453	1.161	0.866	0.787	0.787
	BCG-0501	1/2" NPT	5.0	9.0	13.0	25.5	24.5	22.0	22.0
			0.197	0.354	0.512	1.004	0.965	0.866	0.866
	BCG-0502 (cULus)	1/2" NPT	6.0	12.0	13.0	25.5	24.5	22.0	22.0
			0.236	0.472	0.512	1.004	0.965	0.866	0.866
	BCG-0503	1/2" NPT	10.0	14.0	13.0	28.0	26.8	24.0	24.0
			0.394	0.551	0.512	1.102	1.055	0.945	0.945
	BCG-0752 (cULus)	3/4" NPT	13.0	18.0	13.0	36.0	33.0	30.0	30.0
			0.512	0.709	0.512	1.417	1.299	1.181	1.181
	BCG-1002 (cULus)	1" NPT	18.0	25.0	13.0	43.0	48.5	43.0	40.0
			0.709	0.984	0.512	1.693	1.909	1.693	1.575

Dimensions

PG thread	Part no.	PG thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	BCG-PG71	PG07	2.0	5.0	6.0	22.0	15.5	14.0	14.0
			0.079	0.197	0.236	0.866	0.610	0.551	0.551
	BCG-PG71-L	PG07	2.0	5.0	10.0	22.0	15.5	14.0	14.0
			0.079	0.197	0.394	0.866	0.610	0.551	0.551
	BCG-PG72 (cURus)	PG07	3.0	6.5	6.0	22.0	15.5	14.0	14.0
			0.118	0.256	0.236	0.866	0.610	0.551	0.551
	BCG-PG72-L (cURus)	PG07	3.0	6.5	10.0	22.0	15.5	14.0	14.0
			0.118	0.256	0.394	0.866	0.610	0.551	0.551
	BCG-PG91	PG09	2.0	6.0	6.0	23.5	18.9	17.0	17.0
			0.079	0.236	0.236	0.925	0.744	0.669	0.669
	BCG-PG91-L	PG09	2.0	6.0	10.0	23.5	18.9	17.0	17.0
			0.079	0.236	0.394	0.925	0.744	0.669	0.669
	BCG-PG92 (cURus)	PG09	4.0	8.0	6.0	23.5	18.9	17.0	17.0
			0.157	0.315	0.236	0.925	0.744	0.669	0.669
	BCG-PG92-L (cURus)	PG09	4.0	8.0	10.0	23.5	18.9	17.0	17.0
			0.157	0.315	0.394	0.925	0.744	0.669	0.669
	BCG-PG112 (cURus)	PG11	5.0	10.0	6.0	26.0	22.0	20.0	20.0
			0.197	0.394	0.236	1.024	0.866	0.787	0.787
	BCG-PG112-L (cURus)	PG11	5.0	10.0	10.0	26.0	22.0	20.0	20.0
			0.197	0.394	0.394	1.024	0.866	0.787	0.787
	BCG-PG132 (cULus)	PG13.5	6.0	12.0	6.5	24.5	24.5	22.0	22.0
			0.236	0.472	0.256	0.965	0.965	0.866	0.866
	BCG-PG132-L (cULus)	PG13.5	6.0	12.0	10.0	24.5	24.5	22.0	22.0
			0.236	0.472	0.394	0.965	0.965	0.866	0.866
	BCG-PG161	PG16	7.0	12.0	6.5	28.0	26.5	24.0	24.0
			0.276	0.472	0.256	1.102	1.043	0.945	0.945

Brass cable glands (general purpose)

BCG Series

Dimensions

PG thread	Part no.	PG thread	Cable size		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	BCG-PG162 (cULus)	PG16	10.0	14.0	6.5	28.0	26.5	24.0	24.0
			0.394	0.551	0.256	1.102	1.043	0.945	0.945
	BCG-PG162-L (cULus)	PG16	10.0	14.0	10.0	28.0	26.5	24.0	24.0
			0.394	0.551	0.394	1.102	1.043	0.945	0.945
	BCG-PG211	PG21	9.0	16.0	7.2	33.0	33.0	30.0	30.0
			0.354	0.630	0.283	1.299	1.299	1.181	1.181
	BCG-PG212 (cULus)	PG21	13.0	18.0	7.2	33.0	33.0	30.0	30.0
			0.512	0.709	0.283	1.299	1.299	1.181	1.181
	BCG-PG212-L (cULus)	PG21	13.0	18.0	12.0	33.0	33.0	30.0	30.0
			0.512	0.709	0.472	1.299	1.299	1.181	1.181
	BCG-PG291	PG29	12.0	20.0	8.0	38.5	44.5	40.0	40.0
			0.472	0.787	0.315	1.516	1.752	1.575	1.575
	BCG-PG292 (cULus)	PG29	18.0	25.0	8.0	38.5	44.5	40.0	40.0
			0.709	0.984	0.315	1.516	1.752	1.575	1.575
	BCG-PG292-L (cULus)	PG29	18.0	25.0	12.0	38.5	44.5	40.0	40.0
			0.709	0.984	0.472	1.516	1.752	1.575	1.575
	BCG-PG362 (cULus)	PG36	22.0	32.0	9.0	48.0	55.5	50.0	50.0
			0.866	1.260	0.354	1.890	2.185	1.969	1.969
	BCG-PG362-L (cULus)	PG36	22.0	32.0	14.0	48.0	55.5	50.0	50.0
			0.866	1.260	0.551	1.890	2.185	1.969	1.969
	BCG-PG481	PG48	29.0	35.0	14.0	52.5	70.0	64.0	64.0
			1.142	1.378	0.551	2.067	2.756	2.520	2.520
	BCG-PG481-L	PG48	29.0	35.0	18.0	52.5	70.0	64.0	64.0
			1.142	1.378	0.709	2.067	2.756	2.520	2.520

Rail Specific Cable glands

ABB cable glands comply to the latest European safety standard EN45545 and achieve the highest fire performance HL3 rating for both interior and exterior locations, suitable for rail vehicle and infrastructure usage.

This range of cable glands can be installed anywhere where low smoke and toxicity combined with wide temperature characteristics, versatile cable clamping and resistance to oils and chemicals may be required.

For more than 30 years we have worked with the foremost manufacturers and suppliers of public transportation systems throughout the world. We understand not just the standards that you need to work to, but also the industry issues that you face including your customer service delivery expectations.

Our systems perform in a wide variety of environments from high temperature to freezing subzero conditions, as well as withstanding constant vibrations, water ingress, offer corrosion resistance. They are also available in halogen free, low smoke and low toxicity materials. If your project involves rail stations, infrastructure, signalling, tunnels, surveillance or data and information systems, our experience can help you.

Product examples

- RBCG Series - Rail Brass Cable Glands
- RNCG Series - Rail Nylon Cable Glands
- RBSG Series - Rail Stackable Nickel Plated Brass



Nylon cable glands - Rail specific EN45545

RNCG Series



Features and benefits:

- EN45545-2 Compliant HL3 for R22 and R23 usage
- Lightweight nylon construction
- Large capacity sealing range
- Corrosion resistant

RNCG Series - Nylon cable glands

Approvals & certifications



Conformity

Conforms to:

EN 45545-2, HL3 (R22 and R23)

EN 62444

Temperature range

Normal use: -40°C to +100°C (-40°F to +212°F)

Short Term: -40°C to +120°C (-40°F to +248°F)

IP Rating

IP66

IP68 (5-Bar 30 mins)

IP69

Material

All materials EN 45545-2 compliant to HL3 for category R22 and R23 use

Low smoke zero halogen

EPDM seals

Fire

EN 45545-2 HL3

Low smoke zero halogen nylon body and cap

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	RNCG-M122	M12x1.5	3.0	6.5	8.0	23.0	16.9	15.0	15.0
			0.118	0.256	0.315	0.906	0.665	0.591	0.591
	RNCG-M163-S	M16x1.5	4.0	8.0	8.0	26.5	21.9	19.0	19.0
			0.157	0.315	0.315	1.043	0.862	0.748	0.748
	RNCG-M163	M16x1.5	4.0	8.0	10.0	26.5	21.9	19.0	19.0
			0.157	0.315	0.394	1.043	0.862	0.748	0.748
	RNCG-M164	M16x1.5	5.0	10.0	10.0	30.0	25.0	22.0	22.0
			0.197	0.394	0.394	1.181	0.984	0.866	0.866
	RNCG-M164-L	M16x1.5	5.0	10.0	15.0	30.0	25.0	22.0	22.0
			0.197	0.394	0.591	1.181	0.984	0.866	0.866
	RNCG-M202	M20x1.5	6.0	12.0	10.0	30.0	27.0	24.0	24.0
			0.236	0.472	0.394	1.181	1.063	1.945	1.945
	RNCG-M202x-L	M20x1.5	6.0	12.0	15.0	30.0	27.0	24.0	24.0
			0.236	0.472	0.591	1.181	1.063	1.945	1.945
	RNCG-M205	M20x1.5	10.0	14.0	10.0	33.5	31.0	27.0	27.0
			0.394	0.551	0.394	1.319	1.22	1.063	1.063
	RNCG-M205-L	M20x1.5	10.0	14.0	15.0	33.5	31.0	27.0	27.0
			0.394	0.551	0.591	1.319	1.22	1.063	1.063
	RNCG-M254	M25x1.5	13.0	18.0	10.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.394	1.496	1.496	1.299	1.299

Nylon cable glands - Rail specific EN45545
RNCG Series

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	RNCG-M254-L	M25x1.5	13.0	18.0	18.0	38.0	38.0	33.0	33.0
			0.512	0.709	0.709	1.496	1.496	1.299	1.299
	RNCG-M324-L	M32x1.5	18.0	25.0	15.0	42.0	47.3	42.0	42.0
			0.709	0.984	0.591	1.654	1.862	1.654	1.654
	RNCG-M404x	M40x1.5	22.0	32.0	18.0	52.0	60.0	53.0	53.0
			0.866	1.26	0.709	2.047	2.362	2.087	2.087

Brass cable glands - Rail specific EN45545

RBCG Series



Features and benefits:

- EN45545-2 Compliant HL3 for R22 and R23 usage
- Robust metallic construction
- Large capacity sealing range

RBCG Series - Brass cable glands

Approvals & certifications



Conformity

Conforms to:

EN 45545-2, HL3 (R22 and R23)

EN 62444

Temperature range

Normal use: -40°C to +100°C (-40°F to +212°F)

Short Term: -40°C to +120°C (-40°F to +248°F)

IP Rating

IP66

IP68 (5-Bar 30 mins)

IP69

Material

All materials EN 45545-2 compliant to HL3 for category R22 and R23 use

Nickel plated brass body and cap

Fire

Low smoke zero halogen EPDM seals

EN 45545-2 HL3

Low smoke zero halogen nylon body and cap

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	RBCG-M122	M12x1.5	3.0	6.5	12.0	22.0	15.5	14.0	14.0
			0.118	0.256	0.472	0.866	0.61	0.551	0.551
	RBCG-M122-S	M12x1.5	3.0	6.5	6.0	22.0	15.5	14.0	14.0
			0.118	0.256	0.236	0.866	0.61	0.551	0.551
	RBCG-M163	M16x1.5	4.0	8.0	12.0	23.0	20.0	18.0	17.0
			0.157	0.315	0.472	0.906	0.787	0.709	0.669
	RBCG-M163-S	M16x1.5	4.0	8.0	7.0	23.0	20.0	18.0	17.0
			0.157	0.315	0.276	0.906	0.787	0.709	0.669
	RBCG-M164	M16x1.5	5.0	10.0	12.0	28.5	22.0	20.0	20.0
			0.197	0.394	0.472	1.122	0.866	0.787	0.787
	RBCG-M164-S	M16x1.5	5.0	10.0	7.0	28.5	22.0	20.0	20.0
			0.197	0.394	0.276	1.122	0.866	0.787	0.787
	RBCG-M202	M20x1.5	6.0	12.0	12.0	26.0	24.5	22.0	22.0
			0.236	0.472	0.472	1.024	0.965	0.866	0.866
	RBCG-M204	M20x1.5	10.0	14.0	12.0	28.0	26.8	24.0	24.0
			0.394	0.551	0.472	1.102	1.055	0.945	0.945
	RBCG-M204-S	M20x1.5	10.0	14.0	8.0	28.0	26.8	24.0	24.0
			0.394	0.551	0.315	1.102	1.055	0.945	0.945

Brass cable glands - Rail specific EN45545
RBCG Series

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)				
			Min.	Max.	A Min	B Min	C Min	W1	W2
			(mm/in)	(mm/in)					
	RBCG-M254	M25x1.5	13.0	18.0	12.0	33.0	33.0	30.0	30.0
			0.512	0.709	0.709	1.299	1.299	1.181	1.181
	RBCG-M254-S	M25x1.5	13.0	18.0	8.0	33.0	33.0	30.0	30.0
			0.512	0.709	0.315	1.299	1.299	1.181	1.181
	RBCG-M325	M32x1.5	18.0	25.0	15.0	44.0	44.5	40.0	40.0
			0.709	0.984	0.591	1.732	1.752	1.575	1.575
	RBCG-M325-S	M32x1.5	18.0	25.0	9.0	44.0	44.5	40.0	40.0
			0.709	0.984	0.354	1.732	1.752	1.575	1.575
	RBCG-M405	M40x1.5	22.0	32.0	15.0	52.5	55.5	50.0	50.0
			0.866	1.26	0.591	2.067	2.185	1.185	1.969
	RBCG-M404x	M40x1.5	22.0	32.0	9.0	52.5	55.5	50.0	50.0
			0.866	1.26	0.354	2.067	2.185	1.185	1.185

Stackable brass cable glands- Rail specific EN45545

RBSG Series



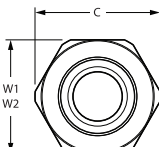
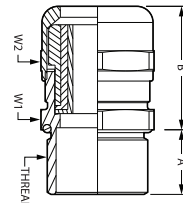
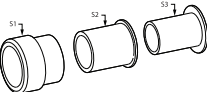
Features and benefits:

- EN45545-2 Compliant HL3 for R22 and R23 usage
- Robust metallic construction
- Multiple seal bushings for wide clamping range

RBSG Series - Brass cable glands

Approvals & certifications	Conformity	Temperature range	
	Conforms to:		
	EN 45545-2, HL3 (R22 and R23)	Normal use: -50°C to +125°C (-40°F to +257°F)	
	EN 62444	Short Term: -50°C to +140°C (-40°F to +284°F)	
		IP Rating	Material
		IP66	All materials EN 45545-2 compliant to HL3 for category R22 and R23 use
		IP68 (5-Bar 30 mins)	
		IP69	
			Nickel plated brass body and cap
		Fire	
		EN 45545-2 HL3	

Dimensions

Metric thread	Part no.	Metric thread	Cable range (mm/in)				Seals range (mm/in)				Nominal dimensions (mm/in)				
			Min.	Max.	S1 Min.	S1 Max.	S2 Min.	S2 Max.	S3 Min.	S3 Max.	A Min	B Min	C Min	W1	W2
	RBSG-M201	M20x1.5	4.0	12.0	9.0	12.0	6.0	9.0	4.0	6.0	9.0	27.0	24.5	22.0	22.0
			0.157	0.472	0.354	0.472	0.236	0.354	0.157	0.236	0.354	1.063	0.965	0.866	0.866
	RBSG-M202	M20x1.5	10.0	16.0	14.5	16.0	12.0	14.5	10.0	12.0	9.0	30.0	31.0	28.0	28.0
			0.394	0.630	0.571	0.630	0.472	0.571	0.394	0.472	0.354	1.181	1.220	1.102	1.102
	RBSG-M251	M25x1.5	4.0	12.0	9.0	12.0	6.0	9.0	4.0	6.0	9.0	27.0	31.0	28.0	22.0
			0.157	0.472	0.354	0.472	0.236	0.354	0.157	0.236	0.354	1.063	1.220	1.102	0.866
	RBSG-M252	M25x1.5	10.0	18.0	14.5	18.0	12.0	14.5	10.0	12.0	9.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.571	0.709	0.472	0.571	0.394	0.472	0.354	1.201	1.220	1.102	1.102
	RBSG-M321	M32x1.5	10.0	18.0	14.5	18.0	12.0	14.5	10.0	12.0	9.0	30.5	39.0	35.0	28.0
			0.394	0.709	0.571	0.709	0.472	0.571	0.394	0.472	0.354	1.201	1.535	1.378	1.102
	RBSG-M322	M32x1.5	14.0	24.0	20.0	24.0	17.0	20.0	14.0	17.0	9.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.787	0.945	0.669	0.787	0.551	0.669	0.354	1.299	1.535	1.378	1.378
	RBSG-M323	M32x1.5	22.0	28.0	27.0	28.0	24.0	27.0	22.0	24.0	9.0	41.0	49.5	45.0	45.0
			0.866	1.102	1.063	1.102	0.945	1.063	0.866	0.945	0.354	1.614	1.949	1.772	1.772
	RBSG-M401	M40x1.5	14.0	24.0	20.0	24.0	17.0	20.0	14.0	17.0	9.0	33.0	50.0	45.0	35.0
			0.551	0.945	0.787	0.945	0.669	0.787	0.551	0.669	0.354	1.299	1.969	1.772	1.378
	RBSG-M402	M40x1.5	22.0	32.0	27.0	32.0	24.0	27.0	22.0	24.0	9.0	40.5	49.5	45.0	45.0
			0.866	1.260	1.063	1.260	0.945	1.063	0.866	0.945	0.354	1.594	1.949	1.772	1.772
	RBSG-M501	M50x1.5	26.0	35.0	31.0	35.0	28.0	31.0	26.0	28.0	9.0	43.5	61.0	55.0	50.0
			1.024	1.378	1.220	1.378	1.102	1.220	1.024	1.102	0.354	1.713	2.402	2.165	1.969
	RBSG-M502	M50x1.5	35.0	44.0	41.0	44.0	38.0	41.0	35.0	38.0	9.0	43.0	70.0	64.0	64.0
			1.378	1.732	1.614	1.732	1.496	1.614	1.378	1.496	0.354	1.693	2.756	2.520	2.520

Food and Beverage

Cable glands

Hygienic, corrosion-resistant cable glands from ABB provide rigorous, dependable electrical connections for food processing machinery and preparation stations.

—
01 Food processing -
Explosion proof (Dust).

—
02 Beverage
manufacture -
Explosion proof
(Vapour).

Along with other products in the ABB electrical connection portfolio, ABB's high quality cable glands can help extend the life of electrical systems in a food and beverage plant's challenging environments while reducing system changeover and downtimes. With high ingress protection ratings and corrosion-resistant stainless steel or nylon construction, ABB glands can withstand a plant's toughest challenges, even in areas that require frequent washdowns.

Products that are particularly attractive to food and beverage processors include the NSF approved FSCG stainless steel gland series, allowing the safe termination of cables into equipment, and the NSF approved FSEM stainless steel EMC gland series, where grounding continuity for a shielded cable is required. Both are IP rated to IP69.

—
01



—
02



Stainless steel cable glands - NSF approved food and beverage cable glands

FSCG Series



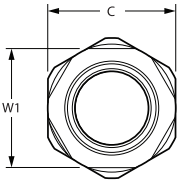
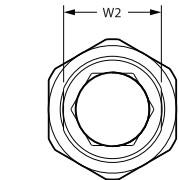
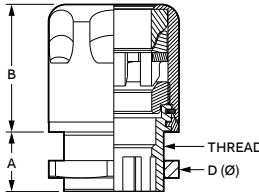
Features and benefits:

- Smooth hygienic external casing
- One piece, fully enclosed
- Suitable for splash zones
- Corrosion resistant

FSCG Series - NSF approved cable glands

Approvals & certifications		Conformity		Temperature range	
		Conforms to:		Normal use: -20°C to +100°C (-40°F to +212°F)	
		NSF - 169-2012		Short Term: -40°C to +150°C (-40°F to +302°F)	
		UL514B / CSA C22.2 No 18.3			
		IP Rating		Material	
		IP66		Stainless Steel construction	
		IP68 (5-Bar 30 mins)		FDA Compliant EPDM Seals	
		IP69 (Steam cleaning)			

Dimensions

	Metric thread Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)					
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	D Min	W1	W2
	FSCG-M121	M12x1.5	3.0	6.5	6.0	21.3	15.6	16.5	14.0	10.0
			0.118	0.256	0.236	0.839	0.614	0.650	0.551	0.394
	FSCG-M161	M16x1.5	5.0	10.0	7.0	23.1	20.2	21.0	18.0	14.0
			0.197	0.394	0.276	0.909	0.795	0.827	0.709	0.551
	FSCG-M201	M20x1.5	6.0	12.0	10.0	26.7	24.1	26.4	22.0	18.0
			0.236	0.472	0.394	1.051	0.949	1.039	0.866	0.709
	FSCG-M251	M25x1.5	12.0	17.0	14.0	29.1	30.1	33.0	28.0	23.0
			0.472	0.669	0.551	1.146	1.185	1.299	1.102	0.906
	NPT thread Part no.	NPT thread	Cable range		Nominal dimensions (mm/in)					
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	D Min	W1	W2
	FSCG-0381	3/8"	3.0	6.5	15.26	21.2	20.2	26.5	18.0	14.0
			0.118	0.256	0.601	0.835	0.795	1.043	0.709	0.551
	FSCG-0382	3/8"	5.0	10.0	15.26	23.7	24.1	26.5	22.0	14.0
			0.197	0.394	0.601	0.933	0.949	1.043	0.866	0.551
	FSCG-0501	1/2"	6.0	12.0	19.85	28.0	30.1	26.5	28.0	18.0
			0.236	0.472	0.781	1.102	1.185	1.043	1.102	0.709
	FSCG-0751	3/4"	12.0	17.0	20.15	31.6	38.0	39.0	35.0	23.0
			0.472	0.669	0.793	1.244	1.496	1.535	1.378	0.906

Stainless steel cable glands - EMC NSF approved food and beverage cable glands

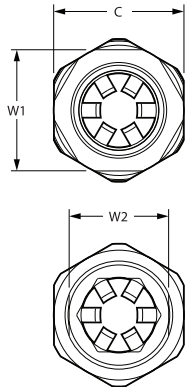
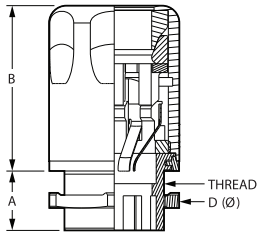
FSEM Series



FSEM Series - NSF approved cable glands

Approvals & certifications		Conformity	Temperature range	
		Conforms to:	Normal use: -20°C to +100°C (-8°F to +212°F)	
		NSF - 169-2012	Short Term: -40°C to +150°C (-40°F to +302°F)	
		UL514B / CSA C22.2 No 18.3		
		IP Rating	Material	
		IP66	Stainless Steel construction	
		IP67	FDA Compliant EPDM Seals	
		IP68 (5-Bar 30 mins)		
		IP69 (Steam Cleaning)		

Dimensions

	Metric thread	Metric thread	Cable range		Nominal dimensions (mm/in)					
			Min.	Max.	A Min	B Min	C Min	D Min	W1	W2
	FSEM-M161	M16x1.5	5.0	10.0	7.0	28.1	20.2	21.0	18.0	14.0
			0.197	0.394	0.276	1.106	0.795	0.827	0.709	0.551
	FSEM-M201	M20x1.5	6.0	12.0	10.0	32.7	24.1	26.5	22.0	18.0
			0.236	0.472	0.394	1.287	0.949	1.043	0.866	0.709
	FSEM-M251	M25x1.5	12.0	17.0	14.0	37.9	30.1	33.0	28.0	23.0
			0.472	0.669	0.551	1.492	1.185	1.299	1.102	0.906
	NPT thread	NPT thread	Cable range		Nominal dimensions (mm/in)					
			Min.	Max.	A Min	B Min	C Min	D Min	W1	W2
	FSEM-0381	3/8"	5.0	10.0	15.26	28.6	24.1	26.5	22.0	14.0
			0.197	0.394	0.601	1.126	0.949	1.043	0.866	0.551
	FSEM-0501	1/2"	6.0	12.0	19.85	33.2	30.1	26.5	28.0	18.0
			0.236	0.472	0.781	1.307	1.185	1.043	1.102	0.709
	FSEM-0751	3/4"	12.0	17.0	20.15	39.1	38.0	39.0	35.0	23.0
			0.472	0.669	0.793	1.539	1.496	1.535	1.378	0.906

Hazardous area

Cable glands

ABB products protect critical data and power cables in hazardous areas onshore and offshore.

Whether it is data cables from a gas detector or the cable protection on a power transmission unit, ABB hazardous area cable glands are designed and manufactured to meet the demands of rigorous and arduous operating environments in addition to ATEX and IECEx standards.

ABB’s hazardous area cable glands are suitable for use with a range of cable types on applications such as:

- Skids
- Control boxes
- Motors
- Lighting

Product examples

Cable type	Standard gland	Barrier gland
Non armoured	EXCG (Non-metallic)	C4 Series
	C2 Series	
	ISR (Mechanical grip)	
Wire armoured	C1 Series (Double compression)	C5 Series
MC armoured	ST	STX
	STE (High range)	
EMC	C6 Series	
Flat	C2F Series (Heat trace)	
	C6F Series (Heat trace)	



Cable glands for hazardous areas

Selection guide

Selection guide



Type	Non-armoured cable types				Armoured cable types	
	EXCG	C2/C2F	C6/C6F	C4	C1	C5
General						
Commercial Building	–	–	–	–	–	–
Residential Building	–	–	–	–	–	–
Industrial MRO	–	–	–	–	•	–
Low Ingress	–	–	–	–	–	–
OEM						
General Applications	•	–	–	–	–	–
Industrial Machinery	•	•	–	–	•	–
Commerical Machinery	–	–	–	–	–	–
Panel Building	•	•	–	–	–	–
Lighting	•	•	–	–	–	–
Rail						
Traction - Exterior	–	–	–	–	–	–
Traction - Interior	–	–	–	–	–	–
Infrastructure - Exterior	–	–	–	–	–	–
Infrastructure - Interior	–	–	–	–	–	–
Automation						
Robotics	–	•	•	–	–	–
Control systems	–	•	•	–	–	–
Enclosures and Motors	–	•	•	–	–	–
Marine						
General Applications	•	•	•	•	•	•
Outdoor Applications	•	•	•	•	•	•
Passenger/Crew Areas	•	•	•	•	•	•
Oil and Gas						
IEC standards	•	•	•	•	•	•
NEC Standards	–	•	•	–	•	–
Other						
Solar	–	–	–	–	–	–
Food and Beverage	–	•	–	–	•	–
Chemical Plants	–	•	•	–	•	–
Data Centres	–	–	•	–	–	–
Waste Water Management	–	•	•	•	•	•

Other cable gland ranges are available
for other types of industries and applications.
Please contact us to find out more.

Ex e Nylon cable glands for hazardous areas
EXCG Series



- Features and benefits:**
- Increased safety Ex e
 - Suitable for use in Zone 1, 2, 21 and 22
 - For use with non-armoured circular cable types
 - Can be used for Ex ia intrinsically safe, with blue cap

EXCG Series - Nylon cable glands

Approvals & certifications		Conformity	Temperature range	
		Conforms to:	Operating range: -40°C to +80°C	
		EN/IEC: 60079-0, 60079-7, 60079-34, 62444		
		ATEX:IMQ_03 ATEX016X REV03	IP Rating	Material
		IECEX: IECEX IMQ 13.0005X	IP66	Nylon
		Ⓜ II 2 GD, Ex e IIC Gb, Ex tb IIIC Db	IP68	

Dimensions

Metric thread	Part no.	Metric thread	Cable range		Nominal dimensions (mm/in)			
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	W1	W2
	EXCGM20S	M20	6.0	12.0	10.0	40.0	24.0	24.0
			0.236	0.472	0.393	1.574	0.944	0.944
	EXCGM20SL	M20	6.0	12.0	15.0	45.0	24.0	24.0
			0.236	0.472	0.590	1.771	0.944	0.944
	EXCGM20M	M20	10.0	14.0	10.0	42.0	27.0	27.0
			0.393	0.551	0.393	1.653	1.062	1.062
	EXCGM20ML	M20	10.0	14.0	15.0	50.0	27.0	27.0
			0.393	0.551	0.590	1.968	1.062	1.062
	EXCGM25S	M25	13.0	18.0	10.0	47.0	33.0	33.0
			0.511	0.708	0.393	1.850	1.299	1.299
	EXCGM25SL	M25	13.0	18.0	15.0	50.0	33.0	33.0
			0.511	0.708	0.590	1.968	1.299	1.299
	EXCGM25M	M25	11.0	17.0	8.0	42.5	29.0	29.0
			0.433	0.669	0.314	1.673	1.141	1.141
	EXCGM32S	M32	15.0	21.0	10.0	50.0	36.0	36.0
			0.590	0.826	0.393	1.968	1.417	1.417
	EXCGM32M	M32	18.0	25.0	15.0	68.0	42.0	42.0
			0.708	0.984	0.590	2.677	1.653	1.653
	EXCGM40S	M40	19.0	28.0	10.0	55.0	46.0	46.0
			0.748	1.102	0.393	2.165	1.811	1.811
	EXCGM40M	M40	22.0	32.0	18.0	68.0	53.0	53.0
			0.866	1.259	0.708	2.677	2.086	2.086
	EXCGM50S	M50	30.0	38.0	18.0	73.0	60.0	60.0
			1.181	1.496	0.708	2.874	2.362	2.362
	EXCGM63S	M63	34.0	44.0	18.0	74.0	65.0	65.0
			1.338	1.732	0.708	2.913	2.559	2.559

C2 Series



- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with non-armoured circular cable types
- Wide cable range
- Deluge proof

C2 Series - Ex d e single compression cable glands

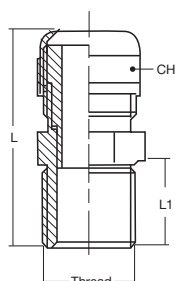
Operating range: -40°C to +100°C (-40°F to +212°F)



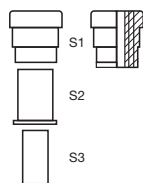
Class 1 Zone 1 AEx e IIC

IP Rating	Material
IP66	Nickel plated brass
IP68 (5-Bar 30 mins)	Stainless steel 316

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
Sealing Combination	EXN03MMC2	M16x1.5	4.0	12.0	16.0	31.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.22	0.945	0.866	0.866
	EXN04MSC2	M20x1.5	3.0	9.0	16.0	27.0	24.0	22.0	20.0
			0.118	0.354	0.63	1.063	0.945	0.866	0.787
	EXN04MMC2	M20x1.5	4.0	12.0	16.0	27.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.063	0.945	0.866	0.866
	EXN04MLC2	M20x1.5	10.0	16.0	16.0	30.0	31.0	28.0	28.0
			0.394	0.63	0.63	1.181	1.22	1.102	1.102
	EXN05MMC2	M25x1.5	10.0	18.0	16.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.63	1.201	1.22	1.102	1.102
	EXN05MLC2	M25x1.5	14.0	20.0	16.0	34.0	39.0	35.0	35.0
			0.551	0.787	0.63	1.339	1.535	1.378	1.378
	EXN06MMC2	M32x1.5	14.0	24.0	16.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.63	1.299	1.535	1.378	1.378
	EXN06MLC2	M32x1.5	22.0	28.0	16.0	41.0	50.0	45.0	45.0
			0.866	1.102	0.63	1.614	1.969	1.772	1.772
	EXN07MMC2	M40x1.5	22.0	32.0	18.0	41.0	50.0	45.0	45.0
			0.866	1.26	0.709	1.614	1.969	1.772	1.772



Sealing Combination



Ex d e Non-armoured cable glands for hazardous areas
C2 Series

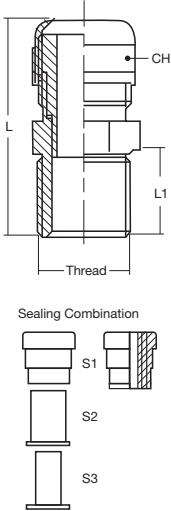
Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)				
			Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2
	EXN07MLC2	M40x1.5	26.0	34.0	18.0	44.0	55.5	50.0	50.0
			1.024	1.339	0.709	1.732	2.185	1.969	1.969
	EXN08MSC2	M50x1.5	26.0	35.0	18.0	44.0	61.0	55.0	50.0
			1.024	1.378	0.709	1.732	2.402	2.165	1.969
	EXN08MMC2	M50x1.5	35.0	44.0	18.0	43.0	70.0	64.0	64.0
			1.378	1.732	0.709	1.693	2.756	2.52	2.52
	EXN09MSC2	M63x1.5	35.0	45.0	18.0	43.0	75.0	68.0	64.0
			1.378	1.772	0.709	1.693	2.953	2.677	2.52
	EXN09MMC2	M63x1.5	46.0	56.0	18.0	52.5	89.0	75.0	80.0
			1.811	2.205	0.709	2.067	3.504	2.953	3.15
	EXN10MSC2	M75x1.5	46.0	62.0	20.0	52.0	89.0	80.0	80.0
			1.811	2.441	0.787	2.047	3.504	3.15	3.15
	EXN10MMC2	M75x1.5	60.0	69.0	20.0	55.0	105.0	95.0	95.0
			2.362	2.717	0.787	2.165	4.134	3.74	3.74
	EXN11MSC2	M90x1.5	60.0	75.0	20.0	55.0	105.0	95.0	95.0
			2.362	2.953	0.787	2.165	4.134	3.74	3.74
	EXN11MMC2	M90x1.5	75.0	82.0	20.0	55.0	117.0	105.0	105.0
			2.953	3.228	0.787	2.165	4.606	4.134	4.134

Ex d e Non-armoured cable glands for hazardous areas

C2 Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Ø		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	EXN03AMC2	3/8"	4.0	12.0	16.0	31.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.22	0.945	0.866	0.866
	EXN04ASC2	1/2"	3.0	9.0	16.0	27.0	24.0	22.0	20.0
			0.118	0.354	0.63	1.063	0.945	0.866	0.787
	EXN04AMC2	1/2"	4.0	12.0	16.0	27.0	24.0	22.0	22.0
			0.157	0.472	0.63	1.063	0.945	0.866	0.866
	EXN04ALC2	1/2"	10.0	16.0	16.0	30.0	31.0	28.0	28.0
			0.394	0.63	0.63	1.181	1.22	1.102	1.102
	EXN05AMC2	3/4"	10.0	18.0	16.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.63	1.201	1.22	1.102	1.102
	EXN05ALC2	3/4"	14.0	20.0	16.0	34.0	39.0	35.0	35.0
			0.551	0.787	0.63	1.339	1.535	1.378	1.378
	EXN06AMC2	1"	14.0	24.0	20.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.787	1.299	1.535	1.378	1.378
	EXN06ALC2	1"	22.0	28.0	20.0	41.0	50.0	45.0	45.0
			0.866	1.102	0.787	1.614	1.969	1.772	1.772
	EXN07AMC2	1 1/4"	22.0	32.0	20.0	41.0	50.0	45.0	45.0
			0.866	1.26	0.787	1.614	1.969	1.772	1.772
	EXN07ALC2	1 1/4"	26.0	34.0	20.0	44.0	55.5	50.0	50.0
			1.0	1.3	0.8	1.7	2.2	2.0	2.0
	EXN08ASC2	1 1/2"	26.0	35.0	20.0	44.0	61.0	55.0	50.0
			1.0	1.4	0.8	1.7	2.4	2.2	2.0
	EXN08AMC2	1 1/2"	35.0	44.0	20.0	43.0	70.0	64.0	64.0
			1.4	1.7	0.8	1.7	2.8	2.5	2.5
	EXN09ASC2	2"	35.0	45.0	20.0	43.0	75.0	68.0	64.0
			1.4	1.8	0.8	1.7	3.0	2.7	2.5
	EXN09AMC2	2"	46.0	56.0	20.0	52.5	89.0	75.0	80.0
			1.8	2.2	0.8	2.1	3.5	3.0	3.2
	EXN10ASC2	2 1/2"	46.0	62.0	21.0	52.0	89.0	80.0	80.0
			1.8	2.4	0.8	2.0	3.5	3.2	3.2
	EXN10AMC2	2 1/2"	60.0	69.0	21.0	55.0	105.0	95.0	95.0
			2.4	2.7	0.8	2.2	4.1	3.7	3.7
	EXN11ASC2	3"	60.0	75.0	21.0	55.0	105.0	95.0	95.0
			2.4	3.0	0.8	2.2	4.1	3.7	3.7
	EXN11AMC2	3"	75.0	82.0	21.0	55.0	117.0	105.0	105.0
			3.0	3.2	0.8	2.2	4.6	4.1	4.1

Ex d e EMC cable glands for hazardous areas

C6 Series



Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with shielded circular cable types
- EMC contact to maintain shielding continuity
- Wide cable range
- Deluge proof

C6 Series - Ex d e single compression cable glands

Approvals & certifications		Conformity		Temperature range	
		Conforms to:		Operating range: -60°C to +100°C (-76°C to +212°C)	
		EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444			
		ATEX:IMQ_03 ATEX016X REV03			
		IECEx: IECEx IMQ 14.0005X			
		DNV: TAE00000Y3			
		Ⓜ II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db			
				IP Rating	Material
				IP66	Nickel plated brass
					Stainless steel 316

Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	EXN03MSC6	M16x1.5	4.0	8.0	16.0	28.5	22.0	20.0	20.0
			0.157	0.315	0.63	1.122	0.866	0.787	0.787
	EXN03MMC6	M16x1.5	4.0	8.0	16.0	28.5	24.5	22.0	22.0
			0.157	0.315	0.63	1.122	0.965	0.866	0.866
	EXN04MMC6	M20x1.5	4.0	12.0	18.0	27.0	24.5	22.0	22.0
			0.157	0.472	0.709	1.063	0.965	0.866	0.866
	EXN05MMC6	M25x1.5	10.0	18.0	16.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.63	1.201	1.22	1.102	1.102
	EXN06MMC6	M32x1.5	14.0	24.0	19.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.748	1.299	1.535	1.378	1.378
	EXN07MMC6	M40x1.5	22.0	32.0	20.0	40.5	49.5	45.0	45.0
			0.866	1.26	0.787	1.594	1.949	1.772	1.772
	EXN08MMC6	M50x1.5	26.0	35.0	20.0	43.5	61.0	55.0	50.0
			1.024	1.378	0.787	1.713	2.402	2.165	1.969
	EXN09MMC6	M63x1.5	35.0	45.0	20.0	43.5	70.0	68.0	64.0
			1.378	1.772	0.787	1.713	2.756	2.677	2.52

Ex d e EMC cable glands for hazardous areas

C6 Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Ø		Nominal dimensions (mm/in)				
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2
	EXN03ASC6	3/8"	4.0	8.0	16.0	28.5	22.0	20.0	20.0
			0.157	0.315	0.63	1.122	0.866	0.787	0.787
	EXN03AMC6	3/8"	4.0	8.0	18.0	28.5	24.5	22.0	22.0
			0.157	0.315	0.709	1.122	0.965	0.866	0.866
	EXN04AMC6	1/2"	4.0	12.0	18.0	27.0	24.5	22.0	22.0
			0.157	0.472	0.709	1.063	0.965	0.866	0.866
	EXN05AMC6	3/4"	10.0	18.0	20.0	30.5	31.0	28.0	28.0
			0.394	0.709	0.787	1.201	1.22	1.102	1.102
	EXN06AMC6	3/4"	14.0	24.0	20.0	33.0	39.0	35.0	35.0
			0.551	0.945	0.787	1.299	1.535	1.378	1.378
	EXN07AMC6	1"	22.0	32.0	20.0	40.5	49.5	45.0	45.0
			0.866	1.26	0.787	1.594	1.949	1.772	1.772
	EXN08AMC6	1 1/4"	26.0	35.0	20.0	43.5	61.0	55.0	50.0
			1.024	1.378	0.787	1.713	2.402	2.165	1.969
	EXN09AMC6	1 1/2"	35.0	45.0	20.0	43.5	70.0	68.0	64.0
			1.378	1.772	0.787	1.713	2.756	2.677	2.52

Ex d e Non-armoured barrier cable glands for hazardous areas

C4 Series



Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with all non-armoured cable types
- Epoxy compound barrier

C4 Series - Ex d e armoured cable glands

Approvals & certifications



Conformity
Conforms to:

EN/IECEx: 60079-0, 60079-1,
60079-7, 60079-34, 62444

ATEX:IMQ_03 ATEX016X REV03

IECEx: IECEx CES 14.0013X

DNV: TAE00000Y3

TAE00000Y3

II 2 GD, Ex d e IIC Gb, Ex tb IIC Db

Temperature range

Operating range: -60°C to +100°C (-76°F to +212°F)

IP Rating

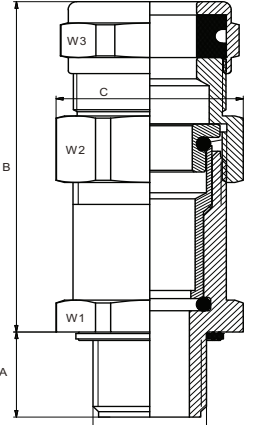
IP66

Material

Nickel plated brass

Stainless steel 316

Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)					
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN04MC4	M20x1.5	8.5	16.0	16.0	62.0	33.0	30.0	30.0	29.0
			0.335	0.630	0.630	2.440	1.299	1.181	1.181	1.142
	EXN05MC4	M25x1.5	16.0	21.0	16.0	62.8	37.0	34.0	34.0	34.0
			0.630	0.827	0.630	2.472	1.456	1.338	1.338	1.338
	EXN06MC4	M32x1.5	16.0	26.0	16.0	68.5	45.0	42.0	42.0	40.0
			0.630	1.024	0.630	2.460	1.771	1.653	1.653	1.574
	EXN07MC4	M40x1.5	29.0	41.0	16.0	75.1	66.0	50.0	60.0	60.0
			1.142	1.614	0.630	2.956	2.598	1.968	2.362	2.362
	EXN08MC4	M50x1.5	33.0	48.0	16.0	82.7	77.0	60.0	70.0	75.0
			1.299	1.890	0.630	3.255	3.031	2.362	2.755	2.952
	EXN09MC4	M63x1.5	36.0	52.0	16.0	96.0	77.0	70.0	70.0	74.0
			1.417	2.047	0.630	3.779	3.031	2.755	2.755	2.913

EXN for nickel plated.

Ex d e Non-armoured barrier cable glands for hazardous areas

C4 Series

Dimensions

NPT thread	Part no.	Cable range Ø			Nominal dimensions (mm/in)					
		NPT thread	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN04AC4	1/2"	8.5	16.0	21.0	62.0	33.0	30.0	30.0	30.0
			0.335	0.630	0.826	2.440	1.299	1.181	1.181	1.181
	EXN05AC4	3/4"	16.0	21.0	21.0	62.8	37.0	34.0	34.0	34.0
			0.630	0.827	0.826	2.472	1.456	1.338	1.338	1.338
	EXN06AC4	1"	16.0	26.0	26.0	68.5	45.0	42.0	42.0	40.0
			0.630	1.024	1.023	2.460	1.771	1.653	1.653	1.574
	EXN07AC4	1 1/4"	29.0	41.0	28.0	75.1	66.0	50.0	60.0	60.0
			1.142	1.614	1.102	2.956	2.598	1.968	2.362	2.362
	EXN08AC4	1 1/2"	33.0	48.0	28.0	82.7	77.0	60.0	70.0	75.0
			1.299	1.890	1.102	3.255	3.031	2.362	2.755	2.952
	EXN09AC4	2"	36.0	52.0	28.0	96.0	77.0	70.0	70.0	74.0
			1.417	2.047	1.102	3.779	3.031	2.755	2.755	2.913

EXN for nickel plated.

Ex d e Armoured cable glands for hazardous areas

C1 Series



Features and benefits:

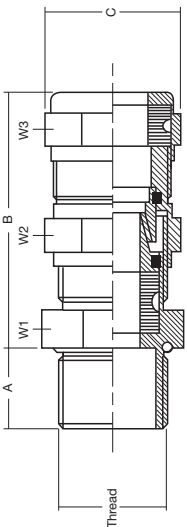
- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with Wire, braid or tape armoured cable types

Available in kit form with locknut, earth tag, sealing washer and dust shroud, add 'K' suffix.

C1 Series - Ex d e single compression cable glands

Approvals & certifications		Conformity		Temperature range	
   		EN/IECEx: 60079-0, 60079-1, 60079-7, 60079-34, 62444 UL514B, UL2225		Operating range: -40°C to +100°C (-40°F to +212°F)	
		ATEX:IMQ_03 ATEX016X REV03 IECEx: IECEx CES 13.0014X UL: E477121		IP Rating	Material
		Ⓜ II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db Class 1 Zone 1 AEx e IIC		IP66	Nickel plated brass and
				IP68 (5-Bar 30 mins)	Stainless steel 316

Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)					
			Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN03MSC1	M16x1.5	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	22.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.866	1.024	1.024
	EXN03MMC1	M16x1.5	6.0 - 12.0	8.5 - 16.0	16.0	50.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.969	1.24	0.984	1.142	1.142
	EXN04MSC1	M20x1.5	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	24.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.945	1.024	1.024
	EXN04MMC1	M20x1.5	6.0 - 12.0	8.5 - 16.0	16.0	47.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.929	1.24	0.984	1.142	1.142
	EXN04MLC1	M20x1.5	12.0 - 14.5	16.0 - 20.0	16.0	52.0	35.0	28.0	30.0	32.0
			0.472 - 0.571	0.630 - 0.787	0.63	2.047	1.378	1.102	1.181	1.26
	EXN05MSC1	M25x1.5	6.0 - 12.0	8.5 - 16.0	18.0	50.5	31.5	29.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.709	1.988	1.24	1.142	1.142	1.142
	EXN05MMC1	M25x1.5	12.0 - 16.0	16.0 - 21.0	18.0	54.5	37.0	32.0	34.0	34.0
			0.472 - 0.630	0.630 - 0.827	0.709	2.146	1.457	1.26	1.339	1.339
	EXN05MLC1	M25x1.5	12.0 - 20.0	16.0 - 26.0	18.0	60.5	44.0	36.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.382	1.732	1.417	1.575	1.575
	EXN06MSC1	M32x1.5	12.0 - 20.0	16.0 - 26.0	18.0	62.0	44.0	40.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.441	1.732	1.575	1.575	1.575

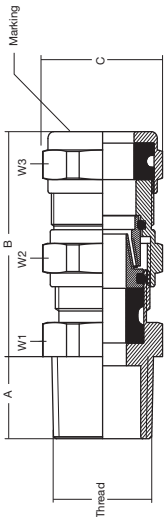
Ex d e Armoured cable glands for hazardous areas

C1 Series

Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)					
			Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN06MMC1	M32x1.5	15.0 - 26.0	20.0 - 33.0	18.0	78.5	57.0	48.0	52.0	52.0
			0.591 - 1.024	0.787 - 1.299	0.709	3.091	2.244	1.89	2.047	2.047
	EXN07MSC1	M40x1.5	15.0 - 26.0	20.0 - 33.0	18.0	78.5	57.0	48.0	52.0	52.0
			0.591 - 1.024	0.787 - 1.299	0.709	3.091	2.244	1.89	2.047	2.047
	EXN07MMC1	M40x1.5	20.0 - 32.0	29.0 - 41.0	18.0	89.5	66.0	55.0	60.0	60.0
			0.787 - 1.260	1.142 - 1.614	0.709	3.524	2.598	2.165	2.362	2.362
	EXN08MSC1	M50x1.5	22.0 - 35.0	33.0 - 48.0	18.0	96.5	82.0	60.0	70.0	75.0
			0.866 - 1.378	1.299 - 1.890	0.709	3.799	3.228	2.362	2.756	2.953
	EXN08MMC1	M50x1.5	27.0 - 41.0	36.0 - 52.0	18.0	100.0	83.0	70.0	70.0	74.0
			1.063 - 1.614	1.417 - 2.047	0.709	3.937	3.268	2.756	2.756	2.913
	EXN09MSC1	M63x1.5	35.0 - 45.0	43.0 - 57.0	20.0	106.0	89.5	75.0	80.0	80.0
			1.378 - 1.772	1.693 - 2.244	0.787	4.173	3.524	2.953	3.15	3.15
	EXN09MMC1	M63x1.5	40.0 - 52.0	47.0 - 60.0	20.0	108.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.787	4.252	3.701	3.346	3.346	3.346
	EXN10MSC1	M75x1.5	40.0 - 52.0	47.0 - 60.0	20.0	107.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.787	4.252	3.701	3.346	3.346	3.346
	EXN10MMC1	M75x1.5	45.0 - 60.0	54.0 - 70.0	20.0	125.0	110.5	90.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.921	4.35	3.543	3.74	3.937
	EXN11MSC1	M90x1.5	45.0 - 60.0	54.0 - 70.0	20.0	124.0	110.5	95.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.882	4.35	3.74	3.74	3.937
	EXN11MMC1	M90x1.5	60.0 - 72.0	63.0 - 80.0	20.0	154.0	127.0	110.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.787	6.063	5.000	4.331	4.528	4.528
	EXN12MSC1	M110x2.0	45.0 - 60.0	54.0 - 70.0	20.0	124.0	110.5	120.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.882	4.35	4.724	3.74	3.937
	EXN12MMC1	M110x2.0	60.0 - 72.0	63.0 - 80.0	20.0	154.0	127.0	120.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.787	6.063	5.000	4.724	4.528	4.528

Dimensions

NPT thread	Part no.	NPT thread	Cable range Ø		Nominal dimensions (mm/in)					
			Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN03ASC1	3/8"	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	22.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.866	1.024	1.024
	EXN03AMC1	3/8"	6.0 - 12.0	8.5 - 16.0	16.0	50.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.969	1.24	0.984	1.142	1.142
	EXN04ASC1	1/2"	3.0 - 8.5	6.0 - 12.0	16.0	47.5	29.0	24.0	26.0	26.0
			0.118 - 0.335	0.236 - 0.472	0.63	1.87	1.142	0.945	1.024	1.024
	EXN04AMC1	1/2"	6.0 - 12.0	8.5 - 16.0	16.0	49.0	31.5	25.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.63	1.929	1.24	0.984	1.142	1.142
	EXN04ALC1	1/2"	12.0 - 14.5	16.0 - 20.0	16.0	52.0	35.0	28.0	30.0	32.0
			0.472 - 0.571	0.630 - 0.787	0.63	2.047	1.378	1.102	1.181	1.26
	EXN05ASC1	3/4"	6.0 - 12.0	8.5 - 16.0	18.0	50.5	31.5	29.0	29.0	29.0
			0.236 - 0.472	0.335 - 0.630	0.709	1.988	1.24	1.142	1.142	1.142
	EXN05AMC1	3/4"	12.0 - 16.0	16.0 - 21.0	18.0	54.5	37.0	32.0	34.0	34
			0.472 - 0.630	0.630 - 0.827	0.709	2.146	1.457	1.26	1.339	1.339
	EXN05ALC1	3/4"	12.0 - 20.0	16.0 - 26.0	18.0	60.5	44.0	36.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.382	1.732	1.417	1.575	1.575
	EXN06ASC1	1"	12.0 - 20.0	16.0 - 26.0	18.0	62.0	44.0	40.0	40.0	40.0
			0.472 - 0.787	0.630 - 1.024	0.709	2.441	1.732	1.575	1.575	1.575

Ex d e Armoured cable glands for hazardous areas

C1 Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range Ø		Nominal dimensions (mm/in)					
			Inner Min. (mm/in)	Outer Max. (mm/in)	A Min	B Min	C Min	W1	W2	W3
	EXN06AMC1	1"	20.0 - 32.0	29.0 - 41.0	18.0	89.5	66.0	55.0	60.0	60.0
			0.787 - 1.260	1.142 - 1.614	0.709	3.524	2.598	2.165	2.362	2.362
	EXN07ASC1	1 1/4"	22.0 - 35.0	33.0 - 48.0	21.0	96.5	82.0	60.0	70.0	75.0
			0.866 - 1.378	1.299 - 1.890	0.827	3.799	3.228	2.362	2.756	2.953
	EXN07AMC1	1 1/4"	27.0 - 41.0	36.0 - 52.0	21.0	100.0	83.0	70.0	70.0	74.0
			1.063 - 1.614	1.417 - 2.047	0.827	3.937	3.268	2.756	2.756	2.913
	EXN08ASC1	1 1/2"	35.0 - 45.0	43.0 - 57.0	21.0	106.0	89.5	75.0	80.0	80.0
			1.378 - 1.772	1.693 - 2.244	0.827	4.173	3.524	2.953	3.15	3.15
	EXN08AMC1	1 1/2"	40.0 - 52.0	47.0 - 60.0	21.0	108.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.827	4.252	3.701	3.346	3.346	3.346
	EXN09ASC1	2"	40.0 - 52.0	47.0 - 60.0	21.0	108.0	94.0	85.0	85.0	85.0
			1.575 - 2.047	1.850 - 2.362	0.827	4.252	3.701	3.346	3.346	3.346
	EXN09AMC1	2"	45.0 - 60.0	54.0 - 70.0	21.0	125.0	110.5	90.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.827	4.921	4.35	3.543	3.74	3.937
	EXN10ASC1	2 1/2"	45.0 - 60.0	54.0 - 70.0	21.0	124.0	110.5	95.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.827	4.882	4.35	3.74	3.74	3.937
	EXN10AMC1	2 1/2"	60.0 - 72.0	63.0 - 80.0	21.0	154.0	127.0	110.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.827	6.063	5.000	4.331	4.528	4.528
	EXN11ASC1	3"	45.0 - 60.0	54.0 - 70.0	21.0	124.0	110.5	120.0	95.0	100.0
			1.772 - 2.362	2.126 - 2.756	0.827	4.882	4.350	4.724	3.74	3.937
	EXN11AMC1	3"	60.0 - 72.0	63.0 - 80.0	21.0	154.0	127.0	120.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.8	6.1	5.0	4.7	4.5	4.528
	EXN12ASC1	3 1/2"	45.0 - 60.0	54.0 - 70.0	21.0	124.0	110.5	120.0	95	100.0
			1.772 - 2.362	2.126 - 2.756	0.787	4.882	4.35	4.724	3.74	3.937
	EXN12AMC1	3 1/2"	60.0 - 72.0	63.0 - 80.0	21.0	154.0	127.0	120.0	115.0	115.0
			2.362 - 2.835	2.480 - 3.150	0.787	6.063	5	4.724	4.528	4.528

Ex d e Armoured barrier cable glands for hazardous areas

C5 Series



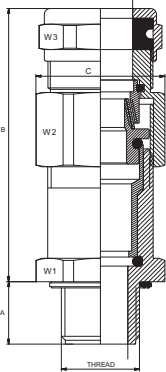
Features and benefits:

- Flameproof Ex d and Increased safety Ex e
- Suitable for use in Zone 1, 2, 21 and 22
- For use with Wire, braid or tape armoured cable types
- Epoxy compound barrier

C5 Series - Ex d e armoured cable glands

Approvals & certifications		Conformity Conforms to:	Temperature range
   		EN/IECEX: 60079-0, 60079-1, 60079-7, 60079-34, 62444	Operating range: -60°C to +100°C (-76°F to +212°F)
		ATEX:IMQ_03 ATEX016X REV03	
		IECEX: IECEX CES 14.0013X	
		Ⓔ II 2 GD, Ex d e IIC Gb, Ex tb IIIC Db	
		IP Rating	Material
		IP66	Brass, Nickel plated brass and Stainless steel 316

Dimensions

Metric thread	Part no.	Metric thread	Cable range Ø		Nominal dimensions (mm/in)					
			Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min	W1 W2	W3	
	EXN04MC5	M20x1.5	8.5	16.0	16.0	70.0	33.0	30.0	30.0	29.0
			0.335	0.630	0.630	2.756	1.299	1.181	1.181	1.142
	EXN05MC5	M25x1.5	16.0	21.0	16.0	72.1	37.0	34.0	34.0	34.0
			0.630	0.827	0.630	2.838	1.456	1.338	1.338	1.338
	EXN06MC5	M32x1.5	16.0	26.0	16.0	76.0	45.0	42.0	42.0	40.0
			0.630	1.024	0.630	2.992	1.771	1.653	1.653	1.574
	EXN07MC5	M40x1.5	29.0	41.0	16.0	83.4	66.0	50.0	60.0	60.0
			1.142	1.614	0.630	3.283	2.598	1.968	2.362	2.362
	EXN08MC5	M50x1.5	33.0	48.0	16.0	96.6	77.0	60.0	70.0	75.0
			1.299	1.890	0.630	3.803	3.031	2.362	2.755	2.952
	EXN09MC5	M63x1.5	36.0	52.0	16.0	109.5	77.0	70.0	70.0	74.0
			1.417	2.047	0.630	4.311	3.031	2.755	2.755	2.913
	EXN04AC5	1/2"	8.5	16.0	16.0	70.0	33.0	30.0	30.0	30.0
			0.335	0.630	0.630	2.756	1.299	1.181	1.181	1.181
	EXN05AC5	3/4"	16.0	21.0	16.0	72.1	37.0	34.0	34.0	34.0
			0.630	0.827	0.630	2.838	1.456	1.338	1.338	1.338
	EXN06AC5	1"	16.0	26.0	16.0	76.0	45.0	42.0	42.0	40.0
			0.630	1.024	0.630	2.992	1.771	1.653	1.653	1.574
	EXN07AC5	1 1/4"	29.0	41.0	16.0	83.4	66.0	50.0	60.0	60.0
			1.142	1.614	0.630	3.283	2.598	1.968	2.362	2.362
	EXN08AC5	1 1/2"	33.0	48.0	16.0	96.6	77.0	60.0	70.0	75.0
			1.299	1.890	0.630	3.803	3.031	2.362	2.755	2.952
	EXN09AC5	2"	36.0	52.0	16.0	109.5	77.0	70.0	70.0	74.0
			1.417	2.047	0.630	4.311	3.031	2.755	2.755	2.913

EXN for nickel plated.

Jacketed metal-clad cable fittings for hazardous locations

ST Series



Features and benefits:

- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disassembly
- “Pop-on” fitting (no disassembly) saves installer time
- Provides grounding continuity of cable armour
- Splined gland and gripping features for ease of installation

ST Series - Jacketed metal-clad cable glands

Approvals & certifications		Conformity	
 		Conforms to:	
		CSA C22.2 60079-0, C22.2 60079-7, C22.2 No.18.3, C22.2 No.25, C22.2 No.94, C22.2 No. 174, UL2279, UL514B, UL50	
c-CSA-us Certificate: 1105555 File 23086			
Class I Div1 ABCD Class II Div1 EFG Class III Div1 (Refer to CEC)			
Ex e II			
UL File: E38947			
Class I, Zone 1, AEx e II			
Suitable for Class I Div2, Class II Div2 and Class III Div2			
		Temperature range	
		-40 to +90°C (-40°F to +194°F)	
		IP Rating	Material
		Type 4X	Copper free aluminium
			Zinc plated steel
			Stainless steel

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket		Cable range over armour		Nominal dimensions (mm/in)		
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min
	ST038-461S*	3/8"	8.74	13.59	6.20	11.05	11.68	51.31	25.27
			0.344	0.535	0.244	0.435	0.460	2.020	0.995
	ST050-462	1/2"	13.34	16.51	10.54	14.48	15.75	51.31	34.13
			0.525	0.650	0.415	0.570	0.620	2.020	1.344
	ST050-464	1/2"	15.24	19.30	12.45	17.27	15.75	51.31	34.13
			0.600	0.760	0.490	0.680	0.620	2.020	1.344
	ST050-465	1/2"	18.42	22.48	15.62	20.45	15.75	54.10	42.07
			0.725	0.885	0.615	0.805	0.620	2.130	1.656
	ST050-466	1/2"	20.96	25.02	18.16	22.99	15.75	54.10	42.07
			0.825	0.985	0.715	0.905	0.620	2.130	1.656
	ST075-467	3/4"	22.35	27.05	19.56	25.02	16.00	62.23	53.18
			0.880	1.065	0.770	0.985	0.630	2.450	2.094
	ST075-468	3/4"	26.04	30.61	23.24	28.58	16.00	62.23	53.18
			1.025	1.205	0.915	1.125	0.630	2.450	2.094
	ST100-469	1"	30.15	34.93	27.36	32.89	19.94	66.04	61.91
			1.187	1.375	1.077	1.295	0.785	2.600	2.438
	ST125-470	1 1/4"	34.29	41.28	31.50	39.24	20.57	83.31	76.20
			1.350	1.625	1.240	1.545	0.810	3.280	3.000

Jacketed metal-clad cable fittings for hazardous locations

ST Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket		Cable range over armour		Nominal dimensions (mm/in)		
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min
	ST125-550	1 1/4"	38.10	41.28	35.31	39.24	20.57	83.31	76.20
			1.500	1.625	1.390	1.545	0.810	3.280	3.000
	ST125-471	1/2"	40.64	47.63	37.85	45.59	20.57	83.31	76.20
			1.600	1.875	1.490	1.795	0.810	3.280	3.000
	ST150-472	1/2"	43.18	49.91	40.39	47.88	20.96	91.95	87.31
			1.700	1.965	1.590	1.885	0.825	3.620	3.438
	ST150-473	1/2"	48.26	55.55	45.47	53.52	20.96	91.95	87.31
			1.900	2.187	1.790	2.107	0.825	3.620	3.438
	ST200-551	1/2"	48.26	55.55	45.47	53.52	21.84	92.46	96.84
			1.900	2.187	1.790	2.107	0.860	3.640	3.813
	ST200-474	3/4"	53.34	60.33	50.55	57.91	21.84	92.46	96.84
			2.100	2.375	1.990	2.280	0.860	3.640	3.813
	ST200-475	3/4"	58.42	65.15	55.63	63.12	21.84	92.46	106.36
			2.300	2.565	2.190	2.485	0.860	3.640	4.188
	ST200-476	3/4"	63.50	69.85	60.71	67.46	21.84	92.46	106.36
			2.500	2.750	2.390	2.656	0.860	3.640	4.188
	ST250-477	3/4"	60.45	67.06	56.90	65.02	32.51	119.38	121.44
			2.380	2.640	2.240	2.560	1.280	4.700	4.781
	ST250-478	3/4"	65.53	72.14	61.98	69.85	32.51	119.38	121.44
			2.580	2.840	2.440	2.750	1.280	4.700	4.781
	ST300-479	3/4"	70.87	77.72	67.06	75.44	34.04	119.38	129.38
			2.790	3.060	2.640	2.970	1.340	4.700	5.094
	ST300-480	3/4"	76.20	83.06	72.90	81.03	34.04	121.67	139.70
			3.000	3.270	2.870	3.190	1.340	4.790	5.500
	ST300-481	3/4"	81.53	88.39	77.27	86.11	34.04	121.67	139.70
			3.210	3.480	3.042	3.390	1.340	4.790	5.500
	ST350-482	3/4"	86.87	93.73	83.06	91.19	35.31	121.67	153.19
			3.420	3.690	3.270	3.590	1.390	4.790	6.031
	ST350-483	3/4"	91.69	98.30	87.38	95.76	35.31	121.67	153.19
			3.610	3.870	3.440	3.770	1.390	4.790	6.031
	ST400-484	1"	96.77	102.36	91.44	99.82	36.58	122.94	166.69
			3.810	4.030	3.600	3.930	1.440	4.840	6.563
	ST400-485	1 1/4"	100.71	106.30	95.38	103.25	36.58	122.94	166.69
			3.965	4.185	3.755	4.065	1.440	4.840	6.563
	ST400-486	1 1/4"	104.65	110.24	99.31	107.19	36.58	122.94	166.69
			4.120	4.340	3.910	4.220	1.440	4.840	6.563

Jacketed metal-clad cable fittings for ordinary locations

STE Series

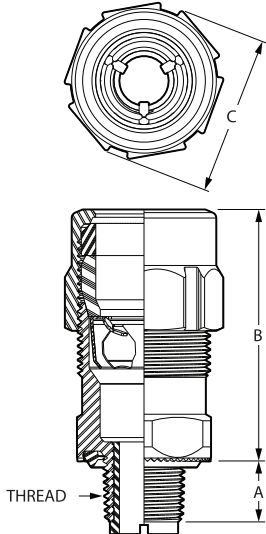


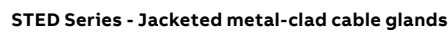
- Features and benefits:
- Excellent pullout strength
 - Robust metallic construction
 - Quick and easy installation without disassembly
 - Extended clamping range taking
 - Provides grounding continuity of cable armour

STE Series - Jacketed metal-clad cable glands

Approvals & certifications		Conformity		Temperature range	
		Conforms to:		-40°C to +90°C (-40°F to +194°F)	
		CSA C22.2 60079-0, C22.2 60079-7, C22.2 No.18.3, C22.2 No.25, C22.2 No.94, C22.2 No. 174, UL2279, UL514B, UL50 c-CSA-us Certificate: 1105555 File 23086		IP Rating	
		Class I Div1 ABCD Class II Div1 EFG Class III Div1 (Refer to CEC)		Type 4X	
		Ex e II		Material	
		UL File: E38947		Copper free aluminium	
		Class I, Zone 1, AEx e II		Zinc plated steel	
		Suitable for Class I Div2, Class II Div2 and Class III Div2		Stainless steel	

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket		Cable range over armour		Nominal dimensions (mm/in)		
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min
	STE050 DATA	1/2"	12.70	17.78	10.41	15.49	15.75	53.34	34.54
			0.500	0.700	0.410	0.610	0.620	2.100	1.360
	STE050	1/2"	15.24	25.02	13.21	22.73	15.75	64.01	41.40
			0.600	0.985	0.520	0.895	0.620	2.520	1.630
	STE075	3/4"	21.84	30.61	19.81	28.58	16.00	72.14	52.83
			0.860	1.205	0.780	1.125	0.630	2.840	2.080
	STE100	1"	24.13	34.93	22.10	32.89	19.94	76.71	58.42
			0.950	1.375	0.870	1.295	0.785	3.020	2.300
	STE125	1 1/4"	29.21	41.28	25.15	37.21	20.57	101.85	71.63
			1.150	1.625	0.990	1.465	0.810	4.010	2.820
	STE150	1 1/2"	36.58	49.91	32.51	45.85	20.96	108.97	82.55
			1.440	1.965	1.280	1.805	0.825	4.290	3.250
	STE200	2"	46.36	60.33	42.29	56.26	21.84	104.65	91.44
			1.825	2.375	1.665	2.215	0.860	4.120	3.600
	STE250	2 1/2"	57.53	72.14	53.47	68.07	32.51	144.02	120.65
			2.265	2.840	2.105	2.680	1.280	5.670	4.750
	STE300	3"	67.82	83.06	64.64	79.88	33.66	146.81	137.16
			2.670	3.270	2.545	3.145	1.325	5.780	5.400
	STE350	3 1/2"	81.79	98.30	78.49	92.46	35.31	145.80	149.86
			3.220	3.870	3.090	3.640	1.390	5.740	5.900
	STE400	4"	93.09	110.24	90.17	107.32	35.31	147.07	162.56
			3.665	4.340	3.550	4.225	1.390	5.790	6.400



Star Teck XP® jacketed metal-clad cable fittings for hazardous locations

STX Series



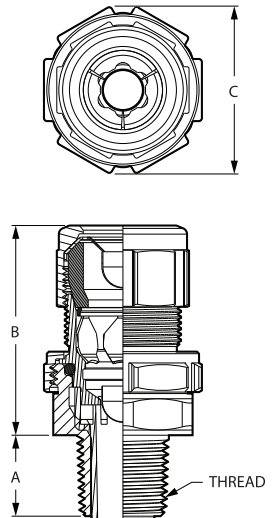
Features and benefits:

- Excellent solution for hazardous location
- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disassembly
- Provides grounding continuity of cable armour
- Splined gland and gripping features for ease of installation

STX Series - Jacketed metal-clad cable glands

Approvals & certifications	Conformity Conforms to:	Temperature range	
		-40°C to +90°C (-40°F to +194°F)	
 	CSA C22.2 No.18.3, C22.2 No.25, C22.2 No.30, C22.2 No. 174, UL2225, UL514B	IP Rating	
	CSA Certificate: 1310604 File 23086	Type 4 / 4X	
	Class I Div1 ABCD Class II Div1 EFG Class III Div1	Material	
	UL: E82038	Copper free aluminium	
	Class I Div1 ABCD Class II Div1 EFG Class III Div1	Zinc plated steel	
		PVC coating available for both	

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket		Cable range over armour		Nominal dimensions (mm/in)		
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min
	STX050-462	1/2"	13.34	16.51	10.54	14.48	20.07	63.50	41.40
			0.525	0.650	0.415	0.570	0.790	2.500	1.630
	STX050-464	1/2"	15.24	19.30	12.45	17.27	20.07	63.50	41.40
			0.600	0.760	0.490	0.680	0.790	2.500	1.630
	STX075-465	3/4"	18.42	22.48	15.62	20.45	20.07	66.55	46.23
			0.725	0.885	0.615	0.805	0.790	2.620	1.820
	STX075-466	3/4"	20.96	25.02	18.16	22.99	20.07	66.55	46.23
			0.825	0.985	0.715	0.905	0.790	2.620	1.820
	STX100-467	1"	22.35	27.05	19.56	25.02	25.02	71.88	61.98
			0.880	1.065	0.770	0.985	0.985	2.830	2.440
	STX100-468	1"	26.04	30.61	23.24	28.58	25.02	71.88	61.98
			1.025	1.205	0.915	1.125	0.985	2.830	2.440
	STX125-469	1 1/4"	30.15	34.93	27.36	32.89	25.65	77.47	64.01
			1.187	1.375	1.077	1.295	1.010	3.050	2.520
	STX150-470	1 1/2"	34.29	41.28	31.50	39.24	26.16	95.50	83.31
			1.350	1.625	1.240	1.545	1.030	3.760	3.280
	STX150-550	1 1/2"	38.10	41.28	35.31	39.24	26.16	95.50	83.31
			1.500	1.625	1.390	1.545	1.030	3.760	3.280
	STX150-471	1 1/2"	40.64	47.63	37.85	45.59	26.16	95.50	83.31
			1.600	1.875	1.490	1.795	1.030	3.760	3.280
	STX200-472	2"	43.18	49.91	40.39	47.88	26.92	102.87	92.46
			1.700	1.965	1.590	1.885	1.060	4.050	3.640
	STX200-473	2"	48.26	55.55	45.47	53.52	26.92	102.87	92.46
			1.900	2.187	1.790	2.107	1.060	4.050	3.640

Star Teck XP® for hazardous locations

STX Series

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket		Cable range over armour		Nominal dimensions (mm/in)		
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min
	STX200-474	2"	53.34	60.33	50.55	57.91	26.92	105.41	102.87
			2.100	2.375	1.990	2.280	1.060	4.150	4.050
	STX250-475	2 1/2"	58.42	65.15	55.63	63.12	40.13	109.47	115.32
			2.300	2.565	2.190	2.485	1.580	4.310	4.540
	STX250-476	2 1/2"	63.50	69.85	60.71	67.46	40.13	109.47	115.32
			2.500	2.750	2.390	2.656	1.580	4.310	4.540
	STX300-478	3"	65.53	72.14	61.98	69.85	41.66	143.26	125.22
			2.580	2.840	2.440	2.750	1.640	5.640	4.930
	STX300-479	3"	70.87	77.72	67.06	75.44	41.66	147.32	133.35
			2.790	3.060	2.640	2.970	1.640	5.800	5.250
	STX350-480	3 1/2"	76.20	83.06	72.90	81.03	42.93	160.53	147.07
			3.000	3.270	2.870	3.190	1.690	6.320	5.790
	STX350-481	3 1/2"	81.53	88.39	77.27	86.11	42.93	160.53	147.07
			3.210	3.480	3.042	3.390	1.690	6.320	5.790
	STX400-482	4"	86.87	93.73	83.06	91.19	44.20	168.40	157.23
			3.420	3.690	3.270	3.590	1.740	6.630	6.190
	STX400-483	4"	91.69	98.30	87.38	95.76	44.20	168.40	157.23
			3.610	3.870	3.440	3.770	1.740	6.630	6.190
	STX400-484	4"	96.77	102.36	91.44	99.82	44.20	180.09	175.26
			3.810	4.030	3.600	3.930	1.740	7.090	6.900
	STX400-485	4"	100.71	106.30	95.38	103.25	44.20	180.09	175.26
			3.965	4.185	3.755	4.065	1.740	7.090	6.900

Star Teck XP® jacketed metal-clad cable fittings for hazardous locations

STEX Series



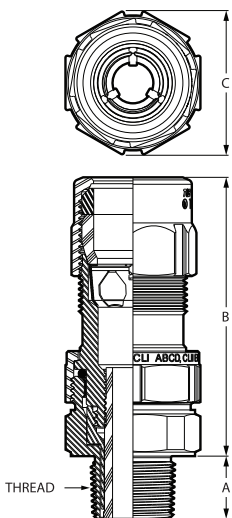
Features and benefits:

- Excellent solution for hazardous location
- Excellent pullout strength
- Robust metallic construction
- Quick and easy installation without disassembly
- Provides grounding continuity of cable armour
- Splined gland and gripping features for ease of installation

STEX Series - Jacketed metal-clad cable glands

Approvals & certifications		Conformity		Temperature range	
		Conforms to:		-40°C to +90°C (-40°F to +194°F)	
		CSA C22.2 No.18.3, C22.2 No.25, C22.2 No.30, C22.2 No. 174, UL2225, UL514B		IP Rating	
		CSA Certificate: 1310604 File 23086		Type 4 / 4X	
		Class I Div1 ABCD Class II Div1 EFG Class III Div1		Material	
		UL File: E82038		Copper free aluminium	
		Class I Div1 ABCD Class II Div1 EFG Class III Div1		Zinc plated steel	
				PVC coating available for both	

Dimensions

NPT thread	Part no.	NPT thread	Cable range over jacket		Cable range over armour		Nominal dimensions (mm/in)		
			Min. (mm/in)	Max. (mm/in)	Min. (mm/in)	Max. (mm/in)	A Min	B Min	C Min
	STEX075	3/4"	15.24	25.02	13.21	22.73	20.07	86.36	46.23
			0.600	0.985	0.520	0.895	0.790	3.400	1.820
	STEX100	1"	21.84	30.61	19.81	28.58	25.02	90.93	61.98
			0.860	1.205	0.780	1.125	0.985	3.580	2.440
	STEX125	1 1/4"	24.13	34.93	22.10	32.89	25.65	99.57	64.01
			0.950	1.375	0.870	1.295	1.010	3.920	2.520
	STEX150	1 1/2"	29.21	41.28	25.15	37.21	26.16	127.51	83.31
			1.150	1.625	0.990	1.465	1.030	5.020	3.280
	STEX200	2"	36.58	49.91	32.51	45.85	26.92	130.05	92.46
			1.440	1.965	1.280	1.805	1.060	5.120	3.640
	STEX250	2 1/2"	46.36	60.33	42.29	56.26	40.13	131.32	115.32
			1.825	2.375	1.665	2.215	1.580	5.170	4.540
	STEX300	3"	57.53	72.14	53.47	68.07	41.66	167.89	125.22
			2.265	2.840	2.105	2.680	1.640	6.610	4.930
	STEX350	3 1/2"	67.82	83.06	64.64	79.88	42.93	187.45	147.07
			2.670	3.270	2.545	3.145	1.690	7.380	5.790
	STEX400	4"	81.79	98.30	78.49	92.46	44.20	194.31	157.23
			3.220	3.870	3.090	3.640	1.740	7.650	6.190



Ty-Rap® high performance cable ties

Nylon detectable cable ties



Characteristics

- The Ty-Rap® detectable cable ties from ABB incorporate a unique compound (patent pending) detectable by X-ray equipment and metal detectors. Bright blue color enhances visual detection. Recommended for applications in food, pharmaceutical and other contamination-sensitive industries using detection systems, where cable tie installation residuals (cut tails) are permitted in the finished product.
- Engineered to provide the highest detectability in metal detectors by size
 - Specially formulated metallic particles provide high reflection in X-ray equipment
 - Bright blue color for an easy visual detection
 - Help achieve the HACCP EU-Directive
 - Available in 6 different sizes in convenient small bags
 - Mounting bases available

Technical information

- Material - Molding: Polyamide 6.6
- Material - Locking barb: 316 grade stainless steel
- Temperature range: -60°C to +85°C
- Min. Installation Temp.: -20°C
- Color: Bright blue
- Flammability rating: UL 94 HB
- Other properties: UV-resistant, halogen free, silicone free

Detectable cable ties



Product code	GID No.	Color	Material	Bundle ø	Length	Width	Min. tensile strength	Quantity
				from ... to	L	W		
				[mm]	[mm]	[mm]	[N]	[pieces]
Detectable Polyamide 6.6								
TY523MR-NDT	7TCG009330R0027	Blue	Polyamide 6.6	2 - 16	93	2,3	80	100
TY524MR-NDT	7TCG009330R0028	Blue	Polyamide 6.6	2 - 35	140	3,6	160	100
TY525MR-NDT	7TCG009330R0026	Blue	Polyamide 6.6	3,5 - 45	186	4,6	200	100
TY5253M-NDT	7TAG009660R0071	Blue	Polyamide 6.6	3,5 - 76	295	4,7	220	100
TY528MR-NDT	7TCG009330R0025	Blue	Polyamide 6.6	3,5 - 102	361	4,8	220	100
TY527MR-NDT	7TCG009330R0029	Blue	Polyamide 6.6	6 - 102	345	6,9	540	50

Some approvals may not be applicable to all product codes.

Tooling

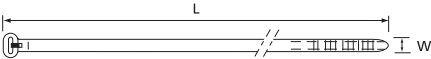


ERG50
For use with 2,4mm to 4,8mm (50N to 220N) cable ties.



ERG120
For use with 4,8mm to 7,6mm (180N to 540N) cable ties.

Dimensions



Ty-Rap® High Performance Cable Ties

Product code structure

Tie		Dimension code				
TY		XXXXM				
TY	C	5	25M	X	R	
Material		Packaging size		Material	Rack Bag with Euroslot	Colour
"blank" – Standard, Polyamide 6.6 H – Heat stabilised Polyamide 6.6 (+105 °C) HT – High temperature resistant Polyamide 4.6 (+150 °C) C – Polyamide 12 P – Polypropylene Z – ETFE Fluoropolymer V – ECTFE Fluoropolymer		"blank" – Standard, 1000/500 pieces B – Workbench box, 1000 pieces 5 – Small bags 100/50 pieces		X – UV-resistant black X-A – UV-resistant black and heat stabilised (+105°C) FR – Flame-retardant according to UL 94 V-0 -NDT – Detectable Polyamide 6.6 -PDT – Detectable Polypropylene		"blank" = natural 0 = black 1 = brown 2 = red 3 = orange 4 = yellow 5 = green 6 = blue 7 = purple 8 = grey 9 = white

Note: Nylon (Polyamide) is inherently susceptible to environmental conditions. Ty-Rap® cable ties are moisturised to optimum performance levels at machine-side and should be stored in cool dry areas out of direct sunlight. Cable ties are packaged in plastic bags to contain moisture and should remain sealed until ready for use.

Polyamide 6.6 cable ties - UV-resistant black - Euroslot packaging

Ty-Rap® High Performance Cable Ties

01 Ty-Rap® High
Performance Cable Ties

Characteristics

- UV-resistant version, especially recommended for outdoor applications
- Black version (2% carbon for military specifications)
- Packaging in small polythene bags with Euroslot, ideal for display and point-of-sales promotion (rack)
- Several lengths and 6 typical widths with a tensile strength up to 780N, to cover the most demanding applications
- Very convenient for small series production: 100 pieces (for cable ties from 2.4 mm to 4.8 mm width) or 50 pieces (for cable ties 6.9 mm width and above)

Technical Information

- Material - Moulding: Polyamide 6.6
- Material - Locking barb: 316 grade stainless steel
- Temperature range: -40°C to +105°C
- Colour: See colour chart below
- Flammability rating: UL 94 V-2
- Other properties: Halogen free, Silicone free

Order Code	MIL Spec.	Length [mm]	Width [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strength [N]	Quantity [pieces]	Tooling
TY5232MR	MS-3367-4	92	2.4	1.0	2 - 16	80	100	ERG50 WT193A
TY5232MR	–	203	2.4	1.0	2 - 50	80	100	
TY5234M*	–	356	2.4	1.0	2 - 102	80	100	
TY524MR	MS-3367-5	140	3.6	1.1	2 - 29	180	100	
TY5242MR	–	204	3.6	1.1	2 - 50	180	100	
TY526MR	–	284	3.6	1.1	2 - 76	130	100	
TY5244MR	–	368	3.6	1.1	2 - 103	130	100	ERG50 ERG120 WT193A
TY525MR	MS-3367-1	186	4.8	1.3	3.5 - 45	220	100	
TY5253MR	MS-3367-7	295	4.8	1.3	3.5 - 78	220	100	
TY528MR	MS-3367-2	361	4.8	1.4	3.5 - 102	220	100	
TY5271MR	–	150	7.6	1.5	6 - 31	540	50	ERG120 L-500-EU
TY5272MR	–	223	6.9	1.6	6 - 50	540	50	
TY527MR	MS-3367-3	340	6.9	1.6	6 - 90	540	50	
TY5275M*	–	457	6.9	1.6	6 - 127	540	50	
TY5277M*	–	617	6.9	1.6	6 - 177	540	50	
TY529M*	MS-3367-6	771	6.9	1.6	6 - 229	540	50	

*Product References TY5234M, TY5275M, TY5277M and TY529M have no Euroslot.

01



For cable ties in a specific colour, replace * in the Product Reference by the colour code:

0 = black, 1 = brown, 2 = red, 3 = orange, 4 = yellow, 5 = green, 6 = blue, 7 = purple, 8 = grey and 9 = white



For example: TY23M-1 defines a brown TY23M cable tie. Contact your Sales Office for product availability.

** For smaller quantities, the figure "5" needs to be added to the Order Code immediately after "TY" - example: TY523M-2 is the same as TY23M-2 but in bags of 100

** Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations.

Ty-Met™ Stainless steel cable ties

Ball-Lock type – Standard widths, uncoated

01 Stainless steel cable ties

Characteristics

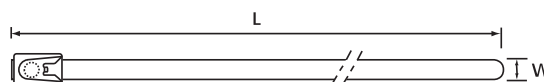
The ball-lock type stainless steel ties from ABB are self-locking and require no time consuming crimping or folding operations

- Strong self-locking mechanism (stainless steel ball), with low insertion force
- Fast, easy and reliable installation
- Standard widths (4,6mm & 7,9mm, suitable for most applications, indoor and outdoor)
- Uncoated version, suitable for high temperature environments
- 2 grades of non-magnetic stainless steel: 304 grade for standard applications and 316 grade (marine grade) for extra corrosion resistance

- Applications: installation of cables and pipes in extreme conditions and hazardous areas, such as: petrochemical and food processing industries, power stations, mining, shipbuilding, offshore and other aggressive environments

Technical information

- Material: A. 304 grade non-magnetic stainless steel; B. 316 grade non-magnetic stainless steel
- Temperature range: -60°C to +300°C
- Color: Metallic
- Extremely high flame and UV resistance
- Strap thickness: 0,26mm



** Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations.

Product Ref. Stainless steel 304	Product Ref. Stainless steel 316	Length (L) [mm]	Width (W) [mm]	Material thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strength [N]	Quantity [pieces]	Tooling
YLS-4.6-100A	YLS-4.6-100B	100	4.6	0.26	20-25	778	100	
YLS-4.6-125A	YLS-4.6-125B	125	4.6	0.26	20-25	778	100	
YLS-4.6-150A	YLS-4.6-150B	150	4.6	0.26	20-35	778	100	
YLS-4.6-200A	YLS-4.6-200B	200	4.6	0.26	20-50	778	100	
YLS-4.6-300A	YLS-4.6-300B	300	4.6	0.26	20-83	778	100	
YLS-4.6-360A	YLS-4.6-360B	360	4.6	0.26	20-100	778	100	
YLS-4.6-520A	YLS-4.6-520B	520	4.6	0.26	20-150	778	100	
YLS-4.6-680A	YLS-4.6-680B	680	4.6	0.26	20-200	778	100	
YLS-4.6-840A	YLS-4.6-840B	840	4.6	0.26	20-250	778	100	
YLS-4.6-1000A	YLS-4.6-1000B	1000	4.6	0.26	20-300	778	100	
YLS-4.6-1200A	YLS-4.6-1200B	1200	4.6	0.26	20-365	778	100	
YLS-4.6-1400A	YLS-4.6-1400B	1400	4.6	0.26	20-425	778	100	CT3
YLS-7.9-100A	YLS-7.9-100B	100	7.9	0.26	20-20	1112	100	CT6
YLS-7.9-125A	YLS-7.9-125B	125	7.9	0.26	20-22	1112	100	
YLS-7.9-150A	YLS-7.9-150B	150	7.9	0.26	20-35	1112	100	
YLS-7.9-200A	YLS-7.9-200B	200	7.9	0.26	20-50	1112	100	
YLS-7.9-300A	YLS-7.9-300B	300	7.9	0.26	20-83	1112	100	
YLS-7.9-360A	YLS-7.9-360B	360	7.9	0.26	20-100	1112	100	
YLS-7.9-520A	YLS-7.9-5200B	520	7.9	0.26	20-150	1112	100	
YLS-7.9-680A	YLS-7.9-680B	680	7.9	0.26	20-200	1112	100	
YLS-7.9-840A	YLS-7.9-840B	840	7.9	0.26	20-250	1112	100	
YLS-7.9-1000A	YLS-7.9-1000B	1000	7.9	0.26	20-300	1112	100	
YLS-7.9-1200A	YLS-7.9-1200B	1200	7.9	0.26	20-365	1112	100	
YLS-7.9-1400A	YLS-7.9-1400B	1400	7.9	0.26	20-425	1112	100	

Ty-Met™ Standard cable ties

Stainless steel cable ties

01 Stainless steel
cable ties

Characteristics

The Ball-Lock Type stainless steel ties from ABB are self-locking, requiring no time consuming crimping or folding operations.

- Strong self-locking mechanism (stainless steel ball), with low insertion force
- Fast, easy and reliable installation
- Heavy-duty version (12 mm & 16 mm of width), for extreme applications, indoor and outdoor
- Uncoated version, suitable for high temperature environments
- Corrosion resistant 316 grade stainless steel (marine grade) for high mechanical and chemical durability

- Applications: installation of cables and pipes in extreme conditions and hazardous areas, such as: petrochemical and food processing industries, power stations, mining, shipbuilding, offshore and other aggressive environments

Technical Information

- Material: 316 grade non-magnetic stainless steel
- Temperature range: -80°C to +300°C
- Colour: Metallic
- Flammability rating: Absolutely fireproof
- Other properties: UV-resistant



01

Order Code	Length [mm]	Width [mm]	Material thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strength [N]	Quantity [pieces]	Tooling
YLS-12-200B	200	12.0	0.32	25-50	2670	50	CT3 CT7
YLS-12-300B	300	12.0	0.32	25-83	2670	50	
YLS-12-360B	360	12.0	0.32	25-100	2670	50	
YLS-12-440B	440	12.0	0.32	25-125	2670	50	
YLS-12-520B	520	12.0	0.32	25-150	2670	50	
YLS-12-600B	600	12.0	0.32	25-175	2670	50	
YLS-12-680B	680	12.0	0.32	25-200	2670	50	
YLS-12-760B	760	12.0	0.32	25-225	2670	50	
YLS-12-840B	840	12.0	0.32	25-250	2670	50	
YLS-12-1000B	1000	12.0	0.32	25-300	2670	25	
YLS-12-1200B	1200	12.0	0.32	25-365	2670	25	
YLS-12-1400B	1400	12.0	0.32	25-425	2670	25	
YLS-16-200B	200	16.0	0.32	40-50	3110	50	CT7
YLS-16-300B	300	16.0	0.32	40-80	3110	50	
YLS-16-360B	360	16.0	0.32	40-100	3110	50	
YLS-16-440B	440	16.0	0.32	40-125	3110	50	
YLS-16-520B	520	16.0	0.32	40-150	3110	50	
YLS-16-600B	600	16.0	0.32	40-185	3110	50	
LS-16-680B	680	16.0	0.32	40-200	3110	50	
YLS-16-760B	760	16.0	0.32	40-225	3110	50	
YLS-16-840B	840	16.0	0.32	40-250	3110	50	
YLS-16-1000B	1000	16.0	0.32	40-300	3110	25	
YLS-16-1200B	1200	16.0	0.32	40-365	3110	25	
YLS-16-1400B	1400	16.0	0.32	40-425	3110	25	

Ty-Fast® plastic cable ties

ABB offers a complete range of all plastic cable ties to fasten cables in the most demanding applications.

Ty-Fast® all plastic ties

The all-plastic cable ties are available in lengths from 100mm to 1220mm and widths from 2,5mm to 12,2mm, offering a loop tensile strength up to 1200 N. These cable ties will satisfy bundling requirements up to 375,5mm. Made of halogen and silicone free Polyamide 6.6, Ty-Fast® cable ties are available in natural and black UV-resistant and heat stabilized material.

Ty-Fast® cable ties meet shipbuilding classification such as DNV-GL, Lloyd's Register of Shipping, Bureau Veritas. Ty-Fast® cable ties have a CE declaration, supported by compliance to the low voltage directive and EN/IEC 62275. On top the Ty-Fast® range is also compliant to UL 62275.

State-of-the-art robotic and raw material handling equipment assures product and material integrity throughout the manufacturing process.

The integrally formed polyamide pawl combines low insertion and high locking strength.

The low profile head significantly reduces the potential for snagging during installation.

Quick and easy pull through increases productivity, reduces operator fatigue.

Tail with finger grip design that helps operator grasp and pull ties snugly.

Sure grip tab keeps the tail from popping out while being treated, then holds it securely for final tightening by hand or tool.



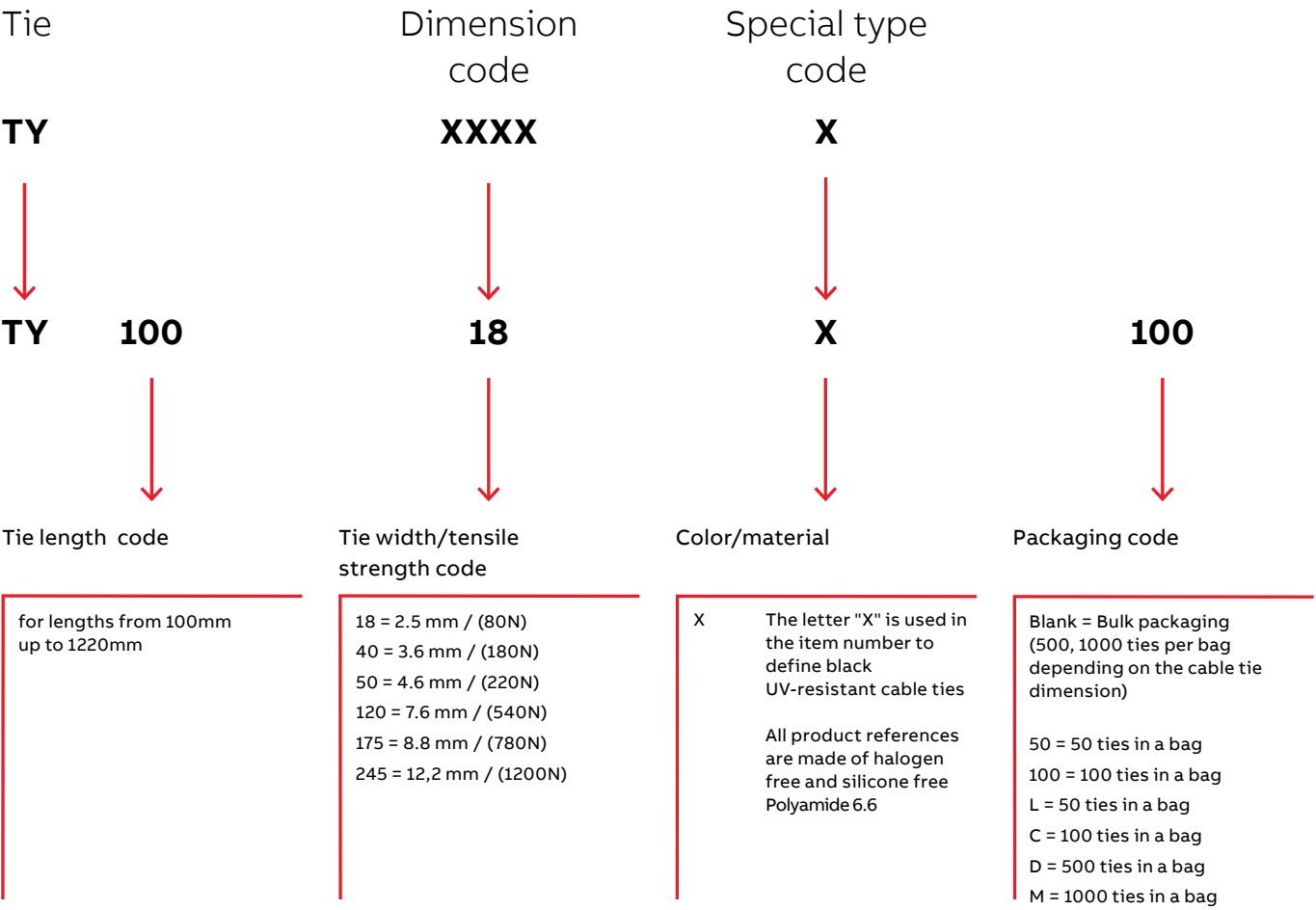
Ty-Fast® cable ties for demanding applications

An all-in one solution:
UV resistant and with enhanced temperature range.



All plastic cable ties

Ty-Fast® product code structure



Note: Nylon (Polyamide 6.6) is inherently susceptible to environmental conditions. Ty-Fast® cable ties are moisturised to optimum performance levels at machine-side and should be stored in cool dry areas out of direct sunlight. Cable ties are packaged in plastic bags to contain moisture and should remain sealed until ready for use.

Easy handling

The turned up tail makes orientation and handling easy, even in blind installations or tight locations.

Easy installation

The specially designed thin tail with grips makes installing the ties easy, even when wearing gloves.



The integrally formed pawl combines low insertion and high locking strength.

Ty-Fast® cable ties

Natural - Distribution packaging



Characteristics

- Suitable for indoor applications
- Material: Polyamide 6.6
- Color: Natural
- Halogen and silicone free
- Packaging: 50 pieces or 100 pieces per bag

Technical features

- Length: from 100mm to 1220mm
- Tensile strength: from 80N to 1200N
- Bundle diameter: from 1.5mm to 375.5mm
- Operating temperature: -40°C to 85°C
- Minimum installation temperature: -20°C
- Flammability rating: UL 94V-2

Natural - Distribution packaging



Product code	GID No.	Bundle ø from ... to [mm]	Length L [mm]	Width W [mm]	Min. tensile strength [N]	Quantity [pieces]
Standard pack size						
TY100-18-C	7TCG054360R0420	1,5 - 20,5	100	2,5	80	100
TY125-18-C	7TCG054360R0422	1,5 - 36,5	150	2,5	80	100
TY200-18-C	7TCG054360R0424	1,5 - 52,5	200	2,5	80	100
TY125-40-100*	7TAG054360R0125	1,5 - 32	143	3,6	180	100
TY200-40-C	7TCG054360R0426	2,0 - 52,5	203	3,5	180	100
TY300-40-100	7TCG054360R0241	1,5 - 76	290	3,6	180	100
TY400-40-100	7TAG054360R0312	6,35 - 102	370	3,6	180	100
TY175-50-100	7TAG054360R0157	3,17 - 44	188	4,8	220	100
TY225-50-100	7TCG054360R0231	3,17 - 57	228	4,8	220	100
TY300-50-100	7TAG054360R0260	3,17 - 76	304	4,8	220	100
TY400-50-100	7TAG054360R0316	3,17 - 102	366	4,8	220	100
TY450-50-C	7TCG054290R0033	3,0 - 122,5	430	4,8	222	100
TY200-120-C	7TCG054360R0428	6,0 - 56	220	7,5	550	100
TY400-120-100	7TCG054360R0284	15 - 102	374	7,6	540	100
TY450-120-L	7TCG054410R0023	6,0 - 130,5	450	7,5	550	50
TY600-120-L	7TCG054410R0024	6,0 - 181,5	610	7,5	550	50
TY800-120-L	7TCG054410R0025	6,0 - 226	750	7,5	550	50
TY600-175-L	7TCG054530R0025	7,0 - 181,5	610	8,8	800	50
TY900-175-L	7TCG054510R0009	7,0 - 280	920	8,8	800	50
TY1000-175-L	7TCG054520R0005	7,0 - 295	1020	8,8	800	50
TY1200-175-L	7TCG054520R0006	7,0 - 375,5	1220	8,8	800	50
TY500-245-L**	7TCG054510R0010	9,0 - 156	530	12,2	1200	50
TY720-245-L**	7TCG054510R0011	9,0 - 216	730	12,2	1200	50
TY1050-245-L**	7TCG054510R0012	9,0 - 323	1030	12,2	1200	50

* Operating temperature: -30°C to +85°C.

** Minimum installation temperature: -10°C.

Tooling



ERG50
For use with 2,4mm to 4,8mm (80N to 220N) cable ties.

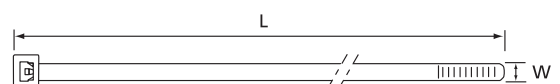


ERG120
For use with 4.8mm to 7,6mm (220N to 540N) cable ties.



WT3D
For use with 7.6mm to 12.7mm (540N to 1200N) cable ties.

Dimensions



Ty-Fast® cable ties

Natural - OEM packaging



Characteristics

- Suitable for indoor applications
- Material: Polyamide 6.6
- Color: Natural
- Halogen and silicone free
- Packaging: 500 pieces or 1000 pieces per bag

Technical features

- Length: from 100mm to 430mm
- Tensile strength: from 80N to 540N
- Bundle diameter: from 1.5mm to 122.5mm
- Operating temperature: -40°C to 85°C
- Minimum installation temperature: -20°C
- Flammability rating: UL 94V-2

Natural - OEM packaging



Product code	GID No.	Bundle ø from ... to [mm]	Length L [mm]	Width W [mm]	Min. tensile strength [N]	Quantity [pieces]
Bulk pack size						
TY100-18-M	7TCG054360R0421	1,5 - 20,5	100	2,5	80	1000
TY125-18-M	7TCG054360R0423	1,5 - 36,5	150	2,5	80	1000
TY200-18-M	7TCG054360R0425	1,5 - 52,5	200	2,5	80	1000
TY125-40*	7TAG054360R0123	1,5 - 32	143	3,6	180	1000
TY200-40-M	7TCG054360R0427	2,0 - 52,5	203	3,5	180	1000
TY300-40	7TCG054360R0240	1,5 - 76	290	3,6	180	1000
TY400-40	7TAG054360R0311	6,35 - 102	370	3,6	180	1000
TY175-50	7TAG054360R0153	3,17 - 44	188	4,8	220	1000
TY225-50	7TCG054360R0230	3,17 - 57	228	4,8	220	1000
TY300-50	7TAG054360R0259	3,17 - 76	304	4,8	220	1000
TY400-50	7TAG054360R0315	3,17 - 102	366	4,8	220	1000
TY450-50-D	7TCG054290R0037	3,0 - 122,5	430	4,8	222	500
TY200-120-D	7TCG054360R0429	6,0 - 56	220	7,5	550	500
TY400-120	7TAG054360R0282	15 - 124	374	7.6	540	500

* Operating temperature: -30°C to +85°C.

Tooling



ERG50
For use with 2,4mm to 4,8mm (80N to 220N) cable ties.

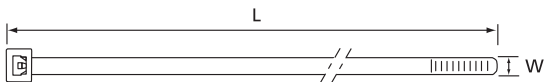


ERG120
For use with 4,8mm to 7,6mm (220N to 540N) cable ties.



WT3D
For use with 7.6mm to 12.7mm (540N to 1200N) cable ties.

Dimensions



Ty-Fast® cable ties

Black UV-resistant and heat stabilized - Distribution packaging



Characteristics

- Suitable for indoor and outdoor applications
- Heat stabilised + UV-resistant, for outdoor applications that also require a resistance to high temperature +115°C
- Material Polyamide 6.6
- Color: black
- Halogen and silicone free
- Packaging: 50 pieces or 100 pieces per bag

Technical information

- Length: from 100mm to 1220mm
- Tensile strength: from 80N to 120N
- Bundle diameter: from 1.5mm to 375.5mm
- Operating temperature: -40°C to 115°C
- All items without suffix L, C, M and D have a maximum operating temperature of 105°C
- Minimum installation temperature: -20°C
- Flammability rating: UL 94V-2

Black UV-resistant and heat stabilized



Product code	GID No.	Bundle ø from ... to [mm]	Length L [mm]	Width W [mm]	Min. tensile strength [N]	Quantity [pieces]
Standard pack size						
TY100-18X-C	7TCG054360R0430	1,5 - 20,5	100	2,5	80	100
TY125-18X-C	7TCG054360R0432	3,0 - 36,5	150	2,5	80	100
TY200-18X-C	7TCG054360R0434	3,0 - 52,5	200	2,5	80	100
TY125-40X-100*	7TAG054360R0142	1,5 - 32	143	3,6	180	100
TY200-40X-C	7TCG054360R0436	3,0 - 52,5	203	3,5	180	100
TY300-40X-100	7TCG054360R0257	1,5 - 76	290	3,6	180	100
TY400-40X-100	7TAG054360R0314	6,35 - 102	370	3,6	180	100
TY175-50X-100	7TAG054360R0179	3,17 - 44	188	4,8	220	100
TY225-50X-100	7TCG054360R0237	3,17 - 57	228	4,8	220	100
TY300-50X-100	7TAG054360R0279	3,17 - 76	304	4,8	220	100
TY400-50X-100	7TAG054360R0337	3,17 - 102	366	4,8	220	100
TY450-50X-C	7TCG054290R0035	3,0 - 122,5	430	4,8	222	100
TY200-120X-C	7TCG054360R0438	6,0 - 56	220	7,5	550	100
TY400-120X-100	7TCG054360R0308	15 - 102	374	7,6	540	100
TY450-120X-L	7TCG054410R0026	6,0 - 130,5	450	7,5	550	50
TY600-120X-L	7TCG054410R0027	6,0 - 181,5	610	7,5	550	50
TY800-120X-L	7TCG054410R0028	6,0 - 226	750	7,5	550	50
TY600-175X-L	7TCG054530R0026	9,0 - 181,5	610	8,8	800	50
TY900-175X-L	7TCG054510R0013	9,0 - 280	920	8,8	800	50
TY1000-175X-L	7TCG054520R0007	9,0 - 295	1020	8,8	800	50
TY1200-175X-L	7TCG054520R0008	9,0 - 375,5	1220	8,8	800	50
TY500-245X-L	7TCG054510R0014	9,0 - 156	530	12,2	1200	50
TY720-245X-L	7TCG054510R0015	9,0 - 216	730	12,2	1200	50
TY1050-245X-L	7TCG054510R0016	9,0 - 323	1030	12,2	1200	50

* Operating temperature: -30°C to +105°C.

Tooling



ERG50
For use with 2,4mm to 4,8mm (80N to 220N) cable ties.

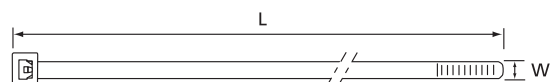


ERG120
For use with 4,8mm to 7,6mm (220N to 540N) cable ties.



WT3D
For use with 7,6mm to 12,7mm (540N to 1200N) cable ties.

Dimensions



Ty-Fast® cable ties

Black UV-resistant and heat stabilized - OEM packaging



Characteristics

- Suitable for indoor and outdoor applications
- Heat stabilised + UV-resistant, for outdoor applications that also require a resistance to high temperature +115°C
- Material Polyamide 6.6
- Color: black
- Halogen and silicone free
- Packaging: 500 pieces or 1000 pieces per bag

Technical features

- Length: from 100mm to 430mm
- Tensile strength: from 80N to 540N
- Bundle diameter: from 1.5mm to 122.5mm
- Operating temperature: -40°C to 115°C
- All items without suffix L, C, M and D have a maximum operating temperature of 105°C
- Minimum installation temperature: -20°C
- Flammability rating: UL 94V-2

Black UV-resistant and heat stabilized



Product code	GID No.	Bundle ø from ... to [mm]	Length L [mm]	Width W [mm]	Min. tensile strength [N]	Quantity [pieces]
Bulk pack size						
TY100-18X-M	7TCG054360R0431	1,5 - 20,5	100	2,5	80	1000
TY125-18X-M	7TCG054360R0433	3,0 - 36,5	150	2,5	80	1000
TY200-18X-M	7TCG054360R0435	3,0 - 52,5	200	2,5	80	1000
TY125-40X*	7TAG054360R0141	1,5 - 32	140	3,6	180	1000
TY200-40X-M	7TCG054360R0437	3,0 - 52,5	203	3,5	180	1000
TY300-40X	7TCG054360R0256	1,5 - 76	290	3,6	180	1000
TY400-40X	7TAG054360R0313	6,35 - 102	370	3,6	180	1000
TY175-50X	7TAG054360R0178	3,17 - 44	188	4,8	220	1000
TY225-50X	7TCG054360R0236	3,17 - 57	228	4,8	220	1000
TY300-50X	7TAG054360R0278	3,17 - 76	304	4,8	220	1000
TY400-50X	7TAG054360R0336	3,17 - 102	370	4,8	220	1000
TY450-50X-D	7TCG054290R0038	3,0 - 122,5	430	4,8	222	500
TY200-120X-D	7TCG054360R0439	6,0 - 56	220	7,5	550	500
TY400-120X	7TAG054360R0307	15 - 124	374	7,6	540	500

* Operating temperature: -30°C to +105°C.

Tooling



ERG50
For use with 2,4mm to 4,8mm (80N to 220N) cable ties.

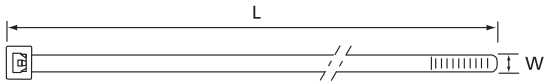


ERG120
For use with 4,8mm to 7,6mm (220N to 540N) cable ties.



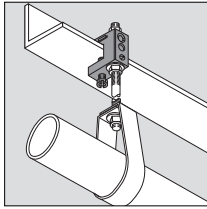
WT3D
For use with 7.6mm to 12.7mm (540N to 1200N) cable ties.

Dimensions



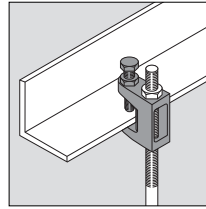
E-Klips® mechanical and electrical fixings

Key products



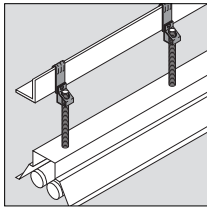
—
Girder clamps for threaded rod

Part Code	ABB Order Code	Quantity (pieces)
PPFH-65	7TCA084030R1720	25
PPFH-107	7TCA084030R1719	25



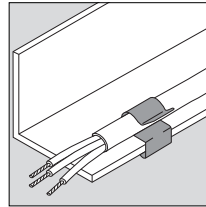
—
Girder clamps for threaded rod

Part Code	ABB Order Code	Quantity (pieces)
FC-11	7TCA084220R0153	25
FC-10T	7TCA084220R0152	25



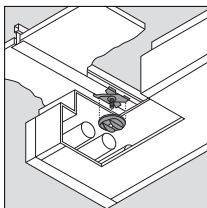
—
Purlin clips for threaded rod

Part Code	ABB Order Code	Quantity (pieces)
AV155-AM8T	7TCA084030R0754	25
AV155-AM10T	7TCA084030R0742	25



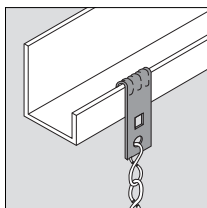
—
Girder clips for single cables

Part Code	ABB Order Code	Quantity (pieces)
PPECS-89	7TCA084030R1714	25
PPECS-1011	7TCA084030R1710	25
PPECS-1214	7TCA084030R1711	25
PPECS-1519	7TCA084030R1712	25
PPECS-2024	7TCA084030R1713	25
PPECM-89	7TCA084030R1709	25
PPECM-1011	7TCA084030R1705	25
PPECM-1214	7TCA084030R1706	25
PPECM-1519	7TCA084030R1707	25
PPECM-2024	7TCA084030R1708	25
PPECL-89	7TCA084030R1704	25
PPECL-1011	7TCA084030R1700	25
PPECL-1214	7TCA084030R1701	25
PPECL-1519	7TCA084030R1702	25
PPECL-2024	7TCA084030R1703	25



—
Suspended ceiling clips

Part Code	ABB Order Code	Quantity (pieces)
PPJHX-16S	7TCA084030R1721	25



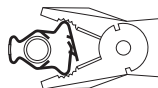
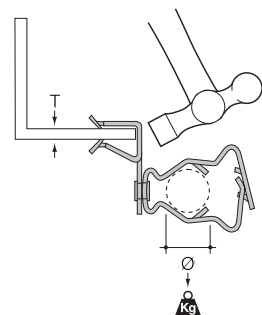
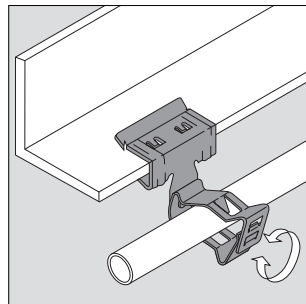
—
Purlin clips for chain or wire

Part Code	ABB Order Code	Quantity (pieces)
PPAV-155	7TCA084030R1699	25

Girder clips

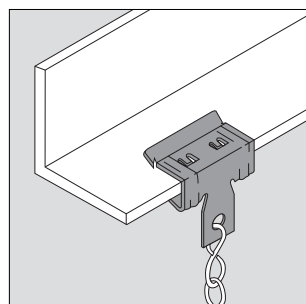
Key products

Girder clips for conduit

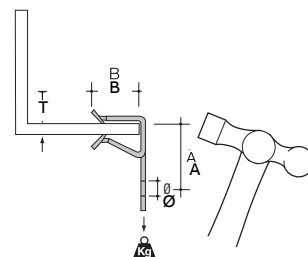


Part Code	ABB Order Code	T (mm)	Ø (mm)	PG type	Load rating (kg)	Material finishes	Quantity (pieces)
AH153-GM1219	7TCA084030R1133	1.5-3	12-19	7/9/11	12	F8+	25
AH153-GM1926	7TCA084030R1135	1.5-3	19-26	13.5/16	12	F8+	25
AH153-GM2632	7TCA084030R1138	1.5-3	26-32	21	12	F8+	25
AH153-GM3240	7TCA084030R1140	1.5-3	32-40	29	12	F8+	25
AH153-GM4047	7TCA084030R1142	1.5-3	40-47	36	12	F8+	25
AH153-GM4757	7TCA084030R1144	1.5-3	47-57	36/42	12	F8+	25
AH38-GM1219	7TCA084030R1163	3-8	12-19	7/9/11	12	F8+	25
AH38-GM1926	7TCA084030R1165	3-8	19-26	13.5/16	12	F8+	25
AH38-GM2632	7TCA084030R1168	3-8	26-32	21	12	F8+	25
AH38-GM3240	7TCA084030R1170	3-8	32-40	29	12	F8+	25
AH38-GM4047	7TCA084030R1172	3-8	40-47	36	12	F8+	25
AH38-GM4757	7TCA084030R1174	3-8	47-57	36/42	12	F8+	25
AH814-GM1219	7TCA084030R1105	8-14	12-19	7/9/11	12	F8+	25
AH814-GM1926	7TCA084030R1107	8-14	19-26	13.5/16	12	F8+	25
AH814-GM2632	7TCA084030R1109	8-14	26-32	21	12	F8+	25
AH814-GM3240	7TCA084030R1111	8-14	32-40	29	12	F8+	25
AH814-GM4047	7TCA084030R1113	8-14	40-47	36	12	F8+	25
AH814-GM4757	7TCA084030R1115	8-14	47-57	36/42	12	F8+	25
AH1420-GM1219	7TCA084030R0487	14-20	12-19	7/9/11	12	F8+	25
AH1420-GM1926	7TCA084030R0489	14-20	19-26	13.5/16	12	F8+	25
AH1420-GM2632	7TCA084030R0493	14-20	26-32	21	12	F8+	25
AH1420-GM3240	7TCA084030R0495	14-20	32-40	29	12	F8+	25
AH1420-GM4047	7TCA084030R0497	14-20	40-47	36	12	F8+	25
AH1420-GM4757	7TCA084030R0499	14-20	47-57	36/42	12	F8+	25

Girder clips for chain wire



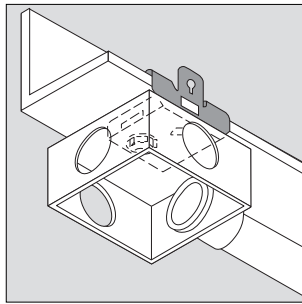
Part no.	ABB Order Code	T (mm)	Ø (mm)	A (mm)	B (mm)	Load rating (kg)	Material finishes	Quantity (pieces)
AH-153	7TCA084030R0448	1.5-3	6.5	16	12.5	72	F8+	100
AH-38	7TCA084030R0452	3-8	6.5	18	20.3	90	F8+	100
AH-814	7TCA084030R0457	8-14	6.5	26	20.3	90	F8+	100
AH-1420	7TCA084030R0443	14-20	6.5	30	26.6	90	F8+	100



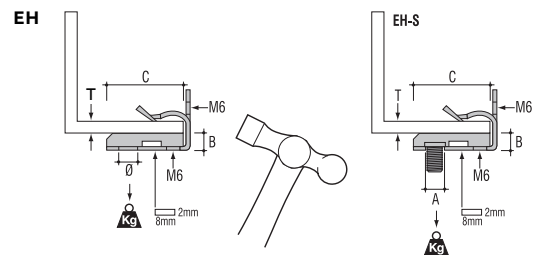
Girder clips and rod

Key products

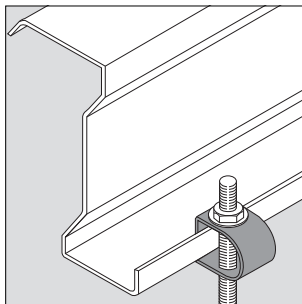
Girder clips for conduit box



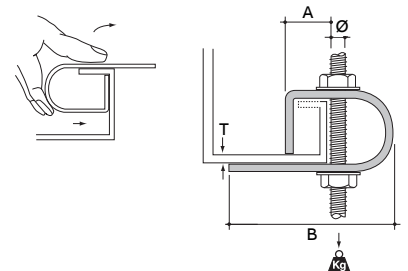
Part no.	ABB Order Code	T (mm)	Ø (mm)	A (mm)	B (mm)	C (mm)	Load rating (kg)	Material finishes	Quantity (pieces)
EH-38	7TCA084030R1091	3-8	7	–	7.5	33	45	F8+	100
EH-814	7TCA084030R1098	8-14	7	–	7.5	33	45	F8+	100
EH-1420	7TCA084030R1085	14-20	7	–	7.5	33	45	F8+	100
EH-38S	7TCA084030R1095	3-8	–	M6x10	7.5	33	45	F8+	100
EH-814S	7TCA084030R1102	8-14	–	M6x10	7.5	33	45	F8+	100
EH-1420S	7TCA084030R1088	14-20	–	M6x10	7.5	33	45	F8+	100



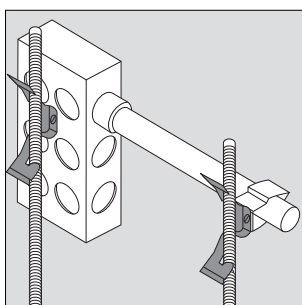
Purlin clamp for threaded rod



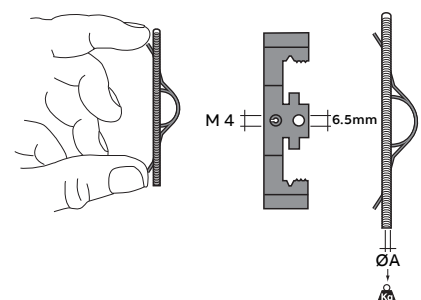
Part no.	ABB Order Code	T (mm)	Ø (mm)	A (mm)	B (mm)	Load rating (kg)	Material finishes	Quantity (pieces)
PD	7TCA084220R0299	≤4	12	15	85	40	F2	50



Fastening clips for threaded rod



Part no.	ABB Order Code	ØA (mm)	Load rating (kg)	Material finishes	Quantity (pieces)
FM-313T	7TCA084030R1270	M6/M8/M10	10	F8+	100
FM-320T	7TCA084030R1274	M6/M8/M10	10	F8+	100



Energy and lighting management

235	Busch-Jaeger movement detectors
237	Busch-Watchdog PRO movement detectors
242	Busch-Watchdog 180 flex movement detectors
248	Busch-Presence movement detectors
250	ABB Watchdog remote control



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Movement detector

For the pleasant feeling of safety.

These innovative and high-quality optical detection systems by Busch-Jaeger simply make life more comfortable. They are alert, helpful, efficient. And they automatically manage many tasks in every sector of the building. Inside and outdoors. When it comes to safety, they know precisely when the light is needed. And other functions such as heating, blinds and air-conditioning are precisely, intelligently and reliably controlled.



- 01 Busch-Watchdog,
Studio white 134 RAL9016
- 02 Busch-Watchdog,
Aluminum silver 133 RAL9006
- 03 Busch-Watchdog,
Stainless steel 136
- 04 Busch-Watchdog,
Brown 131 RAL8017
- 05 Busch-Watchdog,
Anthracite 135 RAL7016

- 06 Busch-Watchdog 180 flex,
Withe
- 07 ABB flexTronic presence
detector, sky sensor,
studio white matt
aluminium silver
- 08 ABB flexTronic presence
detector, corridor sensor,
studio white matt
aluminium silver

- 09 Busch-Presence detector compact,
Withe
- 10 Busch-Presence detector flex,
Withe
- 11 Busch-Presence detector KNX,
Withe

Movement detector

Selected functions.

Busch-Watchdog PRO Designs



Busch-Watchdog PRO
90° BT
6851/9-13X



Busch-Watchdog PRO
220° BT
6851/22-13X



Busch-Watchdog PRO
220° select BT
6851/22S-134



Busch-Watchdog PRO
280° WL
6251/28-13X-WL



Busch-Watchdog PRO
280° free@home
BW-A4.1-1xx



Busch-Watchdog PRO
280° KNX
BW/A4.11-1xx



Corner adapter
Busch-Watchdog PRO
6851/EA-13X



Frame
Busch-Watchdog PRO
6851/DR-13X

Busch-Watchdog 180 flex Designs



Busch-Watchdog
180 flex,
Standard sensor
with select lens



Busch-Watchdog
180 flex,
Comfort sensor
with select lens



Busch-Watchdog
180 flex,
Multi-sensor



ABB flexTronic
presence detector,
sky sensor



ABB flexTronic
presence detector,
corridor sensor

Busch-Presence detector Designs



Busch-Presence
detector KNX



Busch-Presence
detector compact



Busch-Watchdog
Presence tech
BasicLINE Corridor



Busch-Presence
detector flex, Withe

The Watchdog. For everyone.

Planning

Three axis pivot

Consistently adapted to any installation situation: Featuring three pivots, the Busch-Watchdog PRO can be rotated in any direction for a precisely adjustable detection range. Go with a round or square base to blend in with the architecture, mount it on the wall or ceiling - as you see, it is a truly path-breaking design.



Variable design

Square or round? Surface or corner? The surroundings decide which design will do the best job. The new Busch-Watchdog PRO harmoniously blends into the architecture in any situation, with easy installation and efficient operation.



The Watchdog. For everyone.

Factors

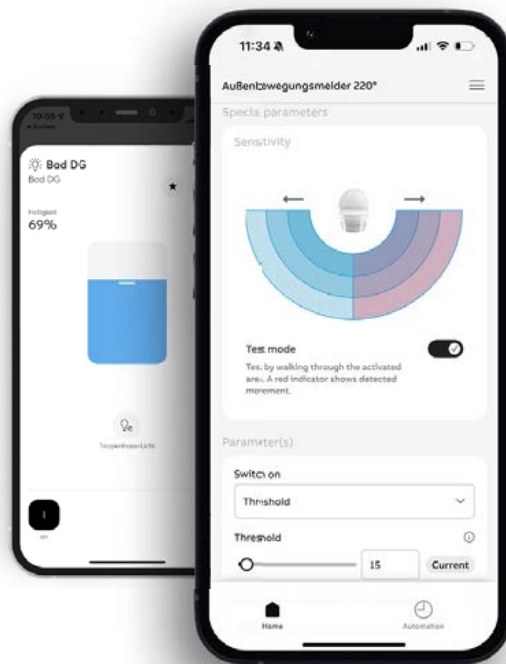
Potentiometer setting

Practical potentiometers on the underside of the Busch-Watchdog PRO are ready for making quick settings during standard commissioning.



App configuration

The Busch-Watchdog PRO can be set even more precisely using the app: Test mode, detection field, sensitivity, switch-on threshold and run-on time.



Conventional 90°, 220°, select

The three variants are suited for classic installation. They can also be operated remotely via an app.



Busch-free@home® 280°

Smart integration enables the use of several lighting circuits – providing flexibility for different situations and times of day.



Wireless/Bluetooth 280°

If the Busch-Watchdog is located at a point suitable for detection, e.g. the garage, it can control the lighting in another area, such as the entryway to the house.



KNX 280° Available in Q1 2025

In functional buildings and top-quality residential buildings, the Busch-Watchdog can optimize motion detection by precisely setting brightness, temperature and twilight values.

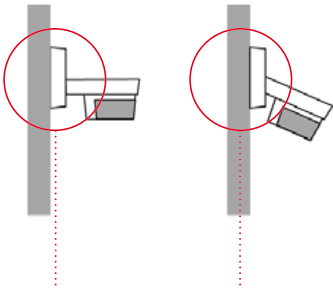
The Watchdog. For everyone.

Perspectives

Three mounting options create maximum freedom for any architecture: Single-point mount, ceiling mount, corner mount. The stable design ensures precisely defined detection ranges and consistently clean switching in the long term.

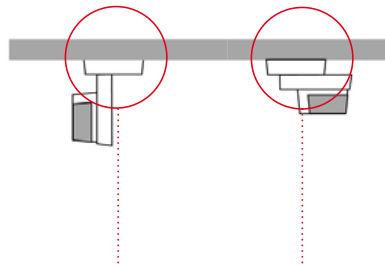


Single-point mounting



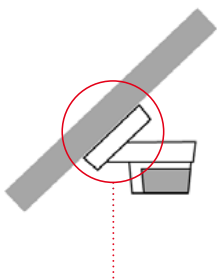
Balanced wall mounting.

If a building is located on a hill or a slope, you can easily optimize the coverage area: The Busch-Watchdog PRO is mounted using a stylish matching bracket which you can precisely adjust to the topography.



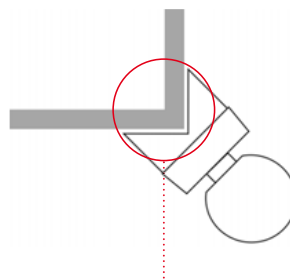
Simplified ceiling installation.

The Busch-Watchdog PRO can be mounted directly on the ceiling without the need for any additional components. The pivot enables precise adjustment to accommodate a wide range of installation options: from the small canopy over a front door to a large warehouse.



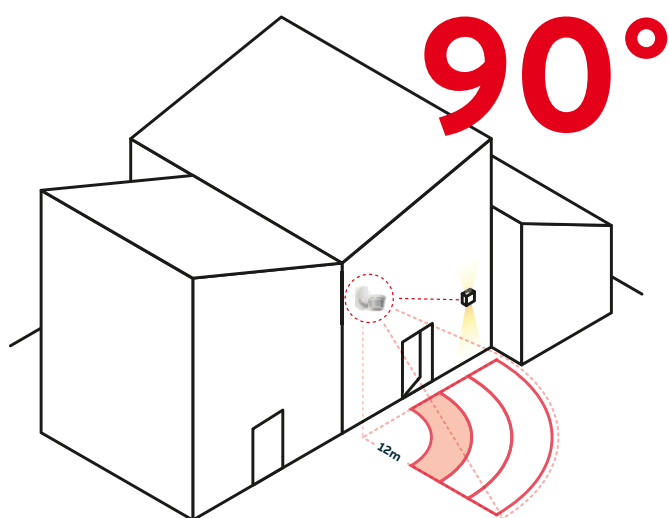
Flexible angled mounting.

Certain types of architecture come with special requirements. The Busch-Watchdog can also be mounted on diagonal surfaces and still be precisely aligned: it provides variability for all types of pitched roofs.



Comprehensive corner mounting.

The Busch-Watchdog PRO 280° detects surfaces in two directions, providing detail for two façade areas and for surrounding areas. The perfectly fitting corner bracket is seamlessly integrated into the design: aesthetically appealing technology for seamless sensitivity.

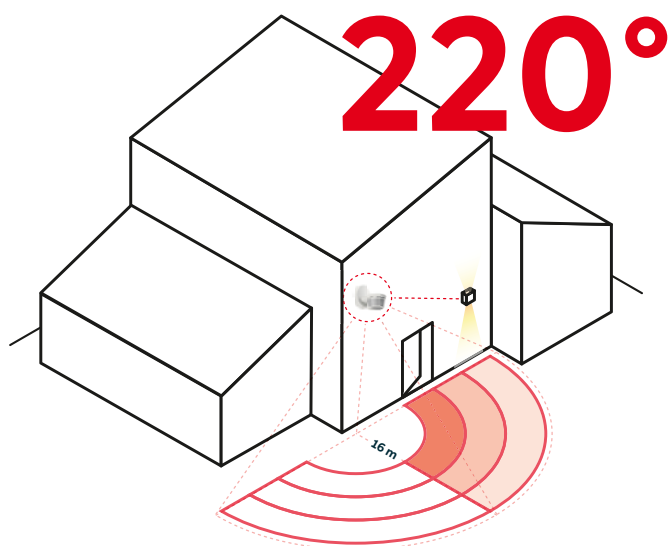


Busch-Watchdog PRO

Precise, definable, appropriate - the perfect solution for townhouses.

Versatile coverage zone:

- ✓ frontal up to 16 m
- ✓ can be reduced horizontally to 8.5m
- ✓ can be reduced by changing the angle or via the app
- ✓ with clear coverage indication
- ✓ with fast switching relay

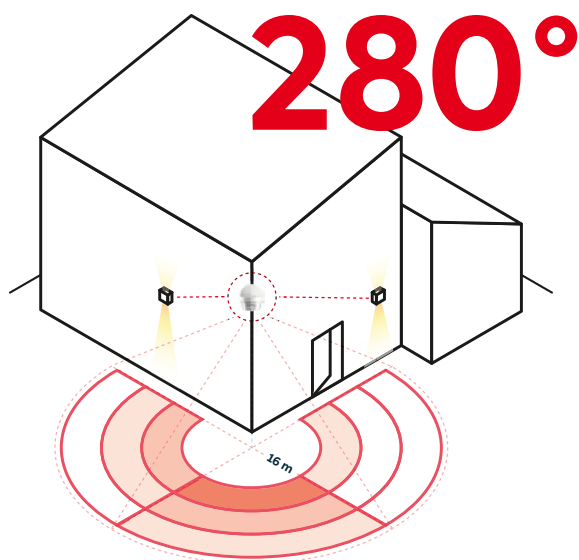


Busch-Watchdog PRO 220° BT

Far-sighted, precise, responsive - the ideal solution for larger buildings.

Versatile coverage zone:

- ✓ radial up to 16 m
- ✓ horizontal up to 32 m
- ✓ plus sensitive rear field coverage
- ✓ with clear coverage indication
- ✓ with fast switching relay



Busch-Watchdog PRO WI/f@h/KNX

Around corners, wide-ranging, clear-sighted - a first-class solution for angled architecture.

Versatile coverage zone:

- ✓ center up to 16 m
- ✓ in any direction up to 32 m
- ✓ plus sensitive rear field coverage
- ✓ with clear coverage indication
- ✓ with fast switching relay

The Watchdog. For everyone.

Styles

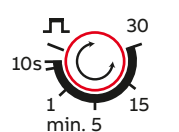
Consistently adapted to any installation situation: Featuring three pivots, the Busch-Watchdog PRO can be rotated in any direction for a precisely adjustable detection range. Go with a round or square base to blend in with the architecture, mount it on the wall or ceiling - as you see, it is a truly path-breaking design.



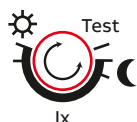
System according to plan

Perfect detection for different applications

The new Busch-Watchdog 180 flex movement detectors combine design, detection quality and flexibility in use.



Setting the switch-off delay pulse operation



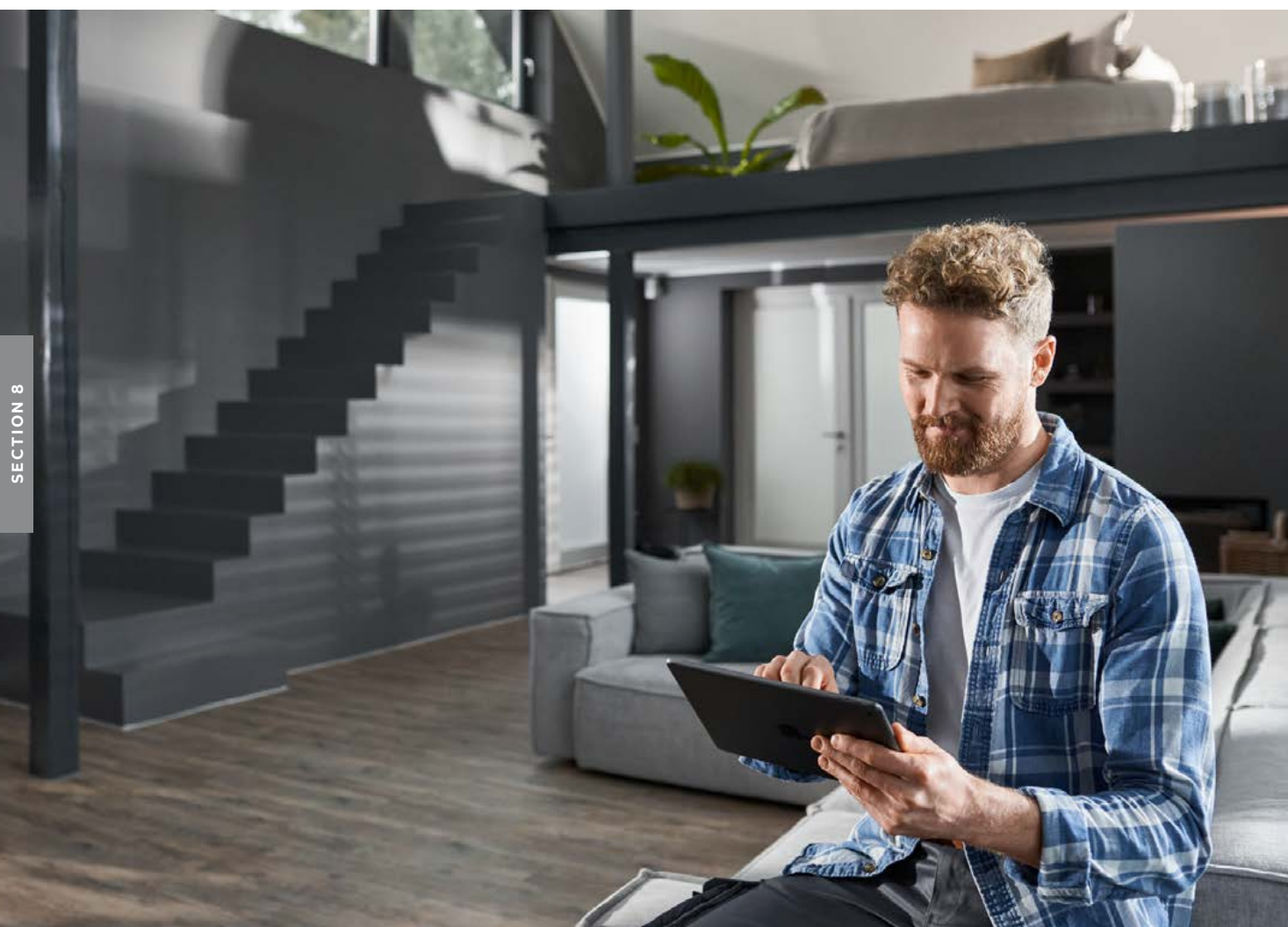
Setting the brightness-value threshold/test mode

180-degree lenses

The 180-degree lenses provide perfect detection for different applications. The new Busch-Watchdog sensors are compact and flat. As a result, the movement detectors blend in with the general appearance more discreetly.

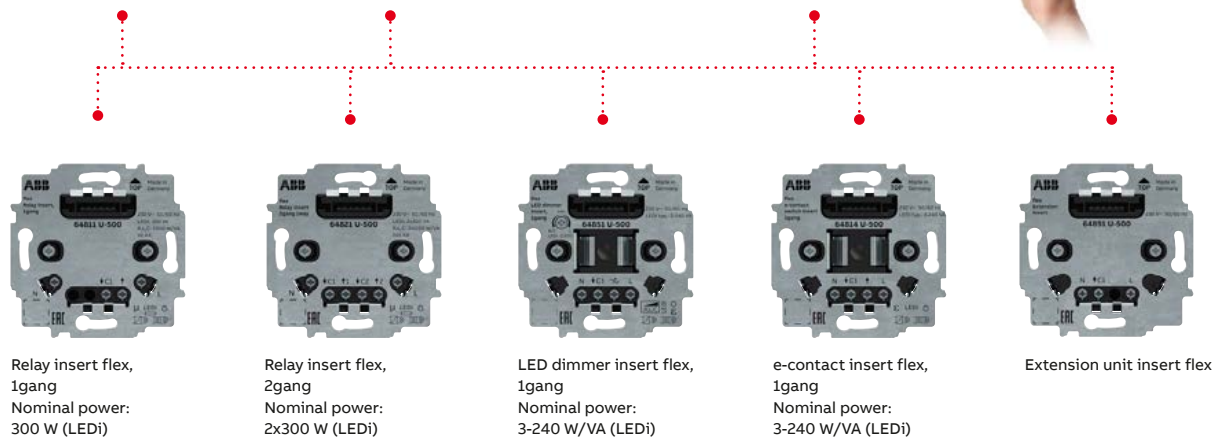
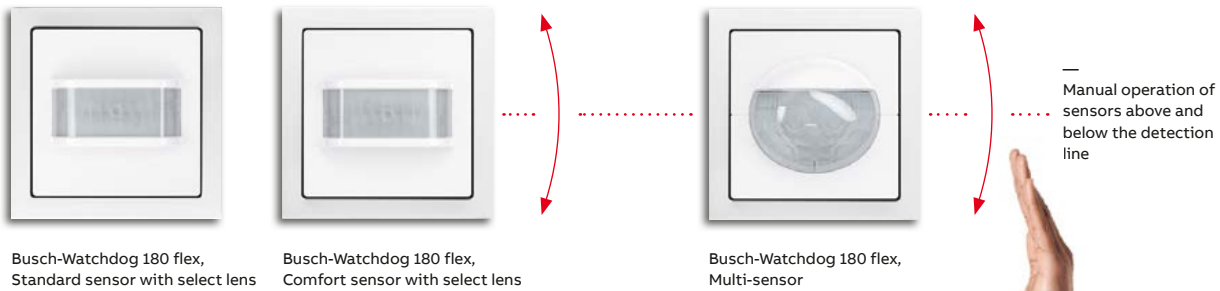
Comfort and multi-sensors

The comfort and multi-sensors can also be operated manually above and below the detection lens to switch the light on and off manually if required or to change the intensity of the light in conjunction with a dimmer insert. The operation is familiar and intuitive as with a switch/button operation.



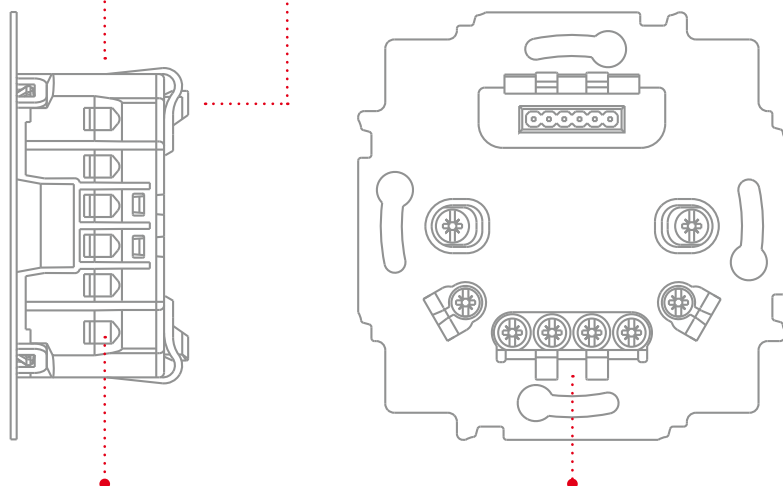
Greater comfort

In addition to an increased selection, the combinable inserts have been technically further developed and offer many new features for reliable and installation-friendly use.



Flat construction type
25.5 mm

Claw protection
for greater safety



Features at a glance

- Fine wire protection: Safe and fast connection of flexible and rigid wires
- Wallpaper compensation: Evens out small unevenness during mounting
- Uniform interface: Many flexible combinations are possible between sensor and actuator
- Extension unit: For operation via conventional push-buttons or connection of the extension unit insert flex

Movement detector

Perfect detection for different applications

Bathroom

Friendly and light in the morning, the atmosphere subdued in the evening and during the night - the demands on the light conditions could barely be more versatile. The Busch-Watchdog 180 flex comfort sensor with the select lense creates an individual light atmosphere with the combination of movement detector and dimmer, and so supports the natural biorhythm.

Stairway

It is the connecting link to our apartments. Although one only spends a brief period of time here, uncomplicated lighting is especially important in the stairway. The hands are full of shopping, in your mind you are already on the next floor - but thanks to the Busch-Watchdog 180 flex multi-sensor, there is no irritating switching of the light.

01 Busch-Watchdog 180 flex, comfort sensor with select lens

02 Busch-Watchdog 180 flex, multi-sensor

03 Busch-Watchdog 180 flex, standard with select lens

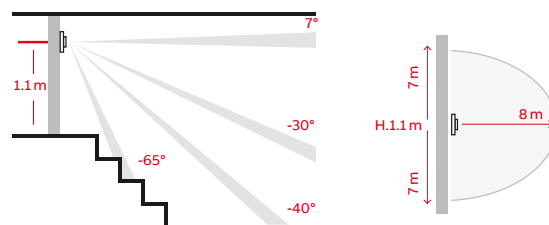
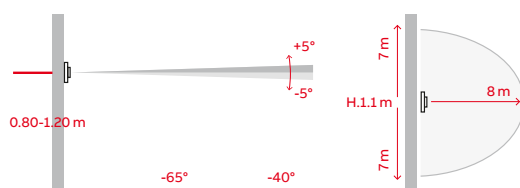


01



02

- Personalised light settings, adjusted to the time of day and the situation
- Dimming function supports the natural biorhythm and cares for sustainable power consumption
- Two detection lenses respond exclusively to movements that are created by people and not by inquisitive pets.



Detection range of multi-lens

- Individual light settings including dimming function
- Four detection levels cover the entire stairway
- Energy-saving effect due to automatic switch-on and switch-off.

Movement detector

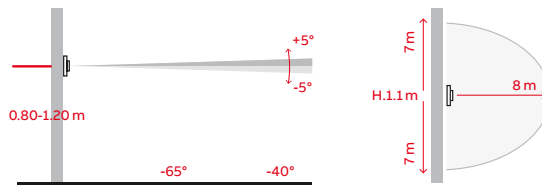
Perfect detection for different applications

Corridor

The first impression counts! That is why it is especially difficult to create a welcoming light atmosphere in a rather small corridor. In addition, the switched-on light can be quickly forgotten and turn into a power guzzler. The Busch-Watchdog 180 flex standard with select lense detects the entire corridor area and reacts with a combination of movement detector and lighting.



03



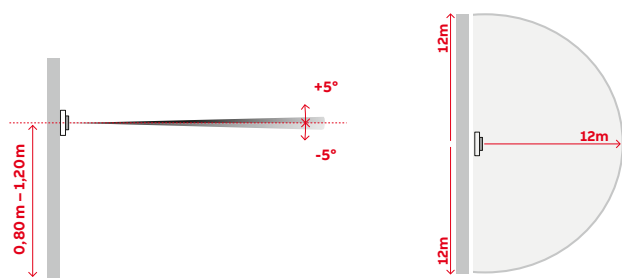
Detection range of select lense

- The horizontal detection level reacts exclusively to persons and not four-footed family members
- Inviting and individual light conditions that can be personalized in the corridor area with dimming function
- Reduction of energy consumption due to automatic switch-on and switch-off

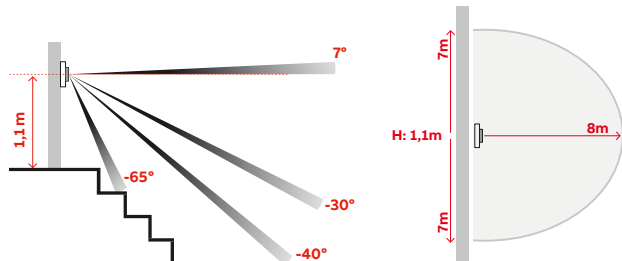
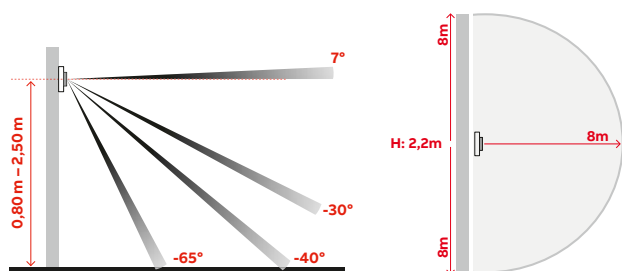
Movement detector

What kinds of detection are available?

The Busch-Watchdog 180 flex is available with two detection lenses. The **select lens** is suitable for corridors or rooms such as tea kitchens where horizontal detection is sufficient or desired, for example, because of pets. It is usually mounted at switch height.



The **multi-lens** offers further areas of application thanks to its four detection levels. For example, this lens can also be used in stairwells. Mounted in the hallway area at 2.2 m, this lens is even better protected from damage and vandalism.



Versatile combination possibilities!



**Busch-Watchdog 180 flex,
basic sensor with select lens**
Article no.: 64761-xxx



**Busch-Watchdog 180 flex,
basic sensor with select lens**
Article no.: 64762-xxx



**Busch-Watchdog 180 flex,
multi sensor**
Article no.: 64764-xxx



Relay insert flex, 1gang
Nominal power: 300 W (LEDi)
Article no.: 64811 U-500



Relay insert flex, 2gang
Nominal power: 2x300 W (LEDi)
Article no.: 64821 U-500



**LED dimmer insert
flex, 1gang**
Nominal power: 3-240 W/VA (LEDi)
Article no.: 64851 U-500



e-contact insert flex, 1gang
Nominal power: 3-240 W/VA (LEDi)
Article no.: 64814 U-500

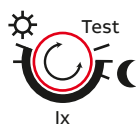


Extension unit insert flex
Article no.: 64891 U-500

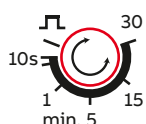
Movement detector

Reliable and uninterrupted surveillance.

Simple and uniform setting of the desired parameters on all Busch-Watchdog lenses on the rear side using two setting potentiometers.

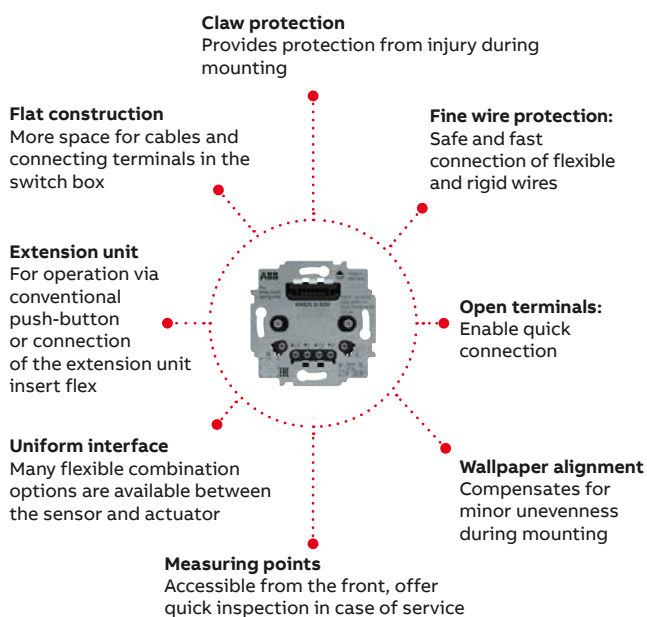


Switching threshold or test mode



Switch-off delay or pulse operation

In addition to the increased selection of combinable inserts, these inserts have been technically further developed and offer many new features for reliable and installation-friendly use.



How flexible should YOUR home be?

The new Busch-Watchdog 180 flex movement detectors combine design, detection quality and flexibility in use. The 180-degree lenses provide perfect detection for different applications. The construction size of the new Busch-Watchdog is compact and flat. As a result, the movement detectors blend in with the general appearance more discreetly.



Busch-Watchdog 180 flex, basic sensor



Busch-Watchdog 180 flex, comfort sensor



Busch-Watchdog 180 flex, multi sensor

The **comfort and multi sensors** can also be operated manually above and below the detection lens to switch the light on and off manually if required or to dim it in conjunction with a dimmer. The operation is familiar and intuitive as with a switch/button operation.



Busch-Watchdog 180 flex, comfort sensor



Busch-Watchdog 180 flex, multi sensor

Movement detector

Busch-Presence detectors.

Overview of Busch-Presence detectors.

Presence detectors 230 V AC

Compact devices for almost every application.



Busch-Watchdog Presence tech BasicLINE

For small offices, toilets, pass-through areas and dedicated applications.



Busch-Presence detectors KNX

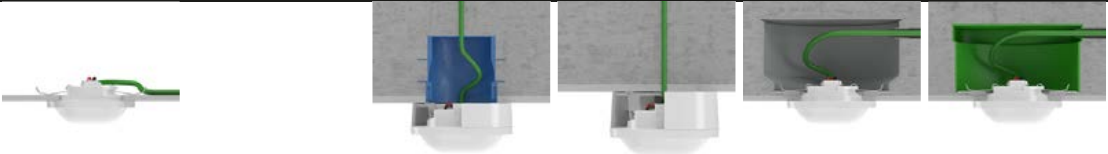
Expertise always works. Almost unnoticed.



Movement detector

Mounting situations. Ideal solutions for all wall types.

The Busch-Presence detectors can, depending on the model, be used for all popular mounting methods. Necessary accessories are to be obtained either from Busch-Jaeger/ABB or corresponding third-party suppliers.

230 V						
						
KNX						
						
Mounting situation	Suspended ceiling	Suspended ceiling with hollow wall box	Flush-mounted installation box VDE	Surface mounted	In-situ concrete	Precast concrete slabs
Notes	Ø 68 mm drill hole diameter	Ø 68 mm drill hole diameter			Mounting via special concrete installation boxes	Mounting via special concrete installation boxes
Necessary accessories	Suspended ceiling with hollow wall box		KNX: Intermediate ring 6131/38	Surface-mounting box 6883-...-500 or Surface-mounting box 6888 KNX: Surface-mounting box 6131/39	E.g. Kaiser HaloX®-O housing: 1290-40 with front part 1281-01 or 1281-61	E.g. Kaiser HaloX-P housing with mineral fibre plate 1291-22
 Busch-Watchdog						
 Presence tech BasicLINE mini	■	–	–	–	■	–
 Busch-Watchdog Presence tech BasicLINE	■	■	■	–	■	■
 Busch-Watchdog Presence tech BasicLINE Corridor	■	■	■	■	■	■
 Busch-Presence detector flex sensors	–	■	■	■	■	■
 Busch-Presence detectors 230 V	■	–	–	–	■	■
 Busch-Presence detector KNX	■	–	■	■	■	■
 Busch-Presence detector mini KNX	■	–	■	■	■	■

Movement detector

ABB Watchdog Remote control.

The generation of ABB presence detectors 230 V AC with integrated Bluetooth interface can be remotely controlled and parameterised via a smartphone or tablet APP.

For example the following functions are adjustable:

NOTE: The Busch-Presence detector flex WL sensors will be controlled by the Busch- free@home app.

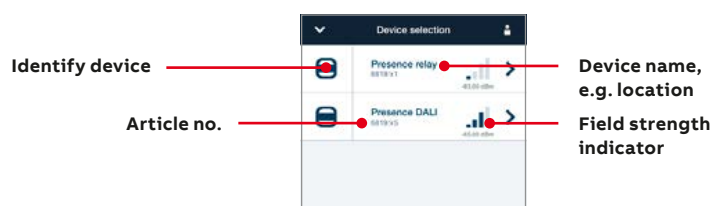
01 Selection of the presence detector to be controlled, via the device list with field strength display and fast identification push button.

02 Direct switching and dimming of the connected load

03 Energy monitor (rough overview of energy cost with / without presence detectors)

04 Sensitivity of sensors

05 test mode



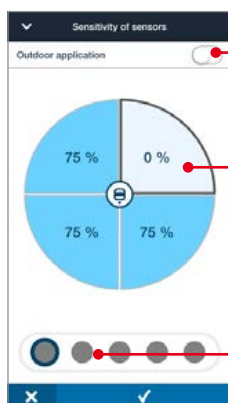
01



02



03

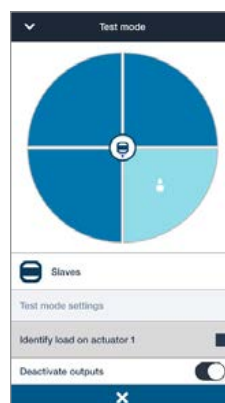


04

Outdoor mounting,
e.g. under canopy

4 PIR sensors
in 4 quadrants
with different
sensitivities

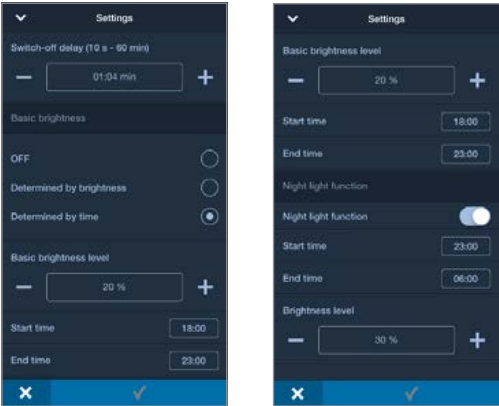
Set sensitivity



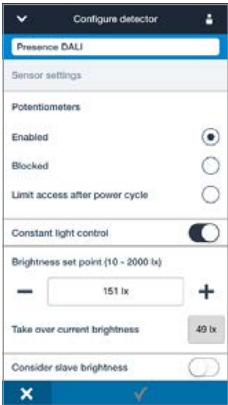
05



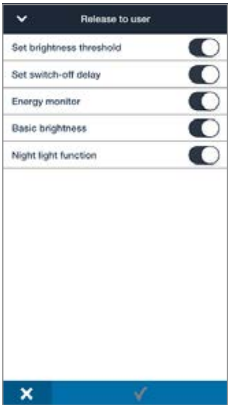
- 06 Activation of presence simulation (if you are not at home) / basic brightness and nightlight
- 07 Set device (Bluetooth) name and device parameters
- 08 Release specific functions to user



06



07



08



Furse® - Earthing, lightning and surge protection

253	Introduction
254	Conductors
256	Conductor network
258	Earth bonds and clamps
259	Earth electrodes
261	Earth bars
263	Electronic systems protection - Surge Protective Devices (SPDs)



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Introduction

Lightning protection standard IEC/BS EN 62305

Within the field of lightning protection, developing a thorough understanding of IEC/BS EN 62305 is fundamental to ensure the design and implementation of safe systems against risk from lightning.

—
* We hope you find this guide useful and should you require assistance or advice, please do not hesitate to contact ABB.

This guide has been developed therefore to improve understanding of lightning protection and to help industry professionals, including M&E engineers, lightning protection designers and contractors, to navigate through the principles of IEC/BS EN 62305 in a practical and pragmatic manner, considering the diverse and often complicated recommendations therein.

In conjunction with our other Furse technical material, such as CPD accredited seminars and risk assessment software, this guide is presented with the following aims:

- To briefly explain the theory and phenomenon of lightning
- To précis, and simplify where possible the four parts of IEC/BS EN 62305
- To provide an introduction to the transient overvoltage protection requirements defined within IEC60364 / BS 7671
- To outline the importance of lightning protection component performance to IEC 62561, which follows on from former product standard, BS EN 50164

All standards are open to individual interpretation. This guide therefore reflects Furse's own views on good practice and it is not the intention that these views replace, in any way, the recommendations contained in the IEC/BS EN 62305 series, but rather to be read in conjunction with the standard.

Development of the lightning protection standard

The International Electrotechnical Commission (IEC) is the body responsible for the recommendations and maintenance of IEC 62305, through its technical committee, TC 81. This committee includes many member countries including the UK. Additionally, the UK, as part of the European Union, is one of the 28 countries with membership of CEN (Comité Européen de Normalisation), which focuses on ensuring harmonisation of design and application standards throughout its member states.

The electrical arm of CEN is CENELEC (CLC), and it is this committee which is responsible for compiling and producing standards relevant to lightning protection. In 2006, a four-part suite of standards on lightning protection was compiled by CENELEC under the reference number 62305 series.

The UK's **British Standards Institution (BSI)** adopted this CENELEC standard as its own British Standard (with minor amendments), and introduced BS EN 62305 in August 2006. A second edition of each of the four parts of BS EN 62305 was introduced in 2011/2012.

British Standard, BS EN 62305, is a national standard developed from the international standard, IEC 62305 in agreement with TC/81 and CENELEC. This approach has been followed by many other countries worldwide, which have introduced their own national standards, and therefore the content of this guide shall be equally of interest to those working in the lightning protection industry in those countries.

Scope of IEC/BS EN 62305

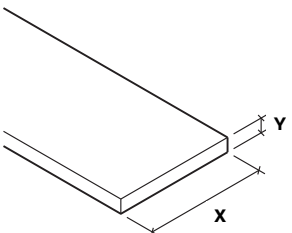
IEC/BS EN 62305 considers lightning protection in much greater depth and detail than historic standards, such as BS 6651. Additionally, in two key areas, Part 2: Risk management and Part 4: Electrical and electronic systems within structures, it is radically different:

- **Part 2:** presents risk management in much greater detail and complexity and defines a single risk assessment process for protection against physical damage to structures, life hazard, and protection of electronic systems
- **Part 4:** is now a key part of the core IEC/BS EN 62305 standard with implementation driven by Part 2

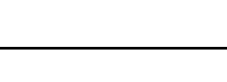
Conductors

Bare conductors, hard drawn and tinned conductors

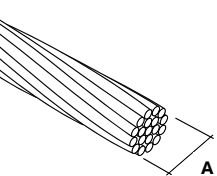
Bare copper tape

	Part no.	Conductor size (mm)
	TC005	12.5 x 1.5
	TC010	12.5 x 3
	TC015	20 x 1.5
	TC020	20 x 3
	TC020/100	20 x 3
	TC026-FU	25 x 2
	TC030	25 x 3
	TC030/50	25 x 3
	TC030-UL	1" x 1/8"
	TC035	25 x 4
	TC040	25 x 6
	TC042	30 x 3
	TC044	30 x 4
	TC043-FU	30 x 5
	TC045	31 x 3
	TC048	31.5 x 4
	TC050	31 x 6
	TC055	38 x 3
	TC060-FU	38 x 5
	TC065	38 x 6
	TC067	40 x 3
	TC066	40 x 4
	TC071	40 x 5
	TC068	40 x 6
	TC070	50 x 3
	TC075	50 x 4
	TC078	50 x 5
	TC080	50 x 6
	TC090	50 x 7
	TC092	50 x 8
	TC093	75 x 6
	TC094	50 x 10
	TC096	60 x 10
	TC098	80 x 6
TC099	100 x 6	

Bare aluminium tape

	Part no.	Conductor size (mm)
	TA005	12.5 x 1.5
	TA020	20 x 3
	TA030	25 x 3
	TA040	30 x 3
	TA042	25 x 6
	TA068	40 x 6
	TA080	50 x 6

Bare stranded copper cable

	Part no.	Cross sectional area (mm ²)
	Soft drawn stranded copper cable	
	CB016	16
	CB025	25
	CB035	35
	CB050-FU	50
	CB070	70
	CB095	95
	CB120-FU	120
	CB150-FU	150
	CB185	185
	CB240	240
	CB300-FU	300
	CB400-FU	400
	Hard drawn stranded copper cable	
	CB071	70

Bare & tinned solid circular

	Part no.	Diameter (mm)
	Copper conductor	
	CD035	Ø 8
	Aluminium conductor	
	CD080	Ø 8
	Tinned copper conductor	
	CD235	Ø 8

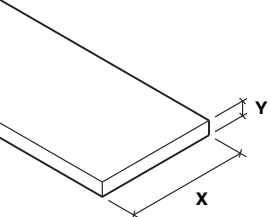
Hard drawn copper bar

	Part no.	Overall nominal size (mm)
	BA205	25 x 3
	BA210	25 x 6
	BA225	38 x 6
	BA230	50 x 6
	BA235	50 x 10
	BA240	75 x 6
	BA250-FU	100 x 6

Conductors

PVC and LSOH covered conductors

PVC covered copper tape

	Part no.	Conductor size (mm)	Colour range
	TC100-FU	12.5 x 1.5	Black 
	TC105-FU	25 x 3	Black 
	TC105/50	25 x 3	Black 
	TC110	25 x 3	Green 
	TC110/50	25 x 3	Green 
	TC115-FU	25 x 3	Grey 
	TC115/50	25 x 3	Grey 
	TC116-FU	25 x 3	Dark grey 
	TC116/25	25 x 3	Dark grey 
	TC120-FU	25 x 3	Stone 
	TC120/50	25 x 3	Stone 
	TC125-FU	25 x 3	White 
	TC125/50	25 x 3	White 
	TC130	25 x 3	Brown 
	TC130/50	25 x 3	Brown 
	TC140-FU	25 x 6	Green 
	TC145	50 x 6	Green 

Green & yellow PVC covered copper tape

	Part no.	Conductor size (mm)
	TC111-FU	25 x 3
	TC111/50	25 x 3

Green LSOH covered copper tape

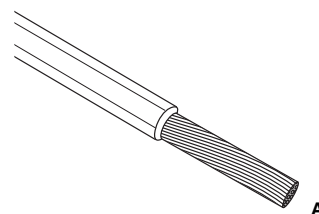
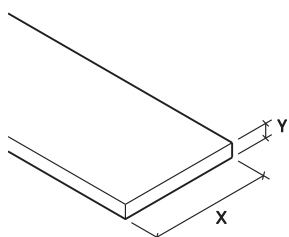
	Part no.	Conductor size (mm)
	TC910	25 x 3
	TC910/50	25 x 3
	TC940	25 x 6
	TC980	50 x 6

PVC covered aluminium tape

	Part no.	Conductor size (mm)	Colour range
	TA105	25 x 3	Black 
	TA110	25 x 3	Green 
	TA115	25 x 3	Grey 
	TA120	25 x 3	Stone 
	TA125	25 x 3	White 
	TA130	25 x 3	Brown 
	TA140	25 x 6	Green 

Green & yellow PVC insulated stranded copper cable

	Part no.	Cross-sectional area (mm ²)
	CC016	16
	CC025	25
	CC035	35
	CC050	50
	CC070	70
	CC095	95
	CC120-FU	120
	CC150-FU	150
	CC185	185
	CC240	240
	CC300	300
	CC400-FU	400



Conductor network

Conductor clips & clamps

Tape clip

Part no.	Conductor width (mm)	Conductor thickness (mm)
For use with bare copper		
CP205	20	3
CP210	25	3-4
CP220	25	5-6
CP230	30-32	3-4
CP235	30-32	5-6.5
CP240	38-40	3-4
CP245	38-40	5-6.5
CP255	50	3-4
CP260	50	5-6.5
For use with PVC covered copper		
CP215	25	3-4
CP225	25	6
CP265	50	6
For use with lead covered copper		
CP305	25	3
For use with bare aluminium		
CP105	20	3
CP110	25	3-4
CP125	50	6
For use with PVC covered aluminium		
CP115	25	3
CP130	50	6

Pressed tape clip

Part no.	Conductor size (mm)
For use with bare copper	
CP510	20 x 3
CP515	25 x 3
For use with bare aluminium	
CP405	20 x 3
CP410	25 x 3
CP415	25 x 6
For use with PVC covered tape	
CP517	25 x 3

Non-metallic tape clip

Part no.	Conductor size (mm)	Colour
For use with bare tape		
CP005	20 x 3	Brown
CP010	20 x 3	Grey
CP015	25 x 3	Brown
CP020	25 x 3	Grey
CP065	50 x 6	Brown
For use with PVC covered tape		
CP025	25 x 3	Brown
CP030	25 x 3	Black
CP033	25 x 3	Dark grey
CP035	25 x 3	Green
CP040	25 x 3	Grey
CP045	25 x 3	Stone
CP050	25 x 3	White

Square tape clamp

Part no.	Conductor size (mm)	Conductor material
CT105-H	25 x 3	Copper
CT110-H	25 x 6	Copper
CT115-H	50 x 6	Copper
CT005-H	25 x 3	Aluminium
CT010	25 x 6	Aluminium

Cable to tape square clamp

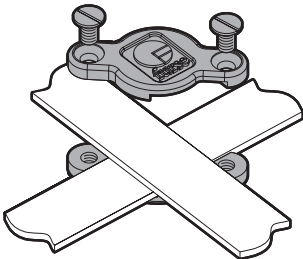
Part no.	Conductor size	Conductor material
CT125-FU	25 x 3 mm to 50 mm ²	Copper
CT130-FU	25 x 3 mm to 70 mm ²	Copper
CT135-FU	25 x 3 mm to 95 mm ²	Copper

Conductor network

Conductor clamps

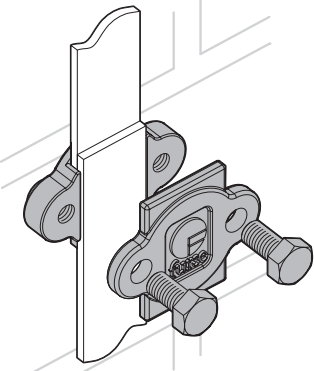
Crossover tape clamp

	Part no. Conductor	Conductor size (mm)	Conductor material
	CX105-H	25 x 3	Copper
	CX005-H	25 x 3	Aluminium



Test / Junction clamp

	Part no.	Conductor size (mm)	Conductor material
	CN105-H	26 x 8	Copper
	CN005	26 x 8	Aluminium

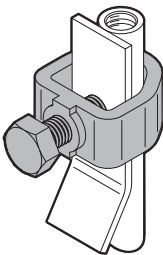


Earth bonds and clamps

Mechanical clamps

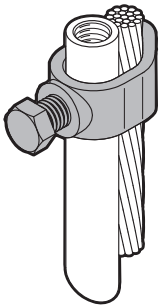
Rod to tape clamp (type A)

	Part no.	Nominal rod diameter		Max. conductor (mm)
		(in)	(mm)	
	CR105	Ø ½	Ø 12.7	26 x 12
		Ø ½	Ø 16	26 x 12
		Ø ¾	Ø 20	26 x 10
	CR108	Ø ⅝	Ø 16	30 x 2
		Ø ¾	Ø 20	30 x 2
	CR110	Ø ⅝	Ø 16	40 x 12
	CR115	Ø ⅝	Ø 16	51 x 8
	CR125	Ø ¾	Ø 20	51 x 12
	CR130	Ø ½	Ø 12.7	26 x 20
		Ø ⅝	Ø 16	26 x 18
		Ø ¾	Ø 20	26 x 10
		Ø 1	Ø 25	26 x 10



Rod to cable clamp (type G)

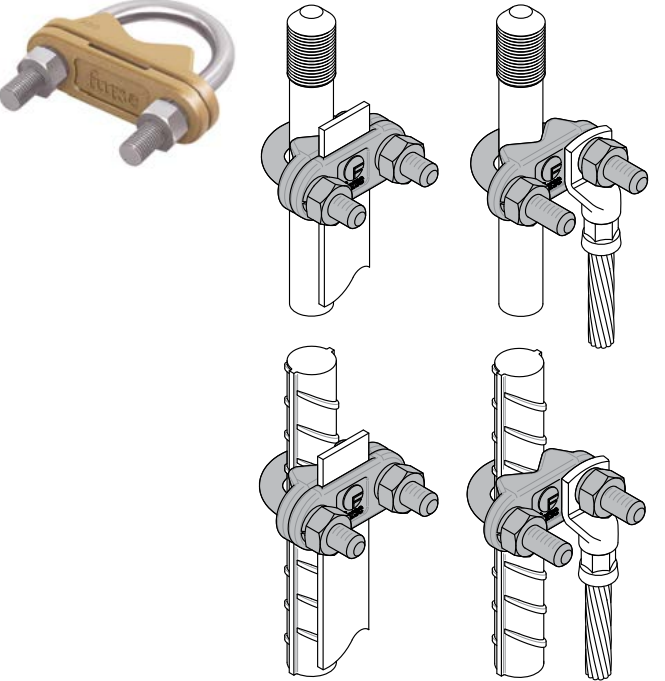
	Part no.	Nominal rod diameter		Max. conductor (mm²)
		(in)	(mm²)	
	CR505	Ø ⅝	Ø 9.5	6-35
	CR510-FU	Ø ½	Ø 12.7	16-50
	CR515	Ø ⅝	Ø 16	16-70
	CR520	Ø ¾	Ø 20	35-95
	CR525	Ø 1	Ø 25	70-150



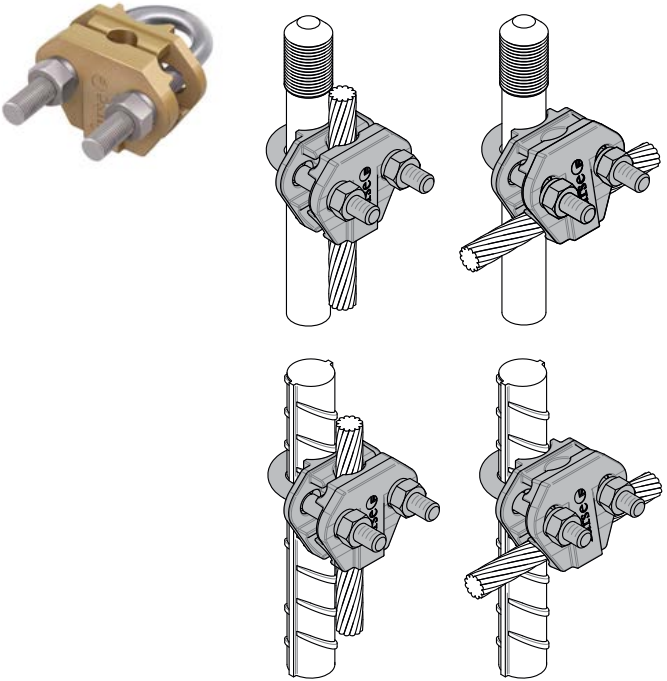
Earth bonds and clamps

Mechanical clamps

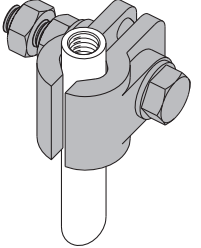
‘U’ bolt rod clamp (type E)

	Part no.	Nominal rod/rebar diameter (mm)		Tape width (mm)
	CR305	Ø 14 - 25		–
	CR320	Ø 14 - 25		25
	CR325	Ø 26 - 40		–
	CR326	Ø 26 - 40		25
	CR330	Ø 41 - 50		–
				

‘U’ bolt rod clamp (type GUV)

	Part no.	Nominal rod/rebar diameter (mm)		Conductor range (mm²)
	CR700	Ø 12 - 20		16-70
	CR705	Ø 12 - 20		70-150
	CR710	Ø 25		16-70
	CR740	Ø 12 - 27		185-300
	CR750	Ø 25		70-150
	CR750	Ø 25		150-300
				

Rod to cable clamp (type B)

	Part no.	Nominal rod diameter		Rod type
		(in)	(mm)	
	CR205	Ø 3/8	Ø 9.5	Copperbond
	CR215	Ø 5/8	Ø 16	Copperbond
	CR220	Ø 5/8	Ø 15	Solid copper
	CR225	Ø 3/4	Ø 20	Copperbond
	CR230	Ø 3/4	Ø 20	Solid copper
				

B bond

	Part no.	Max tape width (mm)		Conductor material
	BN105	26		Copper
	BN005	26		Aluminium
	BN113	31		Copper
	BN114	40		Copper
	BN117	50		Copper

Earth electrodes

Earth rod and earth rod seal

Threaded copperbond earth rod



Part no.	Nominal diameter (in)	Length (mm)
RB105	Ø ½	1,200
RB110	Ø ½	1,500
RB115	Ø ½	1,800
RB125	Ø ½	2,400
RB205-FU	Ø ⅝	1,200
RB210	Ø ⅝	1,500
RB215	Ø ⅝	1,800
RB220-FU	Ø ⅝	2,100
RB225	Ø ⅝	2,400
RB235	Ø ⅝	3,000
RB305	Ø ¾	1,200
RB310	Ø ¾	1,500
RB315	Ø ¾	1,800
RB320-FU	Ø ¾	2,100
RB325	Ø ¾	2,400
RB335	Ø ¾	3,000

Fittings (threaded)



Part no.	Type
CG170	½" Coupling
CG270	⅝" Coupling
CG370	¾" Coupling
ST100	½" Driving stud
ST200	⅝" Driving stud
ST300	¾" Driving stud

Earth rod seal



Part no.	Type
Earth rod seal assembly	
ES300	Earth rod seal and membrane seal
Earth rod seal pack	
ES300-12	Seal pack for ½" (Ø 12.7 mm) Copperbond rod
ES300-58	Seal pack for ⅝" (Ø 14.2 mm) Copperbond rod
ES300-34	Seal pack for ¾" (Ø 17.2 mm) Copperbond rod
ES300-15	Seal pack for Ø 15 mm solid copper rod
ES300-16	Seal pack for Ø 16 mm stainless steel rod
ES300-20	Seal pack for Ø 20 mm solid copper rod
Earth rod seal tube	
ES310-03	Seal tube, 300 mm length
ES310-05	Seal tube, 500 mm length
ES310-10	Seal tube, 1,000 mm length
ES310-15	Seal tube, 1,500 mm length
ES310-20	Seal tube, 2,000 mm length
ES310-30	Seal tube, 3,000 mm length
Accessory spanner set	
ES320	Membrane seal torque spanner set

Earth electrodes

Inspection pits, plate, lattice, backfill materials

FurseCEM® conductive aggregate

	Order Code	Description	Weight (kg)
	CM035	FurseCEM®	25kg
	CM040	FurseCEM® Premix*	25kg
	CM045	FurseCEM® Low Density	25kg
	CM050	FurseCEM® Low Density Premix*	25kg

Concrete inspection pit

	Order Code	Description
	PT005	Concrete inspection pit
	Accessories	
	PT006	5 hole earth bar
	PT007	7 hole earth bar

Bentonite moisture retaining clay

	Order Code	Description	Weight (kg)
	CM015	Bentonite powder	25kg
	CM020	Bentonite granules	25kg

Earth plate (solid copper)

	Order Code	Size (mm)
	PE005	600 x 600 x 1.5
	PE015	900 x 900 x 1.5
	PE010	600 x 600 x 3
	PE020	900 x 900 x 3

Lightweight inspection pit

	Order Code	Description
	PT205	Lightweight inspection pit with grey polymer lid
	PT004	5 hole earth bar
Accessories for polymer lid		
	AK005	6 mm Allen key
Accessories for concrete lid		
	JH100	M8 x 100 mm long mild steel 'J' bolt lifting hook
	AS100	M8 x 60 stainless steel Allen caphead screw (2 per lid)

Earth mat (lattice copper)

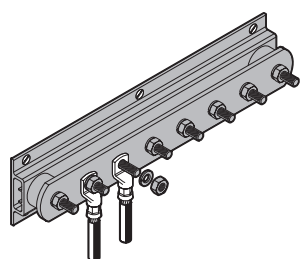
	Order Code	Size (mm)
	PE110	600 x 600 x 3
	PE120	900 x 900 x 3

Earth bonds and clamps

Earth bars

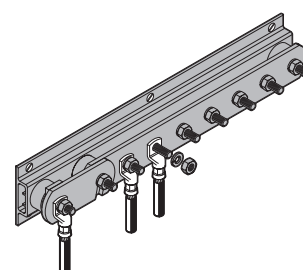
Earth bar

	Part no.	Description	Length (mm)
	Copper earth bar		
	LK245-6	6 way	400
	LK245-8	8 way	500
	LK245-10	10 way	650
	LK245-12	12 way	750
	LK245-14	14 way	850
	LK245-16	16 way	950
	LK245-18	18 way	1,050
	LK245-20	20 way	1,200
	LK245-22	22 way	1,300
	LK245-24	24 way	1,400
	LK245-26	26 way	1,500
	Tinned copper earth bar		
	LK245-6-T	6 way	400
	LK245-8-T	8 way	500
	LK245-10-T	10 way	650
	LK245-12-T	12 way	750
	LK245-14-T	14 way	850
	LK245-16-T	16 way	950
	LK245-18-T	18 way	1,050
	LK245-20-T	20 way	1,200
	LK245-22-T	22 way	1,300
	LK245-24-T	24 way	1,400
	LK245-26-T	26 way	1,500
	Earth Bar with stainless steel fixings		
	Copper earth bar		
	LK245-6SS	6 way	400
	LK245-8SS	8 way	500
	LK245-10SS	10 way	650
	LK245-12SS	12 way	750
	Tinned copper earth bar		
	LK245-6TSS	6 way	400
	LK245-8TSS	8 way	500
	LK245-10TSS	10 way	650
	LK245-12TSS	12 way	750



Earth bar with single disconnecting link

	Part no.	Description	Length (mm)
	Copper earth bar		
	LK243-6	6 way	475
	LK243-8	8 way	575
	LK243-10	10 way	725
	LK243-12	12 way	825
	LK243-14	14 way	925
	LK243-16	16 way	1,025
	LK243-18	18 way	1,125
	LK243-20	20 way	1,275
	LK243-22	22 way	1,375
	LK243-24	24 way	1,475
	LK243-26	26 way	1,575
	Tinned copper earth bar		
	LK243-6-T	6 way	475
	LK243-8-T	8 way	575
	LK243-10-T	10 way	725
	LK243-12-T	12 way	825
	LK243-14-T	14 way	925
	LK243-16-T	16 way	1,025
	LK243-18-T	18 way	1,125
	LK243-20-T	20 way	1,275
	LK243-22-T	22 way	1,375
	LK243-24-T	24 way	1,475
	LK243-26-T	26 way	1,575
	Earth Bar with stainless steel fixings and single disconnecting link		
	Copper earth bar		
	LK243-6SS	6 way	475
	LK243-8SS	8 way	575
	LK243-10SS	10 way	725
	LK243-12SS	12 way	825
	Tinned copper earth bar		
	LK243-6TSS	6 way	475
	LK243-8TSS	8 way	575
	LK243-10TSS	10 way	725
	LK243-12TSS	12 way	825

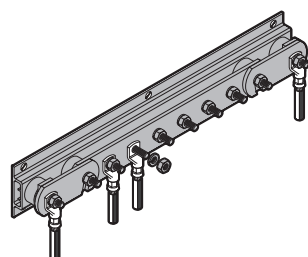


Earth bonds and clamps

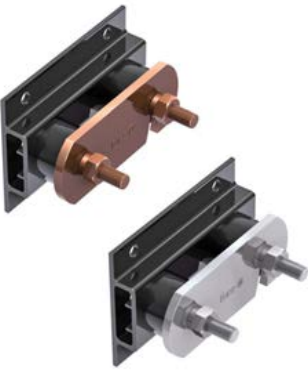
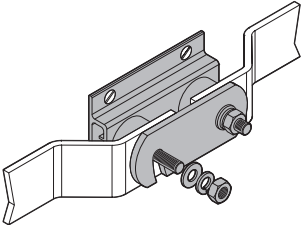
Earth bars

Earth bar with twin disconnecting link

	Part no.	Description	Length (mm)
	Copper earth bar		
	LK207-6	6 way	550
	LK207-8	8 way	650
	LK207-10	10 way	800
	LK207-12	12 way	900
	LK207-14	14 way	1,000
	LK207-16	16 way	1,100
	LK207-18	18 way	1,200
	LK207-20	20 way	1,350
	LK207-22	22 way	1,450
	LK207-24	24 way	1,550
	LK207-26	26 way	1,650
	LK207-28	28 way	1,800
	LK207-30	30 way	1,900
	Tinned copper earth bar		
	LK207-6-T	6 way	550
	LK207-8-T	8 way	650
	LK207-10-T	10 way	800
	LK207-12-T	12 way	900
	LK207-14-T	14 way	1,000
	LK207-16-T	16 way	1,100
	LK207-18-T	18 way	1,200
	LK207-20-T	20 way	1,350
	LK207-22-T	22 way	1,450
	LK207-24-T	24 way	1,550
	LK207-26-T	26 way	1,650
	LK207-28-T	28 way	1,800
	LK207-30-T	30 way	1,900
	Earth Bar with stainless steel fixings and twin disconnecting links		
	Copper earth bar		
	LK207-6SS	8 way	550
	LK207-8SS	10 way	650
	LK207-10SS	12 way	800
	LK207-12SS	14 way	900
	Tinned copper earth bar		
	LK207-6TSS	6 way	550
	LK207-8TSS	8 way	650
	LK207-10TSS	10 way	800
	LK207-12TSS	12 way	900



Earth bar accessories

	Part no.	Description
	Copper earth bar	
	LK004	Swan-neck link
	LK205	Disconnecting link
	Tinned copper earth bar	
	LK004-T	Swan-neck link
	LK205-T	Disconnecting link

Electronic systems protection

Surge protection devices (SPDs) for mains power supplies

Mains supplies - equipotential bonding

	Part no.		Description
	ESP 415T1/25/TNS		ESP Type 1 power SPD for 3 Phase 400V, 25kA 10/350, 4 modes
	ESP 415T1/25/TNC		ESP Type 1 power SPD for 3 Phase 400V, 25kA 10/350, 3 modes
	ESP 415T1/25/TT	ESP Type 1 power SPD for 3 Phase 400V, 25kA (L-N) + 100kA (N-E) 10/350, 3+1 modes	
	ESP 415T1/12.5/TNS		ESP Type 1 power SPD for 3 Phase 400V, 12.5kA 10/350, 4 modes
	ESP 415T1/12.5/TNC		ESP Type 1 power SPD for 3 Phase 400V, 12.5kA 10/350, 3 modes
	ESP 415T1/12.5/TT	ESP Type 1 power SPD for 3 Phase 400V, 12.5kA (L-N) + 50kA (N-E) 10/350, 3+1 modes	
	ESP 240T1/25/TNS		ESP Type 1 power SPD for 1 Phase 400V, 25kA 10/350, 2 modes
	ESP 240T1/25/TNC		ESP Type 1 power SPD for 1 Phase 400V, 25kA 10/350, 1 mode
	ESP 240T1/25/TT	ESP Type 1 power SPD for 1 Phase 400V, 25kA (L-N) + 100kA (N-E) 10/350, 1+1 modes	
	ESP 415T2/50/TNS		ESP Type 2 power SPD for 3 Phase 400V, 50kA 8/20, 4 modes
	ESP 415T2/50/TNC		ESP Type 2 power SPD for 3 Phase 400V, 50kA 8/20, 3 modes
	ESP 415T2/50/TT	ESP Type 2 power SPD for 3 Phase 400V, 50kA (L-N) + 65kA (N-E) 8/20, 3+1 modes	
	ESP 240T2/50/TNS		ESP Type 2 power SPD for 1 Phase 400V, 50kA 8/20, 2 modes
	ESP 240T2/50/TNC		ESP Type 2 power SPD for 1 Phase 400V, 50kA 8/20, 1 mode
	ESP 240T2/50/TT	ESP Type 2 power SPD for 1 Phase 400V, 50kA (L-N) + 65kA (N-E) 8/20, 1+1 modes	

Mains supplies - DIN housing

	Part no.		Description
	ESP 240 D1	Enhanced Type 1+2+3 Full Mode power SPD for 240V Single Phase supplies, Din Rail mounted	
	ESP 415 D1	Enhanced Type 1+2+3 Full Mode power SPD for 415V 3 Phase supplies, Din Rail mounted	
	Supplied with remote indication display		
	ESP 415 D1R	Enhanced Type 1+2+3 Full Mode power SPD for 3 Phase 415V supplies, LED status indication on remote display, Din Rail mounting	
	ESP RLA HD-4	4 Metre display lead for ESP D1R Series	

Mains supplies (extra high maximum surge currents)

	Part no.		Description
	ESP 415 M2	Enhanced Type 1+2+3 Full Mode power SPD for 3 Phase 415V supplies, high surge current rating	
	ESP 415 M4	Enhanced Type 1+2+3 Full Mode power SPD for 3 Phase 415V supplies, very high surge current rating	

Mains supplies & power distribution system

	Part no.		Description
	ESP 240 M1	Enhanced Type 1+2+3 power SPD for 240V Single Phase supplies	
	ESP 415 M1	Enhanced Type 1+2+3 power SPD for 415V 3 Phase supplies	

Sub-distribution board

	Part no.		Description
	ESP 240CD40	Compact Type 2+3 SPD for 240V Single Phase supplies	
	ESP415CD40	Compact Type 2+3 SPD for 415V Single Phase supplies	

Mains protectors for specific systems

	Part no.		Description
	ESP 240CDT2/40/TT	Compact Type 2 SPD for 240V residential consumer units	
	ESP 415CDT2/40/TT	Compact Type 2 SPD for 415V residential consumer units	

Electronic systems protection

Surge protection devices (SPDs) for mains power supplies

Mains supplies - with remote display indication

	Part no.	Description
	ESP 415 M1R	Enhanced Type 1+2+3 power SPD for 3 Phase 415V supplies, with remote indication display
	ESP 415 M1R	Enhanced Type 1+2+3 power SPD for 3 Phase 415V supplies, with remote indication display
	ESP 415 M4R	Enhanced Type 1+2+3 power SPD for 3 Phase 415V supplies, 25KA 10/350, with remote indication display
	ESP RLA-4	4 Metre display lead for ESP M1R, M2R and M4R Series

Mains supplies & fused connections up to 10 amps or up to 32 amps

	Part no.	Description
	Protectors rated at 10 amps or less	
	ESP 240D-10A	Enhanced mains SPD for 240V supplies up to 10A, with LED status indication
	ESP 240DS-10A	Enhanced mains SPD for 240V supplies up to 10A, with LED status indication and remote signal contact
	Protectors rated at 32 amps or less	
	ESP 240D-32A	Enhanced mains SPD for 240V supplies up to 32A, with LED status indication
	ESP 240DS-32A	Enhanced mains SPD for 240V supplies up to 32A, with LED status indication and remote signal contact

Mains supplies & fused connections up to 5 amps or up to 16 amps

	Part no.	Description
	Protectors rated at 5 amps or less	
	ESP 240-5A	Enhanced mains SPD for 240V supplies up to 5A
	ESP 240-5A/BX	Enhanced mains SPD for 240V supplies up to 5A, IP66 enclosure
	Protectors rated at 16 amps or less	
	ESP 240-16A	Enhanced mains SPD for 240V supplies up to 16A
	ESP 240-16A/BX	Enhanced mains SPD for 240V supplies up to 16A, IP66 enclosure
	ESP 240T3/SKT	Type 3 mains SPD for supplies up to 16A for installation behind socket outlets

Plug-in SPD for mains power supplies, with telephone and computer line protection options

	Part no.	Description
	ESP MC/19BK	Brackets and fixings for mounting ESP MC SPD Series To 19" racks
	ESP MC	Plug-in power SPD with filtering for 220-240V systems up to 13A with UK plug
	ESP MC/TN/RJ11	Plug-in power SPD with filtering for 220-240V systems up to 13A with UK plug and data SPD for telecom systems with RJ11 connection
	ESP MC/Cat-5e	Plug-in power SPD with filtering for 220-240V systems up to 13A with UK plug and data SPD for Cat-5E computer systems with RJ45 connection

Electronic systems protection

Surge protection devices (SPDs) for data, signal and telephone lines

Twisted pair data communication & signal lines (lower in-line resistance, higher current and higher bandwidth)



Part no.	Description
ESP 06E	Data SPD for 2-Wire signal lines up to 6V, 1.25A
ESP 15E	Data SPD for 2-Wire signal lines up to 15V, 1.25A
ESP 30E	Data SPD for 2-Wire signal lines up to 30V, 1.25A
ESP 50E	Data SPD for 2-Wire signal lines up to 50V, 1.25A
ESP 110E	Data SPD for 2-Wire signal lines up to 110V, 1.25A

Twisted pair data communication, signal & telecom lines - slim line, with removable protection module



Part no.	Description
ESP SLTN	Data SPD for 2-Wire telephone lines up to 296V (ringing voltage)
Slim line protectors with removable protection module, LED status indication and isolated screen	
ESP SL06L/I	Data SPD for 2-Wire signal lines up to 6V, 750mA
ESP SL15L/I	Data SPD for 2-Wire signal lines up to 15V, 750mA
ESP SL30L/I	Data SPD for 2-Wire signal lines up to 30V, 750mA
ESP SL50L/I	Data SPD for 2-Wire signal lines up to 50V, 750mA
ESP SL110L/I	Data SPD for 2-Wire signal lines up to 110V, 750mA
Slim line SPD for 4-20mA current loops with removable protection module, LED status indication and isolated screen	
ESP SL30L/4-20/I	Data SPD for 4-20mA signal lines up to 30V, 75mA

High density data, signal & telephone lines (/PT fast fit Push Terminal option)



Part no.	Description
ESP 06Q or ESP 06Q/PT	Data SPD for 8-Wire (4 pairs) 6V signal lines space saving design
ESP 15Q or ESP 15Q/PT	Data SPD for 8-Wire (4 pairs) 15V signal lines space saving design
ESP 30Q or ESP 30Q/PT	Data SPD for 8-Wire (4 pairs) 30V signal lines space saving design
ESP 50Q or ESP 50Q/PT	Data SPD for 8-Wire (4 pairs) 50V signal lines space saving design
ESP 110Q or ESP 110Q/PT	Data SPD for 8-Wire (4 pairs) 110V signal lines space saving design
ESP 180Q or ESP 180Q/PT	Data SPD for 8-Wire (4 pairs) 180V signal lines space saving design
ESP TNQ or ESP TNQ/PT	Data SPD for 4 twisted pair phone lines with a maximum (ringing) voltage of 296 volts

Three wire RTD applications



Part no.	Description
ESP RTD	Data SPD for three 3-Wire RTD systems
ESP SL RTD	Slim Line Data SPD for 3-Wire RTD systems
ESP RTDQ	Data SPD for three of 3-Wire RTD systems space saving design

RS485 & Fieldbus applications



Part no.	Description
ESP RS485	Data SPD for RS485 signalling systems
ESP SL RS485	Slim Line Data SPD for RS485 signal lines
ESP RS485Q ESP RS485Q/PT	Data SPD for 8-Wire (4 pairs) RS485 signal lines space saving design

Electronic systems protection

Surge protection devices (SPDs) for computer and telephone lines

Plug-in protectors for telephone & ISDN lines

	Part no.	Description
	ESP TN/JP	Data SPD for telephone line with BT UK connection
	ESP TN/RJ11-6/6	Data SPD for 6-Wire telephone line with RJ11 connection
	ESP ISDN/RJ45-8/8	Data SPD for 8-Wire ISDN telephone line, RJ45 connector
	ESP MC/TN/RJ11 Series	Power + Data SPD - UK 3 Pin plug sockets and RJ11 connection

PSTN & ISDN telephone lines with LSA-PLUS connections

	Part no.	Description
	ESP KE10	Earth connection bar for up to 10 of ESP KT1 data SPDs for LSA-PLUS PBX systems
	ESP KT1	Data SPD for one LSA-PLUS PBX phone line, use with ESP KE10 earth bar
	ESP K10T1	Data SPD for 10 LSA-PLUS PBX telephone lines

Computer networks up to Cat-6 cabling & PoE+

	Part no.	Description
	ESP Cat-6	Data SPD for Cat-6 1000 Base T computer networks, RJ45 connector
	ESP Cat-6/PoE	Data SPD for Cat-6 1000 Base T computer networks with Power over Ethernet, RJ45 connector
	ESP MC/Cat-5 Series	Power + Data SPD - UK 3 Pin plug sockets and RJ45 connection

Electronic systems protection

Surge protection devices (SPDs) for specific systems

Mains supplies - wind turbine (WT) power distribution systems

	Part no.	Description
	ESP 690/25/WT	Type 1+2 power SPD for wind turbine systems, 25kA 10/350
	ESP 690/12.5/WT	Type 1+2 power SPD for wind turbine systems, 12.5kA 10/350
	ESP CE7	Connection and earthing bar for use with 3 of ESP 690/12.5/WT protectors for TNC systems
	ESP CE9	Connection and earthing bar for use with 4 of ESP 690/12.5/WT protectors for TNS systems
	ESP CE10	Connection and earthing bar for use with 3 of ESP 690/25/WT protectors for TNC systems
	ESP CE13	Connection and earthing bar for use with 4 of ESP 690/25/WT protectors for TNS systems

DC photo-voltaic (PV) power distribution systems

	Part no.	Description
	ESP DC1100T1/12.5	Type 1+2 power SPD for 1100Vdc PV supplies, 12.5kA 10/350 surge current rating
	ESP DC1500T1/12.5	Type 1+2 power SPD for 1500Vdc PV supplies, 12.5kA 10/350 surge current rating
	ESP DC1100T2/40	Type 2 power SPD for 1100Vdc PV supplies, 40kA 8/20 surge current rating
	ESP DC1500T2/30	Type 2 power SPD for 1500Vdc PV supplies, 40kA 8/20 surge current rating

Coaxial cable TV (CATV) systems

	Part no.	Description
	ESP CATV/F	Data SPD for Cable TV 5-860Mhz with F Type connector
	ESP TV/F	Data SPD for TV 5-860Mhz with F Type connector
	ESP TV/EURO	Data SPD for TV 5-860Mhz with Euro-TV connector
	ESP MATV/F	Data SPD for main antenna TV MATV 5-2450Mhz with F Type connector
	ESP SMATV/F	Data SPD for satellite main antenna TV SMATV 860-2450Mhz with F Type connector

Closed circuit TV video lines

	Part no.	Description
	ESP CCTV/B	Data SPD for CCTV systems with BNC connection for Coax cable
	ESP CCTV/T	Data SPD for CCTV systems with twisted pair cables

Coaxial RF systems (for frequencies between DC and up to 3.5 GHz)

	Part no.	Description
	ESP RF/N	ESP RF Series data SPD, N bulkhead female (LINE) / N male (CLEAN) connectors
	ESP RF/DIN	ESP RF Series data SPD, 7/16 DIN bulkhead female (LINE) / 7/16 DIN male (CLEAN) connectors
	ESP RF/BNC	ESP RF Series data SPD, BNC bulkhead female (LINE) / BNC male (CLEAN) connectors
	ESP RF/TNC	ESP RF Series Data SPD, TNC bulkhead female (LINE) / TNC male (CLEAN) connectors
	ESP RF/SMA	ESP RF Series Data SPD, SMA bulkhead female (LINE) / SMA male (CLEAN) connectors

Electronic systems protection

Accessories

Weatherproof enclosures

	Part no.	Description
	WBX 2/G	IP66 Enclosure for 2 single stud ESP D/E/H data SPDs or ESP TN telecom SPD, grey lid
	WBX 3	IP67 Enclosure for 3 single stud data SPDs or ESP Single Phase M1 mains SPD, clear lid
	WBX 3/G	IP67 Enclosure for 3 single stud data SPDs, grey lid
	WBX 4	IP66 Enclosure for ESP 415 M1, ESP 208 M1 or ESP 480 M1 or 4 single stud ESP data/telecom
	WBX 4/GS	IP66 Enclosure for 4 single stud ESP data/telecom SPDs using CME4 earth bar, grey lid, security screws
	WBX 8	IP66 Enclosure for 8 single stud ESP data/telecom SPDs using CME8 earth bar, grey lid
	WBX 8/GS	IP66 Enclosure for 8 single stud ESP data/telecom SPDs using CME8 earth bar, grey lid, security screws
	WBX 16/2/G	IP56 Enclosure for 1 or 2 CME16 earth bars for mounting and enclosing up to 32 of ESP single stud data/telecom SPDs, grey lid
	WBX D4	IP65 Enclosure for 72mm DIN (4TE)
	WBX D8	IP65 Enclosure for 144mm DIN (8TE)
	WBX M2	IP67 Enclosure for ESP 415 M2 or ESP 480 M2, clear lid
	WBX M4	IP67 Enclosure for ESP 415 M2 or ESP 480 M2, clear lid
	WBX SLQ	IP66 Enclosure for up to 15 of ESP SL Series, or up to 6 of ESP Q Series, clear lid
	WBX SLQ/G	IP66 Enclosure for up to 15 of ESP SL Series, or up to 6 of ESP Q Series, grey lid

Metallic enclosures

	Part no.	MBX D4	MBX D8
	Dimensions (mm)		
	Length: – External	268	268
	Width: – External	134	208
	Depth: – External	104	104
	Fixing centres (mm):	201 x 66.5 (3 holes)	201 x 137 (3 holes)
	IP Rating:	IP20	IP20
	Temperature range:	-40 to +80°C	-40 to +80°C
	Product available width:	73.5mm (4TE)	146mm (8TE)

Combined mounting & earthing kits

	Part no.	Description
	CME 4	4 Hole combined mounting earthing kit
	CME 8	8 Hole combined mounting earthing kit
	CME 16	16 Hole combined mounting earthing kit
	CME 32	32 Hole combined mounting earthing kit

Commercial/ Industrial enclosures

270	IP65 SR2 enclosures
272	IP66 SRX enclosures
274	IP66 Gemini enclosures
276	Mistral 65 double insulated enclosures
279	ARIA universal polyester enclosures
280	APO polyester boxes



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

SR2 Enclosures

IP65 Sheet steel enclosures



Rapid selection table

Overall Dimensions			Enclosures with blind door + back plate		Kit for automation		Kit for distribution			
Height mm	Width mm	Depth mm	Enclosures with blind door + back plate	with glazed door*	Blind counter door	Back plate	No. vertical mod. H=185mm	No. DIN mod. per row	Total modules	DIN Supports
300	200	150	SRN3215K							
	300		SRN3315K							
	400		SRN3415K							
400	300	150	SRN4315K							
	300		SRN4320K							
	400	200	SRN4420K							
	600		SRN4620K							
500	300	200	SRN5320K							
	400		SRN5420K	SRN5420VK*	KC5040K	PF5040	2	14	28	KD5040K
	500		SRN5520K							
	400		SRN5425K	SRN5425VK*	KC5040K	PF5040	2	14	28	KD5040K
	400		SRN6420K	SRN6420VK*	KC6040K	PF6040	3	14	42	KD6040K
600	500	200	SRN6520K							
	600		SRN6620K							
	400		SRN6425K	SRN6425VK*	KC6040K	PF6040	3	14	42	KD6040K
	500	250	SRN6520K							
	600		SRN6625K							
	600	300	SRN6630K							
	500		SRN7520K	SRN7520VK*	KC7050K	PF7050				
800	500	250	SRN7525K	SRN7525VK*	KC7050K	PF7050				
	600		SRN8625K	SRN8625VK*	KC8060K	PF8060	4	25	100	KD8060K
	600	300	SRN8630K	SRN8630VK*	KC8060K	PF8060	4	25	100	KD8060K
	800		SRN8830K							
1000	600	300	SRN10625K	SRN10625VK*	KC1060K	PF1060	5	25	125	KD1060K
	600		SRN10630K	SRN10630VK*	KC1060K	PF1060	5	25	125	KD1060K
	800		SRN10830K	SRN10830VK*	KC1080K	PF1080	5	36	180	KD1080K
1200	600	300	SRN12630K	SRN12630VK*	KC1260K	PF1260	6	25	150	KD1260K
	800		SRN12830K	SRN12830VK*	KC1280K	PF1280	6	36	216	KD1280K
	800	400	SRN12840K							

* No mounting plate included.

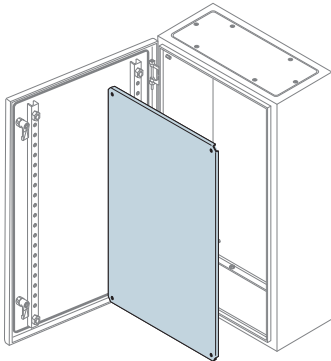


Technical characteristics

Conformity with Standard	IEC 62208, IEC 61439-1-2	
Degree of protection	IP65 (IEC 60529), UL Listed: UL 508A, NEMA: Types 1, 3R, 12	
Degree of mechanical strength	IK10 blind door IK09 glazed door (IEC 62262)	
Certifications	 	
Type of material	Metallic	
Paint colour	RAL7035 (orange peel)	
Installation site	Indoors	
Fixing method	floor/wall	
Normal service conditions - ambient temperature	from -5 to +40°C	
Operating climate (t°/Ur%)	constant	23°C/83% - 40°C/93%
	variable	23°C/98% - 40°C/98%

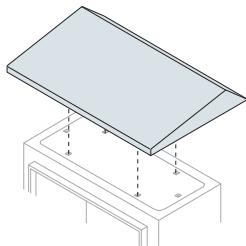
SR2 Enclosures

IP65 Sheet steel enclosures



Blind internal mounting plate

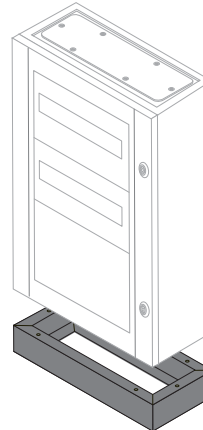
Dimensions (mm)		
H	W	Order Code
300	200	PF3020
300	300	PF3030
300	400	PF3040
400	300	PF4030
400	400	PF4040
400	600	PF4060
500	300	PF5030
500	400	PF5040
600	400	PF6040
600	600	PF6060
700	500	PF7050
800	600	PF8060
800	800	PF8080
1000	600	PF1060
1000	800	PF1080
1200	600	PF1260
1200	800	PF1280



Spray protection roof

Dimensions (mm)		
W	D	Order Code
200	150	TT2015K
300	150	TT3015K
400	150	TT4015K
300	200	TT3020K
400	200	TT4020K
500	200	TT5020K
600	200	TT6020K
400	250	TT4025K
500	250	TT5025K
600	250	TT6025K
600	300	TT6030K
800	300	TT8030K

ZA4020



GZ4020

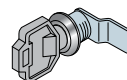


Accessories for stacking

Dimensions (mm)		
W	D	Order Code
IP65 gasket		
400	200	GZ4020
	250	GZ4025
600	200	GZ6020
	250	GZ6025
	300	GZ6030
800	300	GZ8030

Plinth

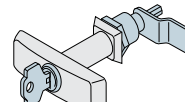
Dimensions (mm)			
W	D	H	Order Code
400	200	100	ZA4020
	250	100	ZA4025
600	250	100	ZA6025
	300	100	ZA6030
800	300	100	ZA8030



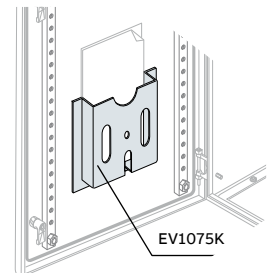
AA8001



AA8002



AA8003



EV1075K

Enclosure accessories

Description	Order Code
Document pocket	EV1075K
N.4 wall mounting brackets	AA1206
Double tongue 7mm lock with DIN 5mm plastic key	AA8001
Lock with Yale insert & key	AA8002
T handle with Yale insert and key	AA8003
Replacement hinge kit	AA1204

SRX Enclosures

IP66 Stainless steel enclosures



Rapid selection table

Overall Dimensions			Enclosures		Kit for automation	Kit for distribution				
Height mm	Width mm	Depth mm	Enclosures with blind door + back plate	with glazed door*	Blind counter door	Back plate	No. vertical mod. H=185mm	No. DIN mod. per row	Total modules	DIN Supports
300	200	150	SRN3215X			PF3020				
	400	150	SRN3415X			PF3040				
400	300	150	SRN4315X		KC4030X	PF4030				
		200	SRN4320X							
	400	200	SRN4420X			PF4040				
		200	SRN4620X							
500	400	200	SRN5420X	SRN5420VX*	KC5040X	PF5040	2	14	28	KD5040X
	500	200	SRN5520X			PF5050				
600	400	200	SRN6420X	SRN6420VX*	KC6040X	PF6040	3	14	42	KD6040X
		200	SRN6620X							
	600	300	SRN6630X			PF6060				
700	500	250	SRN7525X	SRN7525VX*	KC7050X	PF7050				
		200	SRN8620X							
	600	250		SRN8625VX*	KC8060X	PF8060	4	25	100	KD8060X
		300	SRN8630X					25	100	
1000	800	300	SRN8830X			PF8080				
		300	SRN10830X	SRN10830VX*						
1200	600	300	SRN12630X			PF1260	5	36	180	KD1080X
	800	300	SRN12830X							

* No mounting plate included.

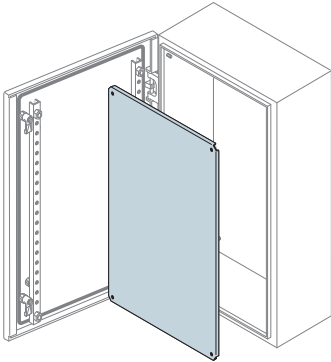


Technical characteristics

Conforms to	CEI EN 62208, IEC 61439-1-2
Degree of protection	IP66 (CEI EN 60529), UL Listed: UL 508A, NEMA: Types 1, 3R, 4, 4X, 12
Degree of mechanical protection	IK10 blind door IK09 glazed door (IEC 62262)
Certifications	
Type of material	AISI 304
Installation site	Indoors/outdoors
Fixing method	floor/wall
Normal service conditions - ambient temperature	from -5 to +55°C

SRX Enclosures

IP66 Stainless steel enclosures



Opaque internal mounting plate

20/10 thick galvanised sheet metal internal plate, complete with fixing with small parts supplied. Depth-adjustable using a special spacer kit (to be ordered separately).

Opaque internal mounting plate

Dimensions (mm)

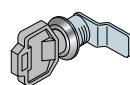
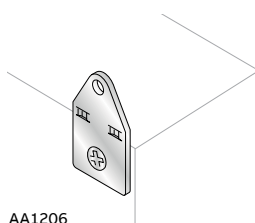
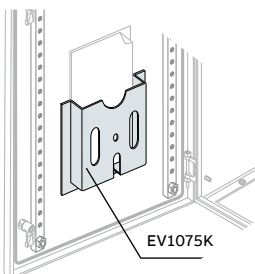
H	W	Order Code
300	200	PF3020
300	400	PF3040
400	300	PF4030
400	400	PF4040
400	600	PF4060
500	400	PF5040
500	500	PF5050
600	400	PF6040
600	600	PF6060
700	500	PF7050
800	600	PF8060
800	800	PF8080
1000	800	PF1080
1200	600	PF1260
1200	800	PF1280

Enclosure accessories

Description

Order Code

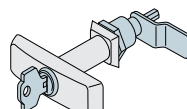
Document pocket	EV1075K
Wall mounting brackets (4 off)	AA1206
Double tongue 7mm lock with DIN 55mm plastic key	AA8001
Lock with Yale insert & key	AA8002
T handle with Yale insert and key	AA8003



AA8001



AA8002



AA8003

Gemini enclosures

IP66 thermoplastic enclosures

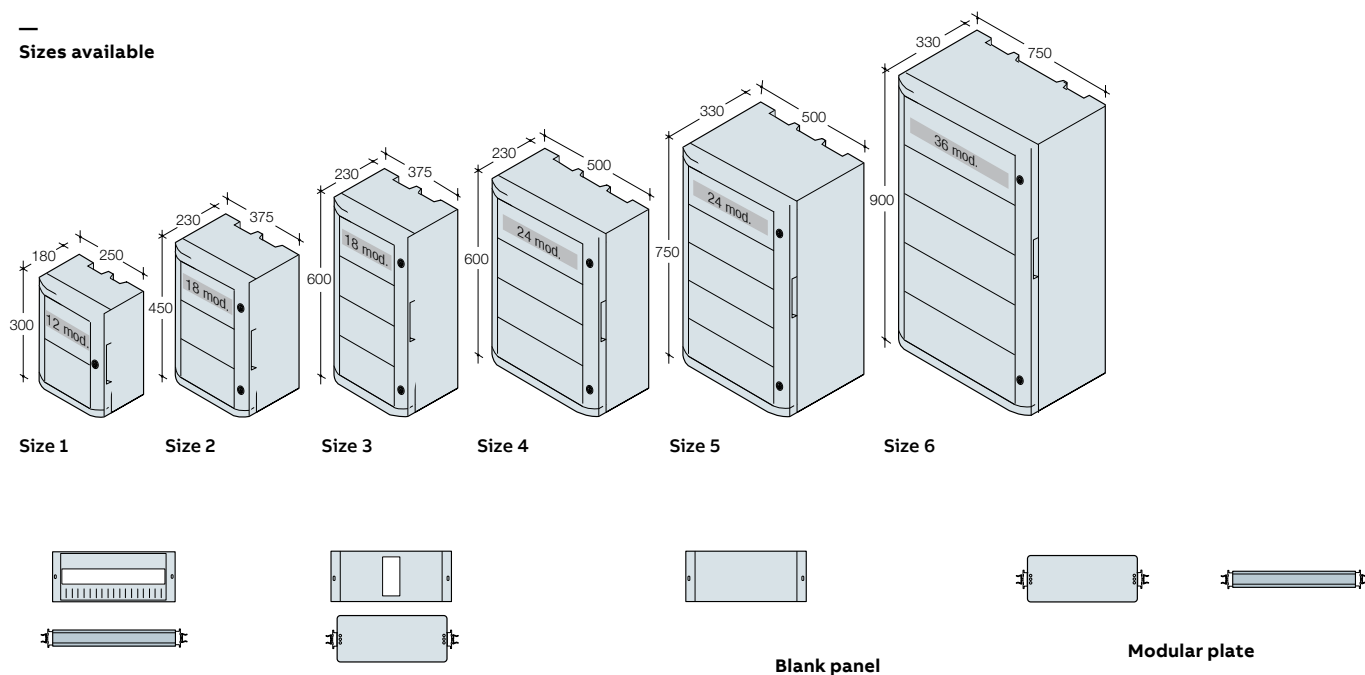


- Made of thermoplastic material, to which the co-injection moulding technique gives the same mechanical characteristics as polyester
- Extremely sturdy, with its rigid covering and expanded internal core
- IP66, IP30 with the door open afford a very high resistance to chemical and atmospheric agents
- Guarantees excellent performances even in severe operating conditions

Rapid selection table

Size	No. of vertical mod. H=150mm	No. of DIN modules installable	External Dimensions			Internal Dimensions			Complete switchboard door			Door		
			(H) mm	(W) mm	(D) mm	(H) mm	(W) mm	(D) mm	Transparent	Opaque	Box only	Transparent	Opaque	Uprights
1	2	24 (12x2)	400	335	210	300	250	180	1SL0211A00	1SL0201A00	1SL0221A00	1SL0241A00	1SL0231A00	1SL0283A00
2	3	54 (18x3)	550	460	260	450	375	230	1SL0212A00	1SL0202A00	1SL0222A00	1SL0242A00	1SL0232A00	1SL0284A00
3	4	72 (18x4)	700	460	260	600	375	230	1SL0213A00	1SL0203A00	1SL0223A00	1SL0243A00	1SL0233A00	1SL0285A00
4	4	96 (24x4)	700	590	260	600	500	230	1SL0214A00	1SL0204A00	1SL0224A00	1SL0244A00	1SL0234A00	1SL0285A00
5	5	120 (24x5)	855	590	360	750	500	330	1SL0215A00	1SL0205A00	1SL0225A00	1SL0245A00	1SL0235A00	1SL0286A00
6	6	216 (36x6)	1005	840	360	900	750	330	1SL0216A00	1SL0206A00	1SL0226A00	1SL0246A00	1SL0236A00	1SL0287A00

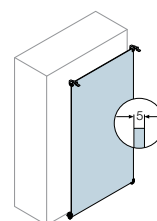
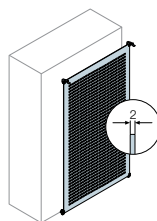
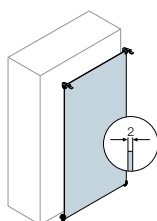
Sizes available



Size	DIN rail kit DIN rail+drilled panel		Kit for XTmax plate+drilled panel		1/2 mod. H=75mm	Blank panel		Modular plate		Blank panel DIN rail
	1 mod. H=150mm	1+1/2 mod. H=225mm	1 mod. H=150mm	2 mod. H=300mm		1 mod. H=150mm	2 mod. H=300mm	1 mod. H=150mm	2 mod. H=300mm	
1	1SL0307A00	—	—	—	1SL0318A00	1SL0324A00	1SL0330A00	1SL0296A00	—	1SL0290A00
2	1SL0308A00	1SL0313A00	1SL0373A00	1SL0376A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00	1SL0291A00
3	1SL0308A00	1SL0313A00	1SL0373A00	1SL0376A00	1SL0319A00	1SL0325A00	1SL0331A00	1SL0297A00	1SL0302A00	1SL0291A00
4	1SL0309A00	1SL0314A00	1SL0374A00	1SL0377A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00	1SL0292A00
5	1SL0309A00	1SL0314A00	1SL0374A00	1SL0377A00	1SL0320A00	1SL0326A00	1SL0332A00	1SL0298A00	1SL0303A00	1SL0292A00
6	1SL0310A00	1SL0315A00	1SL0375A00	1SL0378A00	1SL0321A00	1SL0327A00	1SL0333A00	1SL0299A00	1SL0304A00	1SL0293A00

Gemini switchboards

Assembly kits



Base plates

Size	Blank metal	Drilled metal	Insulating material
1	1SL0259A00	1SL0259A00	1SL0275A00
2	1SL0260A00	1SL0260A00	1SL0276A00
3	1SL0261A00	1SL0261A00	1SL0277A00
4	1SL0262A00	1SL0262A00	1SL0278A00
5	1SL0263A00	1SL0263A00	1SL0279A00
6	1SL0264A00	1SL0264A00	1SL0280A00

Locks

	Description	Order Code
	Lock with Yale Typed key	1SL0340A00
	Lock with triangular impression	1SL0341A00
	Lock with square impression	1SL0339A00
	Wall mounting brackets	1SL0342A00

Specifications

	Specifications
Protection	IP66 (IEC EN 60529) Class II insulation
Strength	Thermoplastic material moulded in co-injection Resistance to abnormal heat and fire up to a temperature of 750 °C (IEC EN 60695-2-11) IK10 (IEC EN 50102) degree of resistance to impacts Protection against chemical and atmospheric agents (water, saline solutions, acids, basic agents, mineral oils, UV rays) Operating temperature -25 °C ÷ +100 °C
Performance	Rated service voltage up to 1000 V Rated insulating DC voltage up to 1000 V Rated insulating AC voltage up to 1500 V
Flexibility of use	6 sizes from 335x400x210 mm to 840x1005x360 mm (WxHxD, external dimensions) DIN 24 to 216 modules
Installation	Snap-on mounting of all components in compliance with safety Standards
Quality and environment	Compliance with CEI EN 62208 international reference Standard, qualification for the requirements of CEI EN 61439-1 Standard, IMQ mark according to EN 62208 Standard. 100% recyclable EN 60068-2-52 resistance to marine environments EN60068-2-5 resistance direct sun exposure UL Listed: UL508A, UL50, UL50E Nema: Types 1, 3R, 4, 4X, 12

Mistral 65

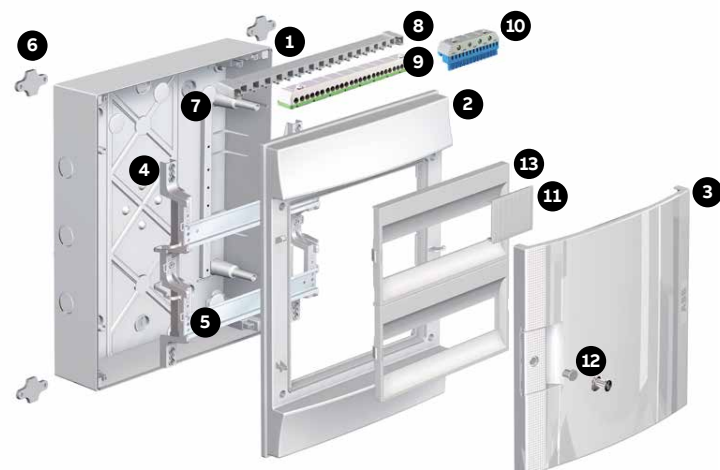
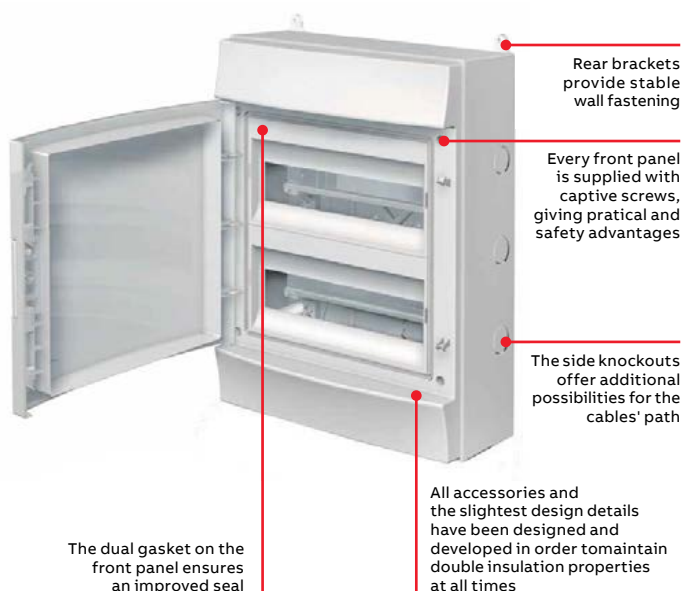
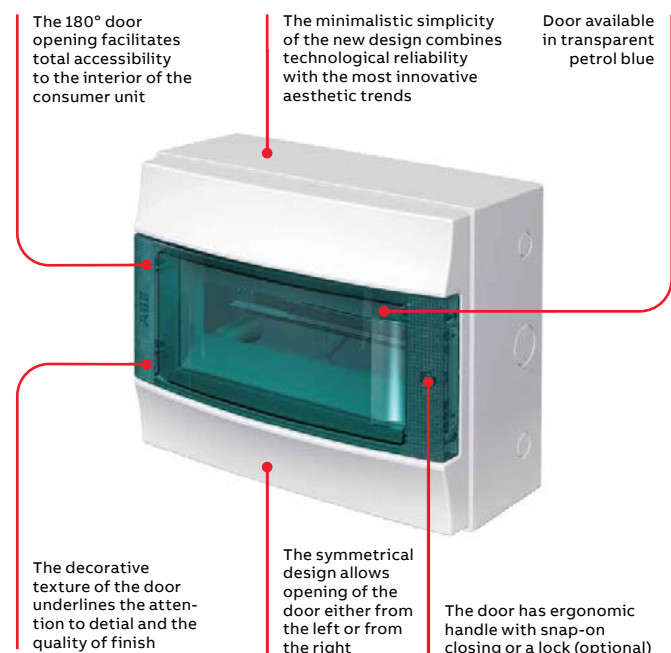
A versatile range suitable for every application

Efficiency, safety, integration: the new Mistral 65 series rests on the strength's which have consolidated ABB's image over the years for its expertise and reliability in the area of products for protection, control, monitoring, measurement, safety and energy efficiency.



Designed for harsh environments

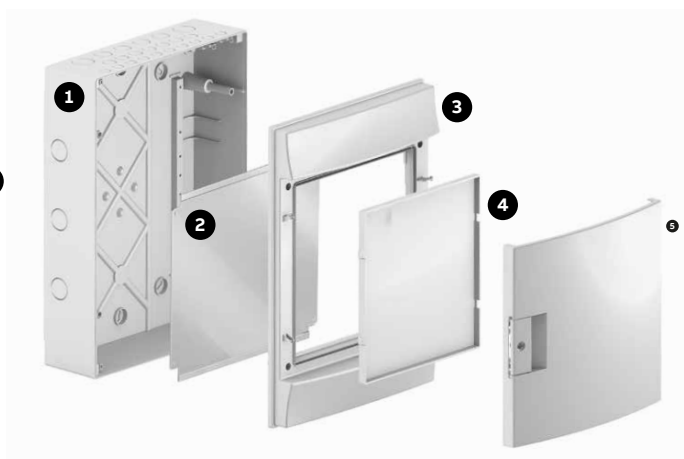
- The Mistral 65 consumer units come with IP65 protection degree, providing a dust-tight resistance (6) and jetting water resistance (5)
- Mechanical strength of Mistral 65 consumer units are IK09 (10joule) and IK08 for the precut parts
- Transparent or opaque doors which open up to 180°, and a choice of between 4 and 72 modules



1. Box for wall mounting
2. Reversible front panel
3. RAL 7035 opaque door
4. Fixed support for DIN rail
5. DIN rail

6. Wall fastening brackets
7. Plugs, protection class II
8. Terminal block carriers
9. Terminal blocks with screw coupling
10. Terminal blocks with screwless coupling

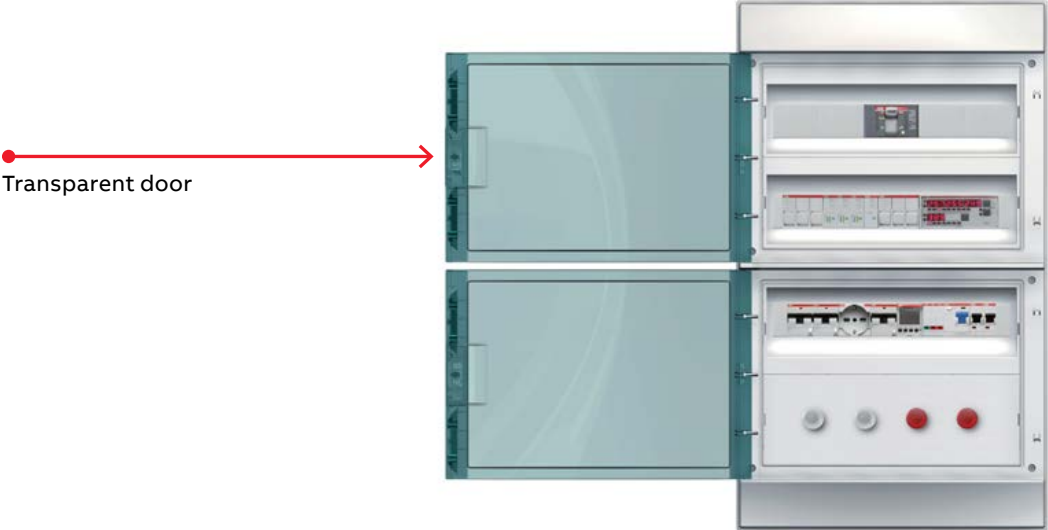
11. Module cover
12. Finish or closure elements (lock and key optional)
13. Reversible panels



1. Box for wall mounting
2. Metal plate
3. Reversible front panel
4. Inner door
5. RAL 7035 opaque door

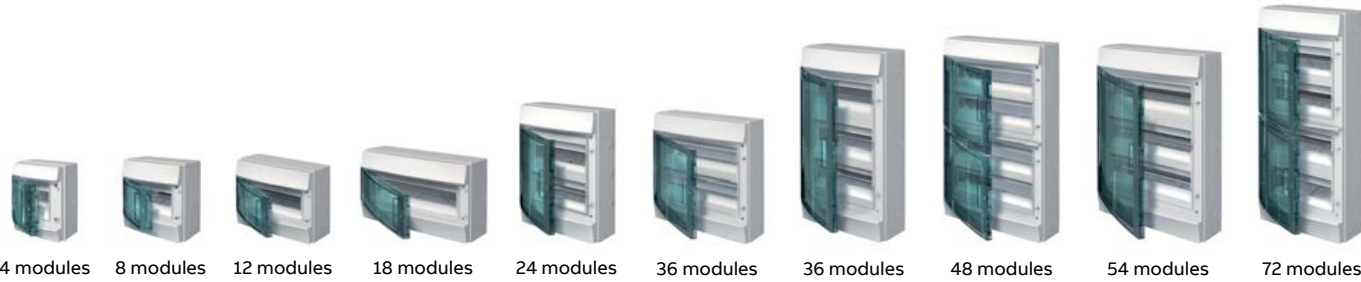
Mistral 65

Double insulated enclosures



Enclosure with transparent door

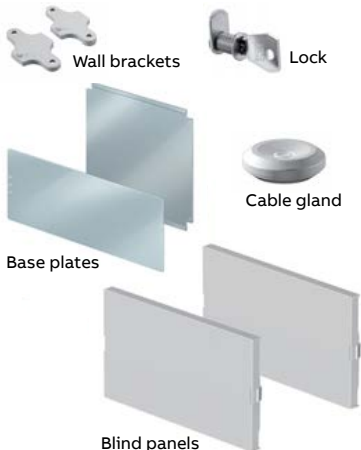
	Rows	Dimensions (mm)			Order Code
		Width	Height	Depth	
650 Transparent door 4M	1	152	202	117	1SL1200A00
650 Transparent door 8M	1	232	250	154	1SL1201A00
650 Transparent door 12M	1	320	250	155	1SL1202A00
650 Transparent door 18M	1	430	250	155	1SL1203A00
650 Transparent door 24M	2	320	435	155	1SL1204A00
650 Transparent door 36M 2F	2	430	435	155	1SL1205A00
650 Transparent door 36M 3F	3	320	600	155	1SL1206A00
650 Transparent door 48M	4	320	735	155	1SL1207A00
650 Transparent door 54M	3	430	600	155	1SL1208A00
650 Transparent door 72M	4	430	735	155	1SL1209A00



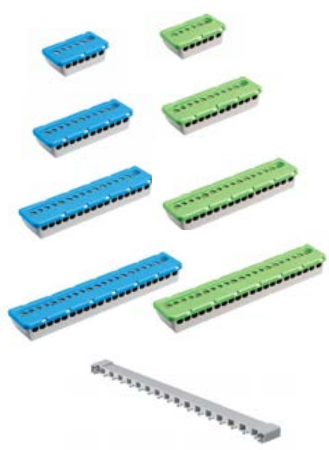
Mistral 65

Double insulated enclosures

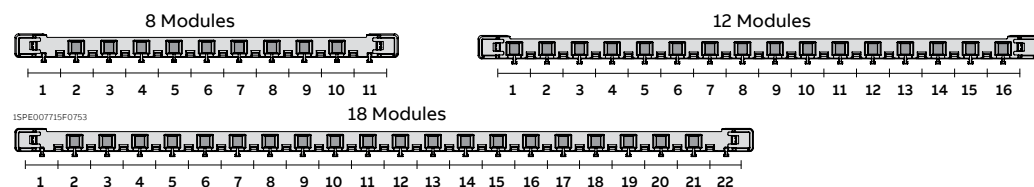
Accessories

		Order Code
	Wall fixing brackets (4 pcs) MISTRAL65	1SL1927A00
	Lock with key MISTRAL65	1SL1931A00
	Cable gland Ø 16	1SL1935A00
	Cable gland Ø 20	1SL1936A00
	Cable gland Ø 25	1SL1937A00
	Cable gland Ø 32	1SL1938A00
	Metal base plate 12M Mistral65	1SL1920A00
	Metal base plate 2x12M Mistral65	1SL1921A00
	Metal base plate 18M Mistral65	1SL1922A00
	Metal base plate 2x18M Mistral65	1SL1923A00
	Central blind panel 12M Mistral65	1SL1945A00
	Blind panel 12M Mistral65	1SL1946A00
	Central blind panel 18M Mistral65	1SL1947A00
	Blind panel 18M Mistral65	1SL1948A00

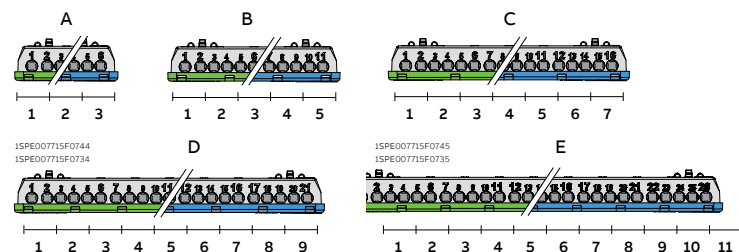
Terminal blocks

		Order Code
	Terminal block N 3*16mm ² +3*6mm ²	A 1SPE007715F0731
	Terminal block N 5*16mm ² +6*6mm ²	B 1SPE007715F0732
	Terminal block N 7*16mm ² +9*6mm ²	C 1SPE007715F0733
	Terminal block N 9*16mm ² +12*6mm ²	D 1SPE007715F0734
	Terminal block N 11*16mm ² +15*6mm ²	E 1SPE007715F0735
	Terminal block PE 3*16mm ² +3*6mm ²	A 1SPE007715F0741
	Terminal block PE 5*16mm ² +6*6mm ²	B 1SPE007715F0742
	Terminal block PE 7*16mm ² +9*6mm ²	C 1SPE007715F0743
	Terminal block PE 9*16mm ² +12*6mm ²	D 1SPE007715F0744
	Terminal block PE 11*16mm ² +15*6mm ²	E 1SPE007715F0745
	Terminal carrier, 8 modules	1SPE007715F0751
	Terminal carrier, 12 modules	1SPE007715F0752
	Terminal carrier, 18 modules	1SPE007715F0753

Terminal Carrier



Terminal Blocks



ARIA

Universal polyester enclosures



1. Monobloc base
2. Detachable door, left-hand or right-hand opening
3. No water stagnation on the seal
4. Mounting point in the door
5. Front plate:
 - polyester RAL 7035
 - hinged
 - detachable
 - stand-alone
 - sealable
 - quick installation
6. Interchangeable cylinders
7. Mounting frame:
 - removable
 - perforated
 - reinforced DIN rails
8. Integral hinges 180° pivoting door
9. Mounting plate:
 - metal
 - pertinax
 - perforated
10. Mounts directly onto the wall or via external mounting lugs made from stainless or synthetic material

Rapid selection table

Type	Rows / Modules		Internal system		Internal system full cover plate options		
	Rows	Total modules	Mounting frame	Solid front	DIN slots	Plate for individual modular plates	
ARIA 32	2	12	4TBA831030C0100	4TBA831028C0100	4TBA831029C0100	–	
ARIA 43	2	24	4TBA831041C0100	4TBA831039C0100	4TBA831040C0100	4TBA831790C0100	
ARIA 54	3	54	4TBA831057C0100	4TBA831055C0100	4TBA831056C0100	4TBA831791C0100	
ARIA 64	3	54	4TBA831070C0100	4TBA831068C0100	4TBA831069C0100	4TBA831792C0100	
ARIA 75	4	88	4TBA831086C0100	4TBA831084C0100	4TBA831085C0100	4TBA831793C0100	
ARIA 86	4	96	4TBA831103C0100	4TBA831101C0100	4TBA831102C0100	4TBA831794C0100	
ARIA 108	5	108	4TBA831117C0100	4TBA831115C0100	4TBA831116C0100	4TBA831795C0100	

Type	Number of Individual Modular Plates Possible		Individual modular plates	
	Rows / No. of Plates	Modules per plate	Solid modular plate (no slots)	Slotted modular plate
ARIA 32	–	–	–	–
ARIA 43	2	12	4TBA831797C0100	4TBA831796C0100
ARIA 54	3	18	4TBA831799C0100	4TBA831798C0100
ARIA 64	3	18	4TBA831801C0100	4TBA831800C0100
ARIA 75	4	22	4TBA831803C0100	4TBA831802C0100
ARIA 86	8	12	4TBA831797C0100	4TBA831796C0100
ARIA 108	10	18	4TBA831801C0100	4TBA831800C0100

APO

Polyester boxes



Specifications

- The range comprises nine different sizes with 300 and 185 mm modules.
- The base is fabricated from polyester, hot press moulded and reinforced with glass fiber, dyed in mass RAL 7035 light grey color. It is equipped with M4 inserts (Dodge-type) for attaching a mounting plate or a frame.
- The cover may be fabricated from transparent polycarbonate or hot press moulded polyester, reinforced with glass fiber, dyed in mass RAL 7035 light gray color.
- Maximum protection for the user and equipment thanks to its total insulation and IP67 protection rating in accordance with EN/IEC 60529.



Type	APO 31	APO 41
------	--------	--------

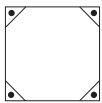
Rapid selection table

Type	External dimensions (mm)			Enclosure	
	H	W	D	IP67 Solid polyester cover with securing screws	IP67 Transparent polycarbonate cover with securing screws
APO 1	186	151	140	4TBO856048C0100	4TBO856057C0100
APO 31	302	186	175	4TBO856049C0100	4TBO856058C0100
APO 41	302	302	175	4TBO856050C0100	4TBO856059C0100
APO 71	370	300	175	4TBO856051C0100	4TBO856060C0100
APO 51	488	302	175	4TBO856052C0100	4TBO856061C0100
APO 81	558	302	175	4TBO856053C0100	4TBO856062C0100
APO 61	602	302	175	4TBO856054C0100	4TBO856063C0100
APO 11	602	372	175	4TBO856055C0100	4TBO856064C0100
APO 12	603	603	175	4TBO856056C0100	4TBO856065C0100

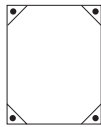
Accessories

Type	Description	Order Code
	Stainless Steel grade 304 wall mounting brackets (4 off)	4TBO852025C0100
	Glass Fiber-reinforced Polyamide wall mounting brackets (4 off)	4TBO851266C0100

- IK08 protection rating against external mechanical impacts in accordance with EN/IEC 62208.
- Each box, which is a multiple of a smaller one, also has a variety of the mounting points of the smaller box. These points have non-threaded holes for embedded M4 inserts.
- The base also includes four to six non-threaded holes for embedded M6 inserts.
- The box may be wall-mounted or on a pedestal.
- Material is simple to work with using conventional tools such as drills, mills, saws, etc.
- Polyester boxes can resist temperatures of up to 70°C under continuous operation and peak temperatures of up to 130°C. The transparent polycarbonate covers can resist operating temperatures of up to 120°C.
- Insulation voltage $U_i = 1000\text{VAC}$ and 1500VDC .
- Standard: EN/IEC 62208.
- APO enclosures are UL Listed, in accordance with the UL Standard 508. They are also CSA certified.



APO 71



APO 51



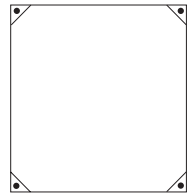
APO 81



APO 61



APO 11



APO 12

IP67 Transparent polycarbonate pivoting cover with clip-in buttons	Enclosure	Mounting plate	Depth extender
	IP55 Solid hinged cover with securing screws	2mm Galv. steel mounting plate	Depth extension frame
–	4TBO856071C0100	4TBO851191C0100	4TBO856040C0100*
4TBO856066C0100	4TBO856072C0100	4TBO851188C0100	4TBO856041C0100*
4TBO856067C0100	4TBO856073C0100	4TBO851279C0100	4TBO856042C0100*
4TBO856068C0100	4TBO856074C0100	4TBO851185C0100	4TBO856043C0100*
4TBO856069C0100	4TBO856075C0100	4TBO852095C0100	–
–	4TBO856076C0100	4TBO851171C0100	4TBO856044C0100**
4TBO856070C0100	4TBO856077C0100	4TBO851287C0100	4TBO856045C0100**
–	4TBO856078C0100	4TBO851292C0100	4TBO856046C0100**
–	4TBO856079C0100	4TBO852178C0100	4TBO856047C0100**

*35mm / **60mm.

Enclosed control products

283**IP65 Push button stations**

For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Push button stations

Plastic IP65 enclosures

- IP65 thermoplastic control station complete with actuator, contact blocks and legend plate. Supplied fully assembled. Other variations are available on request.

One gang push buttons

	Description	Dimensions (mm)			Part no.	Order Code
		H	W	D		
	1 Way Start/Green	75	101	74	1GO	1TVC110000P3101
	1 Way Stop/Red				1RC	1TVC101000P3102

Emergency stops

	Description	Dimensions (mm)			Part no.	Order Code
		H	W	D		
	Emergency stop 30mm (twist release) - to IEC60947-5-5	75	101	92	1RSC	1TVC101000P3203
	Emergency stop 40mm (twist release) - to IEC60947-5-5	75	101	107	1RSC-EN	1TVC101000P3204
	Emergency stop 60mm (twist release) - to IEC60947-5-5	75	101	107	1RMSC50	1TVC101000P3205
	Emergency stop 40mm (with key release) - to IEC60947-5-5	75	101	122	1RMSKC	1TVC101000P3206

Selector switches

	Description	Dimensions (mm)			Part no.	Order Code
		H	W	D		
	Two-position switch	75	101	74	1H2O-I	1TVC110000P3107
	Two-position key switch (key removable both positions)				1K2O-I	1TVC110000P3108
	Three position switch				1H3I-O-II	1TVC110100P3109
	Three position key switch (key removable in all positions)				1K3I-O-II	1TVC110100P3110

Two gang push buttons

	Description	Dimensions (mm)			Part no.	Order Code
		H	W	D		
	Start/Green and Stop/Red	75	141	79	2GORC	1TVC211000P3111
	Start/Green and Red/Emergency Stop 40mm (twist release) to IEC60947-5-5	75	141	107		1TVC211000P3112

Terminal box in enclosures

	Description	No of Terms	[A] 1th	Dimensions (mm)			Part no.	Order Code
				H	W	D		
	Terminal box 2.5mm IP55 plastic enclosure	5	24	118	163	72	5TERM2.5	1TVC151800S2349
		10	24				10TERM2.5	1TVC151800S2347
	Terminal box 4mm IP55 plastic enclosure	5	32				5TERM4	1TVC151800S2350
		10	32				10TERM4	1TVC151800S2348



Metering and monitoring

286	Network analyzers
295	IP Switches
296	Energy meters
322	InSite energy management system



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

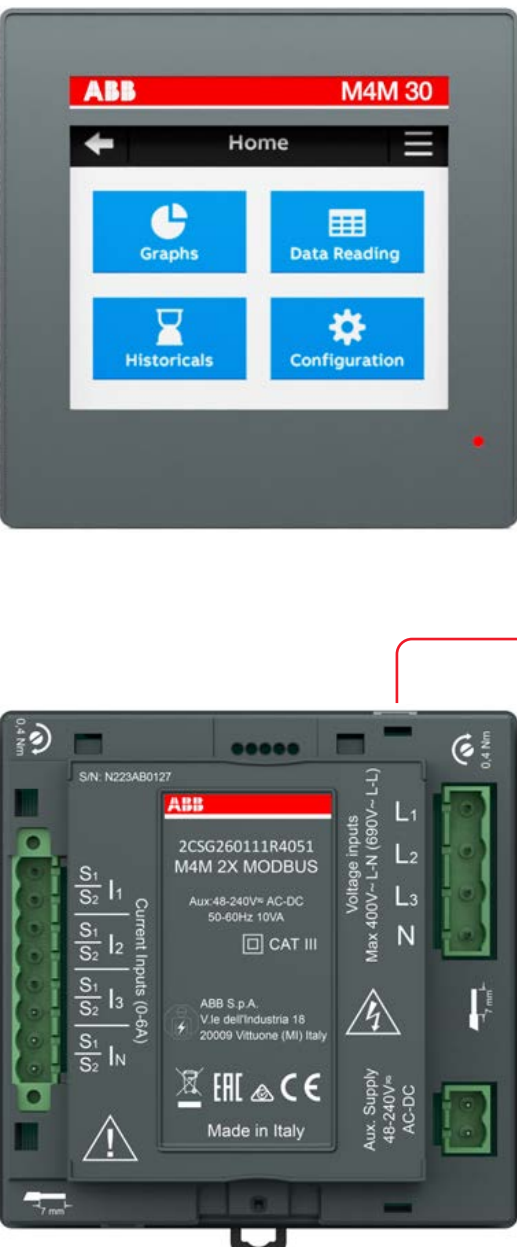
or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

M4M Network analyzers

Accurate electrical measuring and power monitoring.

Simple in every aspect, M4M enables accurate energy efficiency evaluations and perfectly fits the ABB solution for monitoring, optimization and control of electrical system.



The image shows the ABB M4M 30 Network analyzer. The top part displays the front panel with a color touchscreen showing a 'Home' menu with four options: Graphs, Data Reading, Historicals, and Configuration. The bottom part shows the rear panel with various terminals for current inputs (S1, S2, I1, I2, I3, IN), voltage inputs (L1, L2, L3, N), and auxiliary power supply. The device is labeled 'ABB M4M 30' and '2CSG260111R4051 M4M 2X MODBUS'.

Accurate measurement
Class 0,5 measurement according to IEC 61557-12 and advanced power quality functionalities, including historical measurements.

Option for MID Approval
Class C accuracy in accordance with 2014/32/EU for billing applications.

Clear visualization
Color display and App-structured menu for advanced graphic visualization.

Smart commissioning
Bluetooth module for easy configuration through EPiC Mobile App unique commissioning tool.

Intuitive access
Simplified access to the device via touch screen display or 5 pushbuttons keypad.

Easy to install
Fast one-hand mounting and comfortable installation with clips in only 57 mm depth inside the panel.

Fast wiring
All-removable terminals and one tool process to speed up the wiring activities.

Full communication
ABB Ability™ native network analyzers with complete communication protocols and I/O options for integration in any system.

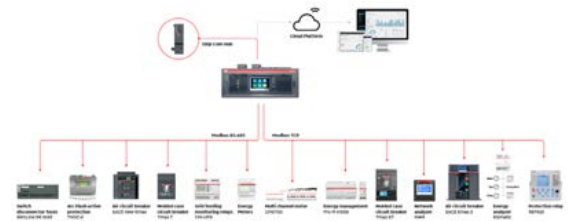
Sustainability
Compliant to the PEP ecopassport® environmental declaration

PEP ECO PASS PORT®



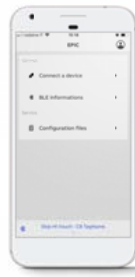
Intuitive interface

Touchscreen display and easy-to-access App-structured menu make network analyzers' configuration and operation simple and quick. Graphic color display for advanced visualization of the Class 0,5S accurate parameters, interactive pop-ups and complete notifications. Quick navigation is ensured by Homepage and favorite page setting.



Full integration

Natively integrated in sub-distribution management System pro M compact InSite and ABB Ability™ Energy and Asset Manager cloud-solution. To allow monitoring, optimization and control of the complete electrical system. Wide integration in all main applications through embedded communication protocols (Modbus RTU, Modbus TCP/IP, BACnet/IP, Profibus DP V0).



Smart commissioning

All M4M network analyzers are equipped with Bluetooth BLE module, ensuring smart configuration and quick visualization via unique EPiC commissioning tool, both available as mobile App and desktop software. Availability of remote firmware update regularly at any time guarantees the latest and the most secure version of the device with no impact on operations.



Installation in any panel

Comfortable installation and secure fix on the panel is ensured by the easy-to-use clips, with different thickness setup for compatibility with any panel. One-hand mounting of the device thanks to the hooks on the housing. The reduced depth of only 57 mm inside the panel makes M4M suitable even in small-size switchboards.



Fast installation and wiring

All terminals on M4M are removable, including the current transformers (CTs) inputs for current measurement, allowing to carry out the wiring directly on the terminals and speeding up the process. Moreover, the vertical disposition of the terminals makes the cabling inside the switchboard more comfortable.



Rogowski coils compatibility

Specific M4M versions compatible with ABB's R4M Rogowski coils allow to retrofit in existing installations, integrating power quality metering with 0 downtime. The pre-wired terminals of R4M coils allow to save up to 70% time for current transformers cabling compared to standard CTs.

Energy efficiency

Network analyzers M4M 20, 30 and 2X

Technical features

Type	M4M 20 - Class 0,5S	M4M 30 - Class 0,5S	M4M 2X
			

Auxiliary power supply

Voltage range	[V]	48 - 240 VAC/VDC $\pm 15\%$
Frequency	[Hz]	50-60
Power Consumption	[VA]	10 VA max
Installation category		CAT III 300V class per IEC 61010-1 edition 3
Protection fuse		T1 A - 277 VAC

Measurement accuracy*

Measurement type		True RMS up to the 40 th harmonic 128 samples per cycle, zero blind
IEC 61557-12		IEC 61557-12 PMD/S/K70/0,5
Active energy		Class 0,5 acc. to IEC 61557-12 [*] Class 0,5S acc. to IEC 62053-22
Reactive energy		Class 2 acc. to IEC 61557-12 Class 2S acc. to IEC 62053-23
Active power		Class 0,5 acc. to IEC 61557-12
Reactive power	Class 2 acc. to IEC 61557-12	Class 1 acc. to IEC 61557-12
Apparent power		Class 0,5 acc. to IEC 61557-12
Voltage		Class 0,2 acc. to IEC 61557-12
Current		Class 0,2 acc. to IEC 61557-12
Neutral current	Calculated	Class 0,2 acc. to IEC 61557-12 Calculated (2X, 2X PQ1, 2X RTS) Class 0,2 acc. to IEC 61557-12 (2X PQ2)
Frequency		Class 0,1 acc. to IEC 61557-12
Unbalances (Current, voltage)		Class 0,2 acc. to IEC 61557-12
Harmonics, THD (Current, voltage)		Class 1 acc. to IEC 61557-12

* The total accuracy rate returned in the output is equal to the sum of the Analog Output accuracy rate and the device accuracy rate.

Voltage measurement inputs

Measurement range	[V]	50 - 400 V AC (L-N) 87 - 690 V AC (L-L)
Measurement category		400V~ (CAT III)
Rated frequency	[Hz]	50-60 Hz
Max. VT secondary (indirect connection)	[V]	400 VAC (L-N)
Max over voltage	[V]	800 VAC (L-L)
Protection fuse	[V]	T1 A - 277 VAC

* Accuracy referred to insertion with .../5A CT or Rogowski coils, according to product version. Derating for .../1A CT.

Insulation characteristics

Test Voltage Impulse @230V to accessible parts	6,4 kV 1,2/50 μ S
Test Voltage Impulse @400V to accessible parts	9 kV 1,2/50 μ S
Test Voltage @230V to accessible parts	3 kV 60s @2000m
Test Voltage @400V to accessible parts	3,6 kV 60s @2000m

Energy efficiency

Network analyzers M4M 20, 30 and 2X

Technical features

Type	M4M 20 - Class 0,5S	M4M 30 - Class 0,5S	M4M 2X
			
Current measurement inputs			
Number of current inputs	3 (L1, L2, L3)	4 (L1, L2, L3, N)	3 (2X, 2X PQ1, 2X RTS), 4 (2X PQ2)
Indirect insertion with CT			
CT rated secondary current		5 A (Class 0.5S) 1 A (Class 0.5S)	
Max primary CT		50 kA	
Measurement range without accuracy derating		50 mA - 6 A	
Starting current		1 mA	
Burden		0.024 VA at 6 A	
Indirect insertion with Rogowski coils			
	M4M 20 Rogowski	M4M 30 Rogowski	–
Rated current		10,000 A	–
Measurement range without accuracy derating		100 A - 12 kA	–
Length of coils connections cable to M4M	3 m	3 m	
Starting current [A]		10 A	–
I/O			
Digital Output			
Voltage (min - max)		5 - 240 VAC/DC	
Current (min - max)		2 - 100 mA	
Max ON state drop voltage		1.5 V	
Max R value at Min voltage conditions (5 V)		1750 Ohm	
Min R value at Max voltage conditions (240 V)		2400 Ohm	
Pulse duration [ms]		20 ms ON, 20 ms OFF	
Pulse frequency		25 Hz	
Alarm activation delay [s]		1 - 900 s (programmable)	
Alarm return hysteresis		0 - 40% (programmable)	
Digital Input			
Maximum voltage		240 VAC/DC	
Max voltage for OFF state on input		20 VAC/DC	
Min voltage for ON state on input		45 VAC/DC	
Analogue Output			
Programmable electrical span		Span [0 - 20 mA or 4 - 20 mA]	
Load		Typical 250 Ohm, max 500 Ohm	
Technical data for MID version			
MID standards		EN 50470-1 - EN 50470-3 - EN 62052-31	
Voltage measurement (type of network and rated voltage)		3Ph/4W - 3Ph/3W - 2Ph/3W - 1Ph/2W - 3x230/400	
Current rating (I min- I ref(I _{max}))		0,01-1(6) A	
Rated frequencies		50 Hz and 60 Hz	
Tolerance on rated frequencies		+/- 2%	
Active Energy accuracy class		Class C	
Pulse value S0 (pulse constant)		200000 imp/kWh	
Electromagnetic ambient conditions		Class E2	
Mechanical ambient conditions		Class M1	
Utilization category - IEC 62052-31		2	
LED indicator pulse frequency		200000 imp/kWh	
LED indicator pulse length		1ms	

Energy efficiency

Network analyzers

Technical features			
Type	M4M 20 - Class 0,5S	M4M 30 - Class 0,5S	M4M 2X
			
Mechanical characteristics			
Overall dimensions	96 mm × 96 mm × 78 mm (Depth inside the switchboard: 57 mm)		96 mm x 96 mm x 78 mm (DIN-rail mounting)
IP degree of protection (acc. to IEC 60529)	Front: IP54		–
Weight	[g]	400	
Terminal characteristics			
Voltage inputs	Nominal cross section: 2,5 mm ² Solid/stranded wire: 0,2 - 2,5 mm2 (AWG 24 - 12) Pitch: 7,62 mm Poles: 4		
Current inputs	Nominal cross section: 2,5 mm ² Solid/stranded wire: 0,2 - 2,5 mm ² (AWG 24 - 12) Pitch: 5,08 mm Poles: 6 Screw flanges for fixing	Nominal cross section: 2,5 mm ² Solid/stranded wire: 0,2 - 2,5 mm2 (AWG 24 - 12) Pitch: 5,08 mm Poles: 8 Screw flanges for fixing	
RS-485 Serial port	Nominal cross section: 2.5 mm ² Solid/stranded wire: 0.2 - 2.5 mm ² (AWG 24 - 12) Pitch: 5.08 mm Poles: 3		
I/O	Nominal cross section: 2.5 mm ² Solid/stranded wire: 0.2 - 2.5 mm ² (AWG 24 - 12) Pitch: 5.08 mm Poles: 3 (Programmable I/O, only on M4M 20 I/O) Poles: 3 (Digital outputs) Poles: 3 (Analogue outputs, only on M4M 20 I/O)	Nominal cross section: 2.5 mm ² Solid/stranded wire: 0.2 - 2.5 mm ² (AWG 24 - 12) Pitch: 5.08 mm Poles: 5 (Programmable I/O) Poles: 3 (Programmable I/O only on M4M 30 I/O) Poles: 3 (Analogue outputs, only on M4M 30 I/O)	Nominal cross section: 2,5 mm ² Solid/stranded wire: 0,2 - 2,5 mm2 (AWG 24 - 12) Pitch: 5,08 mm Poles: 5 (Programmable I/O)
Rogowski current probes	Only with ABB Rogowski probes: - R4M-200 2CSG202150R1101 (200 mm diameter) - R4M-80 2CSG202160R1101 (80 mm diameter)		–
Climatic conditions			
Operating temperature	-25 to 70 °C (K70 acc. to IEC 61557-12)		
Storage temperature	-40 to 85 °C (K70 acc. to IEC 61557-12)		
Relative humidity	Max 93% (non-condensing) at 40°C		
Pollution degree	2		
Altitude	< 2,000 m		
User Interface			
Access to device	5 pushbuttons	Touchscreen	–
Display type	Graphic color display		–
Display dimensions	70 × 52 mm (3.5")		–

Energy efficiency

Network analyzers

Technical features			
Type	M4M 20 - Class 0,5S	M4M 30 - Class 0,5S	M4M 2X
			
Communication protocol			
Modbus RTU	M4M 20 Modbus, M4M 20 I/O, M4M 20 Rogowski	M4M 30 Modbus, M4M 30 I/O, M4M 30 Rogowski	M4M 2X Modbus
Communication interface		RS485 with optical isolation	
Baud rate		9.6, 19.2, 38.4, 57.6, 115.2 kbps	
Parity number		Odd, Even, None	
Stop bit		1, 2	
Address		1-247	
Connector		3 pole terminal	
Profibus DP-V0	M4M 20 Profibus	M4M 30 Profibus	—
Protocol	Profibus with slave DP-V0 function in compliance with IEC 61158 regulations		—
Communication interface	RS485 with optical isolation		—
Baud rate	Automatic detection [9.6 kbps - 12 Mbps]		—
Address	0-126		—
Connector	DB 9 female connector (do not use connectors with 90° cable outlet)		—
LED indicators	Green for communication status Red for communication error		—
Modbus TCP/IP	M4M 20 Ethernet	M4M 30 Ethernet	M4M 2X Ethernet
Protocol		Modbus TCP/IP	
Communication interface	RJ45	RJ45 (2 ports for daisy-chain)*	
BACnet	M4M 20 Bacnet	M4M 30 Bacnet	
Protocol		BACnet/IP	—
Communication interface		RJ45	—
Bluetooth			
Type		BLE (Bluetooth Low Energy)	
Real-time clock			
Clock drift	—		~ 0.4 seconds per day
Battery backup time	—		~ 3 days without aux supply
Standards			
Power metering and monitoring devices (PMD)		IEC 61557-12 (IEC 62053-22, IEC 62053-23)	
Electrical safety		IEC 61010-1	
EMC		IEC 61326-1 (IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11)	

*1x RJ45 port available on M4M 30-M

Energy efficiency

Network analyzers

Technical features

Type	M4M 20 - Class 0,5S	M4M 30 - Class 0,5S	M4M 2X - Class 0,5S
  			
Real-time			
TRMS current	•	•	•
TRMS Voltage	•	•	•
Frequency	•	•	•
Active, Reactive and Apparent Power	•	•	•
Power Factor	•	•	•
Operating timer, countdown timer	•	•	•
Energy			
Active, Reactive and Apparent Energy	•	•	•
4 quadrants Energy (Import/Export)	•	•	•
Tariffs	/	•	/
Power Quality			
THD (I, VLN, VLL)	•	•	•
Individual Harmonics	/	40 th	25 th
Unbalances (I, VLN, VLL)	/	•	•
Neutral current	Calculated	Measured	Calculated
Phasors (I, VLN)	/	•	/
Waveforms (I, VLN, VLL)	/	•	/
Data recording and logs			
Single alarms	25	25	25
Warnings, alarms and errors log	•	•	•
Complex alarms with logics	/	4	/
Demand values (average)	Basic	Advanced	Basic
Min/Max Demand values	Basic	Advanced	Basic
Energy Trending logs	/	•	/
RTC	/	•	•
HMI			
	Graphic color	Graphic color touchscreen	
Graphs visualization	Basic	Advanced	/
Notifications	•	•	/
Homepage and favourite page	•	•	/
Password protection	•	•	/
Connectivity			
Automatic integration in ABB Ability™ EDCS	•	•	•
Bluetooth Low Energy	•	•	•
Communication Protocols	Modbus RTU, Modbus TCP/IP, Profibus DP-V0, BACnet/IP	Modbus RTU, Modbus TCP/IP, Profibus DP-V0, BACnet/IP	Modbus RTU, Modbus TCP/IP
RJ45 Daisy Chain (Ethernet version)*	/	•	•

*1x RJ45 port available on M4M 30-M

Energy efficiency

Network analyzers



M4M 20

M4M 20 is ABB's network analyzer range that provides complete and accurate electrical parameters monitoring and basic power quality analysis.

Equipped with graphic color display for advanced visualization of the measured parameters and Bluetooth module for smart commissioning.

Communication protocol	I/O	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
BLE	2 Digital out.	511519	M4M 20	2CSG251151R4051	0,400	1
BLE, Modbus RTU	2 Digital out.	511410	M4M 20 Modbus	2CSG251141R4051	0,400	1
BLE, Modbus TCP/IP	2 Digital out.	044710	M4M 20 Ethernet	2CSG204471R4051	0,400	1
BLE, Profibus DP-V0	2 Digital out.	511311	M4M 20 Profibus	2CSG251131R4051	0,400	1
BLE, BACnet/IP	2 Digital out.	368311	M4M 20 Bacnet	2CSG236831R4051	0,400	1
BLE, Modbus RTU	2 Progr. I/O, 2 Digital out., 2 Analogue out.	511618	M4M 20 I/O	2CSG251161R4051	0,400	1
BLE, Modbus RTU	2 Digital Out.	390558	M4M 20-M MODBUS	2CSG239055R4051	0,400	1
BLE, Modbus TCP/IP	2 Digital Out.	390657	M4M 20-M ETHERNET	2CSG239065R4051	0,400	1



M4M 20 - Rogowski version

M4M 20 is also available as compatible with ABB's R4M Rogowski coils for current measurement, increasing the flexi-bility of network analyzers offer and allowing retrofit in any existing installations.

M4M 20 Rogowski together with R4M Rogowski coils ensures the integration of basic power quality metering in any existing system with 0 downtime.

Communication protocol	I/O	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type	Order code		
BLE, Modbus RTU	2 Digital out.	070818	M4M 20 Rogowski	2CSG207081R4051	0,400	1



M4M 30

M4M 30 is ABB's network analyzer range that allows complete power quality analysis and energy efficiency evaluations.

Equipped with touchscreen color display for simplified access to the device and with Bluetooth module for smart commissioning.

Communication protocol	I/O	Bbn 8012542 EAN	Order details		Weight 1 piece kg	Pack unit pc.
			Type code	Order code		
BLE, Modbus RTU	4 Progr. I/O	747611	M4M 30 Modbus	2CSG274761R4051	0,400	1
BLE, Modbus TCP/IP	4 Progr. I/O	746812	M4M 30 Ethernet	2CSG274681R4051	0,400	1
BLE, Profibus DP-V0	4 Progr. I/O	367918	M4M 30 Profibus	2CSG236791R4051	0,400	1
BLE, BACnet/IP	4 Progr. I/O	024514	M4M 30 Bacnet	2CSG202451R4051	0,400	1
BLE, Modbus RTU	6 Progr. I/O, 2 Analogue out.	024712	M4M 30 I/O	2CSG202471R4051	0,400	1
BLE, Modbus RTU	4 Progr. I/O	390350	M4M 30-M MODBUS	2CSG239035R4051	0,400	1
BLE, Modbus TCP/IP	4 Progr. I/O	390459	M4M 30-M ETHERNET	2CSG239045R4051	0,400	1

Energy efficiency

Network analyzers



M4M 30 - Rogowski version

M4M 30 is also available as compatible with ABB's R4M Rogowski coils for current measurement, increasing the flexibility of network analyzers and allowing retrofit in any existing installations. M4M 30 Rogowski together with R4M coils ensure integration of complete PQ analysis in any existing system with 0 downtime.

Communication protocol	I/O	Bbn 8012542	Order details		Weight 1 piece	Pack unit
		EAN	Type	Order code	kg	pc.
BLE, Modbus RTU	4 Progr. I/O	024613	M4M 30 Rogowski	2CSG202461R4051	0.400	1



R4M ROGOWSKI COILS

R4M Rogowski coils are flexible current transformer based on Rogowski technology, ideal to retrofit existing installations up to 12kA. Available in two different sizes (80mm or 200mm diameters), R4M coils are directly equipped with pre-wired removable terminals that perfectly fit M4M 20 Rogowski (3 Rogowski coil inputs) and M4M 30 Rogowski (4 Rogowski coil inputs), with no need for external integrators.

Diameter (mm)	Bbn 8012542	Order details		Weight 1 piece	Pack unit
	EAN	Type	Order code	kg	pc.
80	021605	R4M-80	2CSG202160R1101	0.150	1
200	021506	R4M-200	2CSG202150R1101	0.250	1



M4M 2X

M4M 2X is ABB's network analyzer range that ensuring higher flexibility to project specifications compared to standard network analyzers. M4M 2X is available without display, only communicating via protocols and Bluetooth module for smart remote commissioning.

Communication protocol	I/O	Functionality package	Bbn 8012542	Order details		Weight 1 piece	Pack unit
			EAN	Type code	Order code	kg	pc.
BLE, Modbus RTU	2 Digital out.	2X	601111	M4M 2X Modbus	2CSG260111R4051		
BLE, Modbus TCP/IP	2 Digital out.	2X	600619	M4M 2X Ethernet	2CSG260061R4051		
BLE, Modbus RTU	2 Digital out.	2X+PQ1	390756	M4M 2X Modbus PQ1	2CSG239075R4051		
BLE, Modbus TCP/IP	2 Digital out.	2X+PQ1	391258	M4M 2X Ethernet PQ1	2CSG239125R4051		
BLE, Modbus RTU	2 Digital out.	2X+PQ2	390855	M4M 2X Modbus PQ2	2CSG239085R4051		
BLE, Modbus TCP/IP	2 Digital out.	2X+PQ2	391357	M4M 2X Ethernet PQ2	2CSG239135R4051		
BLE, Modbus RTU	4 Progr. I/O	2X+RTS	390954	M4M 2X Modbus RTS	2CSG239095R4051		
BLE, Modbus TCP/IP	4 Progr. I/O	2X+RTS	391456	M4M 2X Ethernet RTS	2CSG239145R4051		
BLE, Modbus RTU	4 Progr. I/O	2X+PQ1+RTS	391050	M4M 2X Modbus PQ1+RTS	2CSG239105R4051		
BLE, Modbus TCP/IP	4 Progr. I/O	2X+PQ1+RTS	391555	M4M 2X Ethernet PQ1+RTS	2CSG239155R4051		
BLE, Modbus RTU	4 Progr. I/O	2X+PQ2+RTS	391159	M4M 2X Modbus PQ2+RTS	2CSG239115R4051		
BLE, Modbus TCP/IP	4 Progr. I/O	2X+PQ2+RTS	391654	M4M 2X Ethernet PQ2+RTS	2CSG239165R4051		

Energy efficiency

IP Switches



IS/S 8.1.1

IP Switch, 8 Ports, Fast Ethernet, MDRC **NEW**

The IP Switch is an industrial-grade, 8 Ports, Fast Ethernet (100 Mbit/s), unmanaged switch with plug-and-play capabilities, designed for installation in electrical distribution boards and small housings for rapid mounting on 35mm DIN rails (to EN 60715).

Description	Mod. width	Order details		Weight 1 piece	Pack unit
		Type code	Order code	kg	pc.
	8	IS/S 8.1.1	2CDG120082R0011	0.25	1



ISP/S 8.1.1.1

IP Switch PoE, 8 Ports, Fast Ethernet, 55W, MDRC **NEW**

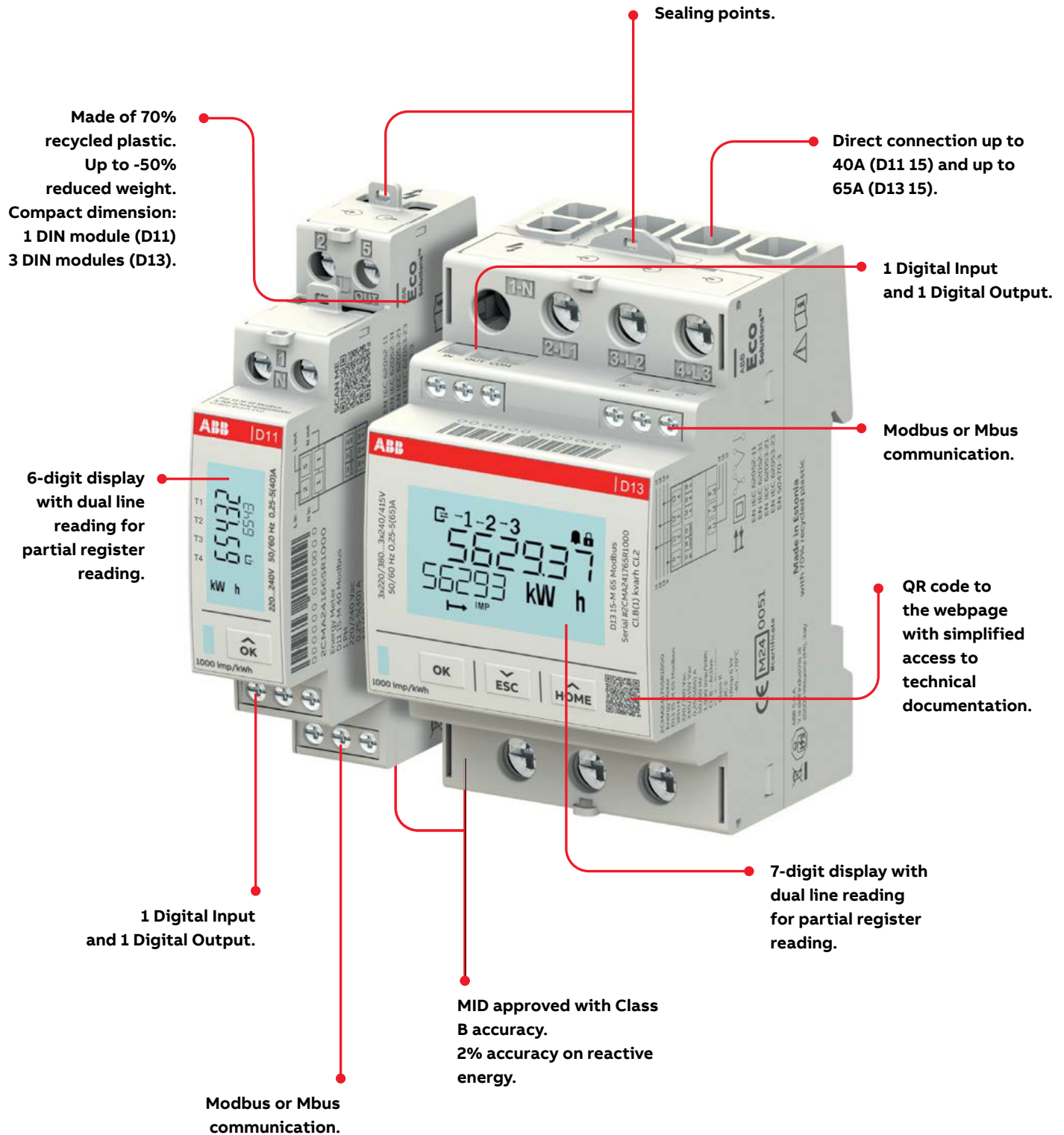
The IP Switch PoE is an industrial-grade, 8 Ports, Fast Ethernet (100 Mbit/s), PoE (55 W), unmanaged switch with plug-and-play capabilities, designed for installation in electrical distribution boards and small housings for rapid mounting on 35mm DIN rails (to EN 60715).

Description	Mod. width	Order details		Weight 1 piece	Pack unit
		Type code	Order code	kg	pc.
	12	ISP/S 8.1.1.1	2CDG120083R0011	0.41	1

Energy meters

The details that make the difference

NEW



Energy meters

Selection framework

The below framework is designed to streamline the process of choosing the right energy meter tailored to individual needs. By considering factors such as accuracy of energy measurement and desired features, the framework guides customers towards optimal selections. With a focus on accuracy, efficiency, and compatibility, users can confidently identify the perfect energy meter solution for their residential, commercial, or industrial requirements.

	STEEL	BRONZE	15 NEW	SILVER	GOLD	PLATINUM
Active energy	✓	✓	✓	✓	✓	✓
Class 1	✓	✓	✓	✓	✓	✓
Class 0.5				Optional	Optional	Optional
Pulse output	✓	✓	✓	✓	✓	✓
Alarm	✓	✓	✓	✓	✓	✓
Reactive energy		✓	✓	✓	✓	✓
Apparent energy		✓	✓	✓	✓	✓
Import/Export energy		✓	✓	✓	✓	✓
Tariffs			2/4* *4 via Communication	4	4	4
Resettable energy register			✓	✓	✓	✓
Fixed I/O			1DI/1DO	2DI/2DO	2DI/2DO	2DI/2DO
Configurable I/O						4
Harmonics						2-16th
Clock functions*					✓	✓
Advanced clock functions**						✓

* Tariff control, previous values, max/min demand, event log - ** Load profiles

D11 and D13

available in: 15 NEW

voltage: 220-240 VAC
3x230/400 VAC



D11	Single phase, up to 40A
D13	Three phase, up to 65A

A series

available in: STEEL BRONZE SILVER GOLD PLATINUM

voltage: 57.7...288 VAC
57.7.../100...288 VAC
3x57.7/100 ... 288/500 VAC
3x57.7/100 ... 400/690 VAC



A41	Single phase, up to 80A
A42	Single phase, with CT/VT
A43	Three phase, up to 80A
A44	Three phase, with CT/VT

B series

available in: STEEL BRONZE SILVER

voltage: 220-240 VAC
3x230/400 VAC



B21	Single phase, up to 65A
B23	Three phase, up to 65A
B24	Three phase, with CT

Energy meters

Functionalities

NEW



	Single phase - Direct			Single phase - Indirect
Energy Meters	D11	B21	A41	A42
Mechanical properties				
DIN modules	1	2	4	4
Overall Dimensions [mm]	65x92x17,5	35x97x65	70x97x65	70x97x65
Voltage/current inputs				
Operating voltage	220 - 240 VAC +/- 20%	220 - 240 VAC +/- 20%	57.7 - 288 VAC	57.7 - 288 VAC
Maximum current	40 A	65 A	80 A	6A
Rated frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Indirect connection	–	–	–	CT/VT
Energy Measurements				
Active energy	■	■	■	■
Reactive energy	■	o	o	o
Apparent energy	■	o	o	o
Import/Export	■	o	o	o
Instantaneous Measurements				
Voltage	■	■	■	■
Current	■	■	■	■
Neutral Current (calculated)	■	■	■	■
Frequency	■	■	■	■
Active, Reactive and Apparent power	■	■	■	■
Power quality measurements				
Power Factor	■	■	■	■
CosPhi	■	o	o	o
Current quadrant	■	■	■	■
Harmonics analysis (2-16th)	–	–	o	o
Function				
Tariffs	■	o	o	o
Single Alarms	25	25	25	25
Max/Min demand	–	–	o	o
Load profiles	–	–	o	o
Resettable registers	■	o	o	o
Event logs	■	–	o	o
Communication				
Digital Input	1	2 (o)	2 (o)	2 (o)
Digital Output	1	2 (o)	2 (o)	2 (o)
Configurable I/O	–	–	■	■
Pulse output	■	■	■	■
Progr. I/O (4 I/O channels)	–	–	–	o
Infrared MBus	–	■	■	■
MBus	o	o	o	o
RS-485 Modbus RTU	o	o	o	o

■ Standard feature

o Optional feature according to order codes in the following pages

– No

NEW



Three phase - Direct			Three phase - Indirect	
D13	B23	A43	B24	A44
3	4	7	4	7
65x97x52,5	70x97x65	123x97x65	70x97x65	123x97x65
3 x 220-240 VAC +/- 20%	3 x 220-240 VAC +/- 20%	3x57.7-288/100-500 VAC	3 x 220-240 VAC +/- 20%	3x57.7-288/100-500 VAC (3x57.7-400/100-690VAC)
65 A	65 A	80 A	6A	6A
50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
–	–	–	CT	CT/VT
■	■	■	■	■
■	o	o	o	o
■	o	o	o	o
■	o	o	o	o
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	■	■	■	■
■	o	o	o	o
■	■	■	■	■
–	–	o	–	o
■	o	o	o	o
25	25	25	25	25
–	–	o	–	o
–	–	o	–	o
■	o	o	o	o
■	–	o	–	o
1	2 (o)	2 (o)	2 (o)	2 (o)
1	2 (o)	2 (o)	2 (o)	2 (o)
–	–	■	–	■
■	■	■	■	■
–	–	o	–	o
–	■	■	■	■
o	o	o	o	o
o	o	o	o	o

Single phase – Direct Energy meters

Technical features

NEW



Single phase - Direct			
Energy Meters	D11	B21	A41
Mechanical			
Material	Housing and terminal covers: up to 70% recycle plastic. Frontal Panel: UV resistant Polyester	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.
Accuracy			
Active Energy	Cl.1 (Class B)	Cl.1 (Class B)	Cl.1 (Class B)
Reactive energy	Cl.2	Cl.2	Cl.2
Voltage/Current Inputs			
Protection fuse/MCB	40 A MCB, C characteristic or 40 A fuse type gL-gG	65 A MCB, C characteristic or 65A fuse type gL-gG	80 A MCB, C characteristic or 80 A fuse type gL-gG
Nominal voltage	220 - 240 VAC	230 VAC	230 VAC
Voltage range	220 - 240 VAC +/- 20%	220-240 VAC (-20% – +15%)	220-240 VAC (-20% – +15%)
Power consumption (240V - Measurement+Comm+Backlight)	0.69 W	0.88 W	0.6 W
Base current Ib	5A	5A	5A
Reference current Iref	5A	5A	5A
Transitional current Itr	0.5 A	0.5 A	0.5 A
Nominal Current	5A	5A	5A
Maximum current Imax	40 A	65 A	80A
Minimum current Imin	0.25 A	0.25 A	0.25 A
Starting current Ist	< 20 mA	< 20 mA	< 20 mA
Frequency	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%
Meter constant	1.000 imp/kWh	1.000 imp/kWh	1.000 imp/kWh
Wiring options			
	1 Phase – 2 Wires	1 Phase – 2 Wires	1 Phase – 2 Wires
Protective class	II	II	II
Overvoltage category	III	III	III
Pollution degree	2	2	2
Rated impulse voltage Uimp	6 kV	6 kV	6 kV
Utilization category (UC)	UC-1	UC-2	UC-2

Single phase – Direct Energy meters

Technical features

NEW



		Single phase - Direct		
Energy Meters		D11	B21	A41
Technical features				
Line terminals	Min. wire cross section	1 mm ²	1 mm ²	1 mm ²
	Max. wire cross section	10 mm ²	25 mm ²	25 mm ²
	Screw head	PZ1	PZ2	Ph2
	Tightening torque	0,8 Nm	3Nm	3Nm
	Wire stripping length	6 mm	13 mm	13 mm
Neutral terminal	Min. wire cross section	1 mm ²	1 mm ²	1 mm ²
	Max. wire cross section	10 mm ²	25 mm ²	25 mm ²
	Screw head	PZ1	PZ2	Ph2
	Tightening torque	0,8 Nm	3Nm	3Nm
	Wire stripping length	6 mm	13 mm	13 mm
Communication and I/O terminals	Min. wire cross section	0,2 mm ²	0,5 mm ²	0,5 mm ²
	Max. wire cross section	2,5 mm ²	1 mm ²	1 mm ²
	Screw head	PZ1	slotted screw	slotted screw
	Tightening torque	0,5 Nm	0,25 Nm	0,25 Nm
	Wire stripping length	6 mm	6 mm	6 mm
Climatic condition				
Operating temperature		-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
Storage temperature		-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Environmental conditions, operation		Indoor with extended operating temperature; dry locations		
Altitude		2.000 m		
Humidity		75% yearly average, 95% on 30 days/year		
Resistance to fire and heat		Terminal 960°C, cover 650°C (IEC 60695-2-1) – UL V0		
Resistance to water and dust		IP 20 on terminal block without protective enclosure and IP 51 in protective enclosure, according to IEC 60529.		
Mechanical environment		Class M2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).		
Electromagnetic environment		Class E2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).		

Single phase – Direct Energy meters

Technical features

NEW



Single phase - Direct			
Energy Meters	D11	B21	A41
User interface			
Access to device	1 pushbuttons	3 pushbuttons	5 pushbuttons
Display type	Dual line display LCD	Single line LCD	Single line LCD
	Configurable backlight	Fixed backlight	Fixed backlight
Display dimensions	23,3x10,5 mm, ~ 1" as diagonal	19 x 22 mm, 1,1" as diagonal	32 x 22,5 mm, 1,8" as diagonal
Number of digits counter 1	6 digits	6 digits	7 digits
Number of digits counter 2	4 digits	–	–
I/O			
Digital Output			
Number of output	1	2 (Optional)	2 (Optional)
Current	2 - 60mA	2 - 100mA	2 - 100mA
Voltage	5 - 40 VDC (+/-10%)	5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC	5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC
Pulse output frequency	Programmable 1-999999 imp/kWh	Programmable 1-999999 imp/kWh	Programmable 1-999999 imp/kWh
Pulse length	10-990 ms	10-990 ms	10-990 ms
Digital Input			
Number of input	1	2 (Optional)	2 (Optional)
Max Voltage (absolute rating)	44 VDC	0 - 240 V AC/DC	0 - 240 V AC/DC
Off state Voltage	0 - 5 VDC (+/-10%)	0 - 5 V AC/DC	0 - 5 V AC/DC
ON state Voltage	10 - 40 VDC (+/-10%)	57 - 240 VAC / 24 - 240 VDC	57 - 240 VAC / 24 - 240 VDC
Min. pulse length and pulse pause	30 ms	30 ms	30 ms
Communication protocol			
M-Bus			
Baud rate	300, 600, 1200, 2400, 4800, 9600	300, 600, 1200, 2400, 4800, 9600, 19200, 38400	300, 600, 1200, 2400, 4800, 9600, 19200, 38400
Address	1-250	1-250	1-250
Access level	Open, Open with password, close	Open, Open with password, close	Open, Open with password, close
Modbus RTU			
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	Odd, Even, None	Odd, Even, None	Odd, Even, None
Address	1-247	1-247	1-247
Pulse Led			
Pulse Frequency	1000 imp/kWh	1000 imp/kWh	1000 imp/kWh
Pulse length	40 ms	40 ms	40 ms

Single phase – Direct Energy meters

Technical features

NEW



Single phase - Direct			
Energy Meters	D11	B21	A41
EMC Compatability			
Impulse voltage test		6 kV 1.2/50μs (IEC 60060-1)	
Surge voltage test		4 kV 1.2/50μs (IEC 61000-4-5)	
Fast transient burst test		4 kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields		80 MHz–2 GHz at 10 V/m (IEC 61000-4-3)	
Immunity to conducted disturbance		150kHz–80MHz, (IEC 61000-4-6)	
Immunity to electromagnetic disturbances		2–150 kHz for kWh-meters	
Radio frequency emission		EN 55022, class B (CISPR22)	
Electrostatic discharge		15 kV (IEC 61000-4-2)	
Standard	EN 50470-3:2022 (Only for MID meters)	IEC 62052-11	IEC 62052-11
	EN IEC 62052-11:2021/ A11:2022	IEC 62053-21 class 1 & 2	IEC 62053-21 class 1 & 2
	IEC 62052-31:2015-09	IEC 62053-22 class 0,5 S	IEC 62053-22 class 0,5 S
	EN 62052-31:2016-06	IEC 62053-23 class 2	IEC 62053-23 class 2
	EN 62052-31:2018-04	IEC 62054-21	IEC 62054-21
	EN IEC 62053-21/A11:2021	GB/T 17215.211-2006	GB/T 17215.211-2006
	EN IEC 62053-23/A11:2021	GB/T 17215.312-2008 class 1 & 2 GB/T 17215.312-2008 class 1 & 2	
	EN IEC 62053-23:2022:02	GB/T 17215.322- 2008 class 0,5 S	GB/T 17215.322- 2008 class 0,5 S
	EN 62059-32-1:2012	GB 4208-2008	GB 4208-2008
	CISPR 32:2015 Class B	EN 50470-1	EN 50470-1
	Welmec Guide 11.1	EN 50470-3 category A & B	EN 50470-3 category A & B
	Welmec Guide 7.2		

Single phase – Direct Energy meters

Product codes



D11

Single phase electricity meter, 1DIN, 40A, 220 VAC-240VAC.

Class B (Cl.1) (Reactive Cl.2) with functionality level 15.

Active and Reactive energy, Import/export, 2 single tariffs or 4 (via communication)

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 8012542	Order details		Weight 1 piece	Pack unit
					EAN	Type code		
–	–	1 Dig. Input 1 Dig Output	Cl. 1 - Active Cl. 2 - Reactive	635550	D11 15 40	2CMA241655R1000	0.070	1
–	MID	1 Dig. Input 1 Dig Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	635451	D11 15-M 40	2CMA241645R1000	0.070	1
Modbus RTU	–	1 Dig. Input 1 Dig. Output	Cl. 1 - Active Cl. 2 - Reactive	635758	D11 15 40 Modbus	2CMA241675R1000	0.070	1
Modbus RTU	MID	1 Dig. Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 – Reactive	635659	D11 15-M 40 Modbus	2CMA241665R1000	0.070	1
Mbus	MID	1 Dig. Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	635857	D11 15-M 40 Mbus	2CMA241685R1000	0.070	1



B21

Single phase electricity meter, 2DIN with IR Port, 65A, 230VAC

For direct connection up to 65 A. Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 8012542	Order details		Weight 1 piece	Pack unit
					EAN	Type code		
–	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	001540	B21 311 - 100	2CMA100154R1000	0.140	1
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	001557	B21 312 - 100	2CMA100155R1000	0.150	1
Mbus	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	001564	B21 313 - 100	2CMA100156R1000	0.150	1

Single phase – Direct Energy meters

Product codes



A41

Single phase electricity meter, 4DIN with IR Port, 80A, 57.7...288VAC

Class B (Cl. 1) with functionality level Steel. Active energy

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	1 Dig Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705547	A41 111 - 100	2CMA170554R1000	0.230	1
Modbus RTU	MID	1 Dig Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705004	A41 112 - 100	2CMA170500R1000	0.230	1
Mbus	MID	1 Dig Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	002400	A41 113 - 100	2CMA100240R1000	0.230	1

Class 1 (Reactive Class 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl.2- Reactive	705035	A41 312 - 100	2CMA170503R1000	0.230	1
Mbus	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705042	A41 313 - 100	2CMA170504R1000	0.230	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Gold. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705059	A41 412 - 100	2CMA170505R1000	0.230	1

Single phase – Indirect Energy meters

Technical features



Single phase - Indirect	
A42	
Mechanical	
Material	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.
Accuracy	
Active Energy	Cl.1 (Class B) or Cl. 0,5S
Reactive energy	Cl.2
Voltage/Current Inputs	
Protection fuse/MCB	10 A MCB, B characteristic or Diazed, fast.
Nominal voltage	230 VAC
Voltage range	
Power consumption (240V - Measurement+Comm+Backlight)	0.61 W
Base current Ib	5A
Rated Current	1A
Reference current Iref	1A
Transitional current Itr	0.05
Nominal Current	1A
Maximum current Imax	6A
Minimum current Imin	0.02 A
Starting current Ist	< 1 mA
Frequency	50/60 Hz ± 5%
Meter constant	1.000 imp/kWh
Wiring options	1 Phase – 2 Wires
Protective class	II
Overvoltage category	III
Pollution degree	2
Rated impulse voltage Uimp	6kV
Utilization category (UC)	UC-1

Single phase – Indirect Energy meters

Technical features



Single phase - Indirect		
A42		
Terminal characteristics		
Line terminals	Min. wire cross section	0,5 mm ²
	Max. wire cross section	10 mm ²
	Screw head	Ph2
	Tightening torque	1.5 Nm
	Wire stripping length	13 mm
Neutral terminal	Min. wire cross section	0,5 mm ²
	Max. wire cross section	10 mm ²
	Screw head	Ph2
	Tightening torque	1.5 Nm
	Wire stripping length	13 mm
Communication and I/O terminals	Min. wire cross section	0,5 mm ²
	Max. wire cross section	1 mm ²
	Screw head	slotted screw
	Tightening torque	0,25 Nm
	Wire stripping length	6 mm
Climatic condition		
Operating temperature		-40°C to +70°C
Storage temperature		-40°C to +85°C
Environmental conditions, operation		Indoor with extended operating temperature; dry locations
Altitude		2000 m
Humidity		75% yearly average, 95% on 30 days/year
Resistance to fire and heat		Terminal 960°C, cover 650°C (IEC 60695-2-1) – UL V0
Resistance to water and dust		IP 20 on terminal block without protective enclosure and IP 51 in protective enclosure, according to IEC 60529.
Mechanical environment		Class M2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).
Electromagnetic environment		Class E2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).
User interface		
Access to device		5 pushbuttons
Display type	Single line LCD	
	Fixed backlight	
Display Dimensions		32 x 22,5 mm, 1,8" as diagonal
Number of digits counter 1		7 digits
I/O		
Digital Output		
Number of output		2 (Optional)
Current		2 - 100mA
Voltage		5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC
Pulse output frequency		Programmable 1–999999 imp/kWh
Pulse length		10–990 ms

Single phase – Indirect Energy meters

Technical features



Single phase - Indirect	
A42	
Digital Input	
Number of input	2 (Optional)
Max Voltage (absolute rating)	0 - 240 V AC/DC
Off state Voltage	0 - 5 V AC/DC
ON state Voltage	57 - 240 VAC / 24 - 240 VDC
Min. pulse length and pulse pause	30 ms
Communication protocol	
M-Bus	
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200, 38400
Address	1-250
Access level	Open, Open with password, close
Modbus RTU	
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	Odd, Even, None
Address	1-247
Pulse Led	
Pulse Frequency	5000 imp/kWh
Pulse length	40 ms
EMC Compatability	
Impulse voltage test	6 kV 1.2/50µs (IEC 60060-1)
Surge voltage test	4 kV 1.2/50µs (IEC 61000-4-5)
Fast transient burst test	4 kV (IEC 61000-4-4)
Immunity to electromagnetic HF-fields	80 MHz–2 GHz at 10 V/m (IEC 61000-4-3)
Immunity to conducted disturbance	150kHz–80MHz, (IEC 61000-4-6)
Immunity to electromagnetic disturbances	2–150 kHz for kWh-meters
Radio frequency emission	EN 55022, class B (CISPR22)
Electrostatic discharge	15 kV (IEC 61000-4-2)
Standard	
	IEC 62052-11
	IEC 62053-21 class 1 & 2
	IEC 62053-22 class 0,5 S
	IEC 62053-23 class 2
	IEC 62054-21
	GB/T 17215.211-2006
	GB/T 17215.312-2008 class 1 & 2
	GB/T 17215.322- 2008 class 0,5 S
	GB 4208-2008
	EN 50470-1
	EN 50470-3 category A & B

Single phase – Indirect Energy meters

Product codes



A42

Single phase electricity meter, 4DIN with IR Port, 6A, 57.7...288VAC

Class B (Cl. 1) with functionality level Steel. Active energy

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	1 Dig Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705554	A42 111 - 100	2CMA170555R1000	0.200	1
Modbus RTU	MID	1 Dig Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705103	A42 112 - 100	2CMA170510R1000	0.200	1
Mbus	MID	1 Dig Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	002424	A42 113 - 100	2CMA100242R1000	0.200	1

Class 1 (Reactive Class 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl.2- Reactive	705127	A42 312 - 100	2CMA170512R1000	0.200	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Gold. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	4 Configurable I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	002387	A42 552 - 100	2CMA100238R1000	0.200	1
Modbus RTU	MID	4 Configurable I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705189	A42 552 - 120	2CMA100518R1000	0.200	1
Mbus	MID	4 Configurable I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705196	A42 553 - 120	2CMA100519R1000	0.200	1

Three phase – Direct Energy meters

Technical features

NEW



Three phase - Direct			
Energy Meters	D13	B23	A43
Material	Housing and terminal covers: up to 70% recycle plastic Frontal Panel: UV resistant Polyester	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.
Accuracy			
Active Energy	Cl.1 (Class B)	Cl.1 (Class B)	Cl.1 (Class B)
Reactive energy	Cl.2	Cl.2	Cl.2
Voltage/Current Inputs			
Protection fuse/MCB	65 A MCB, C characteristic or 65 A fuse type gL-gG	65 A MCB, C characteristic or 65 A fuse type gL-gG	80 A MCB, C characteristic or 80 A fuse type gL-gG
Nominal voltage	220/380 VAC 240/415 VAC	3x230/400 VAC	3x230/400 V AC
Voltage range	3 x 220-240 VAC +/- 20%	3x220-240 VAC (-20% - +15%)	3x57.7-288/100-500 V AC (-20%-+15%)
Power consumption (240V - Measurement+Comm+Backlight)	0.82 W	1.24 W	0.79 W
Base current Ib	5A	5A	5A
Reference current Iref	5A	5A	5A
Transitional current Itr	0.5 A	0.5 A	0.5 A
Nominal Current	5A	5A	5A
Maximum current Imax	65 A	65 A	80A
Minimum current Imin	0.25 A	0.25 A	0.25 A
Starting current Ist	< 20 mA	< 20 mA	< 20 mA
Frequency	50/60 Hz ± 5%	50/60 Hz ± 5%	50/60 Hz ± 5%
Meter constant	1.000 imp/kWh	1.000 imp/kWh	1.000 imp/kWh
Wiring options	3 Phases – 4 Wires	3 Phases – 4 Wires	3 Phases – 4 Wires
	3 Phases – 3 Wires	3 Phases – 3 Wires	3 Phases – 3 Wires
	2 Phase - 2 Wires (not MID)		
	1 Phase (Line 1) – 2 Wires	1 Phase (Line 1) – 2 Wires	1 Phase (Line 1) – 2 Wires
Protective class	II	II	II
Overvoltage category	III	III	III
Pollution degree	2	2	2
Rated impulse voltage Uimp	6 kV	6 kV	6 kV
Utilization category (UC)	UC-2	UC-2	UC-2

Three phase – Direct Energy meters

Technical features



		Three phase - Direct		
Terminal characteristics		D13	B23	A43
Line terminals	Min. wire cross section	1 mm ²	1 mm ²	2.5 mm ²
	Max. wire cross section	25 mm ²	25 mm ²	25 mm ²
	Screw head	PZ2	PZ2	Ph2
	Tightening torque	2 Nm	3 Nm	4.5 Nm
	Wire stripping length	13 mm	13 mm	13 mm
Neutral terminal	Min. wire cross section	2 x 1 mm ²	1 mm ²	2.5 mm ²
	Max. wire cross section	2 x 25 mm ²	25 mm ²	25 mm ²
	Screw head	PZ2	PZ2	Ph2
	Tightening torque	2 Nm	3Nm	4.5 Nm
	Wire stripping length	13 mm	13 mm	13 mm
Communication and I/O terminals	Min. wire cross section	0,2 mm ²	0,5 mm ²	0,5 mm ²
	Max. wire cross section	2,5 mm ²	1 mm ²	1 mm ²
	Screw head	PZ1	slotted screw	slotted screw
	Tightening torque	0,5 Nm	0,25 Nm	0,25 Nm
	Wire stripping length	6 mm	6 mm	6 mm
Climatic condition				
Operating temperature		-40°C to +70°C		
Storage temperature		-40°C to +85°C		
Environmental conditions, operation		Indoor with extended operating temperature; dry locations		
Altitude		2000 m		
Humidity		75% yearly average, 95% on 30 days/year		
Resistance to fire and heat		Terminal 960°C, cover 650°C (IEC 60695-2-1) – UL V0		
Resistance to water and dust		IP 20 on terminal block without protective enclosure and IP 51 in protective enclosure, according to IEC 60529.		
Mechanical environment		Class M2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).		
Electromagnetic environment		Class E2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).		

Three phase – Direct Energy meters

Technical features



Three phase - Direct			
Energy Meters	D13	B23	A43
User interface			
Access to device	3 pushbuttons	3 pushbuttons	5 pushbuttons
Display type	Dual line display LCD	Single line LCD	Single line LCD
	Configurable backlight	Fixed backlight	Fixed backlight
Display dimensions	36 x 21,1 mm, ~ 1,6" as diagonal	32 x 22,5 mm, 1,8" as diagonal	32 x 22,5 mm, 1,8" as diagonal
Number of digits counter 1	7 digits	7 digits	7 digits
Number of digits counter 2	5 digits	–	–
I/O			
Digital Output			
Number of output	1	2 (Optional)	2 (Optional)
Current	2 - 60mA	2 - 100mA	2 - 100mA
Voltage	5 - 40 VDC (+/-10%)	5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC	5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC
Pulse output frequency	Programmable 1–999999 imp/kWh	Programmable 1–999999 imp/kWh	Programmable 1–999999 imp/kWh
Pulse length	10–990 ms	10–990 ms	10–990 ms
Digital Input			
Number of input	1	2 (Optional)	2 (Optional)
Max Voltage (absolute rating)	44 VDC	0 - 240 V AC/DC	0 - 240 V AC/DC
Off state Voltage	0...5 VDC (+/-10%)	0 - 5 V AC/DC	0 - 5 V AC/DC
ON state Voltage	10...40 VDC (+/-10%)	57 - 240 VAC / 24 - 240 VDC	57 - 240 VAC / 24 - 240 VDC
Min. pulse length and pulse pause	30 ms	30 ms	30 ms
Communication protocol			
M-Bus			
Baud rate	300, 600, 1200, 2400, 4800, 9600	300, 600, 1200, 2400, 4800, 9600, 19200, 38400	300, 600, 1200, 2400, 4800, 9600, 19200, 38400
Address	1-250	1-250	1-250
Access level	Open, Open with password, close	Open, Open with password, close	Open, Open with password, close
Modbus RTU			
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	Odd, Even, None	Odd, Even, None	Odd, Even, None
Address	1-247	1-247	1-247
Pulse Led			
Pulse Frequency	1000 imp/kWh	1000 imp/kWh	5000 imp/kWh
Pulse length	40 ms	40 ms	40 ms

Three phase – Direct Energy meters

Technical features

NEW



Three phase - Direct			
Terminal characteristics	D13	B23	A43
EMC Compatability			
Impulse voltage test	6 kV 1.2/50µs (IEC 60060-1)		
Surge voltage test	4 kV 1.2/50µs (IEC 61000-4-5)		
Fast transient burst test	4 kV (IEC 61000-4-4)		
Immunity to electromagnetic HF-fields	80 MHz–2 GHz at 10 V/m (IEC 61000-4-3)		
Immunity to conducted disturbance	150kHz–80MHz, (IEC 61000-4-6)		
Immunity to electromagnetic disturbances	2–150 kHz for kWh-meters		
Radio frequency emission	EN 55022, class B (CISPR22)		
Electrostatic discharge	15 kV (IEC 61000-4-2)		
Standard	EN 50470-3:2022 (Only for MID meters)	IEC 62052-11	IEC 62052-11
	EN IEC 62052-11:2021/ A11:2022	IEC 62053-21 class 1 & 2	IEC 62053-21 class 1 & 2
	IEC 62052-31:2015-09	IEC 62053-22 class 0,5 S	IEC 62053-22 class 0,5 S
	EN 62052-31:2016-06	IEC 62053-23 class 2	IEC 62053-23 class 2
	EN 62052-31:2018-04	IEC 62054-21	IEC 62054-21
	EN IEC 62053-21/A11:2021	GB/T 17215.211-2006	GB/T 17215.211-2006
	EN IEC 62053-23/A11:2021	GB/T 17215.312-2008 class 1 & 2	GB/T 17215.312-2008 class 1 & 2
	EN IEC 62053-23:2022:02	GB/T 17215.322- 2008 class 0,5 S	GB/T 17215.322- 2008 class 0,5 S
	EN 62059-32-1:2012	GB 4208-2008	GB 4208-2008
	CISPR 32:2015 Class B	EN 50470-1	EN 50470-1
	Welmec Guide 11.1	EN 50470-3 category A & B	EN 50470-3 category A & B
	Welmec Guide 7.2		

Three phase – Direct Energy meters

Product codes



D13

Three phase electricity meter, 3DIN, 65A, 3 x 220/240 VAC,

Class B (Cl.1) (Reactive Cl.2) with functionality level 15.

Active and Reactive energy, Import/export, 2 single tariffs or 4(via communication)

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 8012542	Order details		Weight 1 piece	Pack unit
					EAN	Type code	Order code	kg
–	–	1 Dig. Input 1 Dig. Output	Cl. 1 - Active Cl. 2 – Reactive	636052	D13 15 65	2CMA241725R1000	0.249	1
–	MID	1 Dig. Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 – Reactive	635956	D13 15-M 65	2CMA241695R1000	0.249	1
Modbus RTU	MID	1 Dig. Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 – Reactive	636151	D13 15-M 65 Modbus	2CMA241765R1000	0.249	1
Mbus	MID	1 Dig. Input 1 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 – Reactive	636359	D13 15-M 65 Mbus	2CMA241845R1000	0.249	1



B23

Three phase electricity meter, 4DIN with IR Port, 65A, 3 x 230/400 VAC

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff controll via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
					EAN	Type code	Order code	kg
–	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) – Active Cl. 2 – Reactive	001687	B23 311 - 100	2CMA100168R1000	0.330	1
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) – Active Cl. 2 – Reactive	001694	B23 312 - 100	2CMA100169R1000	0.340	1
Mbus	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) – Active Cl. 2 – Reactive	001700	B23 313 - 100	2CMA100170R1000	0.350	1

Three phase – Direct Energy meters

Product codes



A43

Three phase electricity meter, 7DIN with IR Port, 80A, 3 x 57.7/100...288/500 VAC

Class B (Cl. 1) with functionality level Steel. Active energy

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	Pulse Output	Cl.B (Cl.1) - Active	705202	A43 111 - 100	2CMA170520R1000	0.440	1
Modbus RTU	MID	Pulse Output	Cl.B (Cl.1) - Active	002448	A43 112 - 100	2CMA100244R1000	0.440	1
Mbus	MID	Pulse Output	Cl.B (Cl.1) - Active	002455	A43 113 - 100	2CMA100245R1000	0.440	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze. Active and reactive energy, import/export.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	Pulse Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705226	A43 212 - 100	2CMA170522R1000	0.440	1
Mbus	MID	Pulse Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705233	A43 213 - 100	2CMA170523R1000	0.440	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705257	A43 312 - 100	2CMA170525R1000	0.440	1
Mbus	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705264	A43 313 - 100	2CMA170526R1000	0.440	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Platinum. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand, advanced load profiles, harmonics and THD.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	Configurable 4 I/O	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705318	A43 512 - 100	2CMA170531R1000	0.440	1
Mbus	MID	Configurable 4 I/O	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705325	A43 513 - 100	2CMA170532R1000	0.440	1

Three phase – Indirect Energy meters

Technical features



Three phase - Indirect		
Terminal characteristics	B24	A44
Mechanical		
Material	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.	Polycarbonate in transparent front glass. Glass reinforced polycarbonate in bottom case and upper case. Polycarbonate in terminal cover.
Accuracy		
Active Energy	Cl.1 (Class B) or Cl. 0,5S	Cl.1 (Class B) or Cl. 0,5S
Reactive energy	Cl.2	Cl.2
Voltage/Current Inputs		
Protection fuse/MCB	10 A MCB, B characteristic or Diazes, fast.	10 A MCB, B characteristic or Diazed, fast.
Nominal voltage	3x230/400 VAC	3x230/400 V AC
Voltage range	3x220–240 VAC (-20% – +15%)	3x57.7-400/100-690 V AC (-20% - + 15%) on A44 xxx-x1x 3x57.7-288/100-500 V AC (-20% - + 15%) on all other types
Power consumption (240V - Measurement+Comm+Backlight)	1.18 W	0.96 W
Rated Current	1A	1A
Reference current Iref	–	1A
Transitional current Itr	0.05	0.05
Nominal Current	6A	6A
Maximum current I _{max}	6A	6A
Minimum current I _{min}	0.02A	0.01A
Starting current I _{st}	< 1 mA	< 1 mA
Frequency	50/60 Hz ± 5%	50/60 Hz ± 5%
Meter constant	1.000 imp/kWh	1.000 imp/kWh
Wiring options	3 Phases – 4 Wires	3 Phases – 4 Wires
	3 Phases – 3 Wires	3 Phases – 3 Wires
	1 Phase (Line 1) – 2 Wires	1 Phase (Line 1) – 2 Wires
Protective class	II	II
Overvoltage category	III	III
Pollution degree	2	2
Rated impulse voltage U _{imp}	6kV	6kV
Utilization category (UC)	UC-1	UC-1

Three phase – Indirect Energy meters

Technical features



Three phase - Indirect			
Terminal characteristics		B24	A44
Line terminals	Min. wire cross section	0,5 mm²	0,5 mm²
	Max. wire cross section	10 mm²	10 mm²
	Screw head	PZ2	Ph2
	Tightening torque	1.5 Nm	1.5 Nm
	Wire stripping lenght	13 mm	13 mm
Neutral terminal	Min. wire cross section	0,5 mm²	0,5 mm²
	Max. wire cross section	10 mm²	10 mm²
	Screw head	PZ2	Ph2
	Tightening torque	1.5 Nm	1.5 Nm
	Wire stripping lenght	13 mm	13 mm
Communication and I/O terminals	Min. wire cross section	0,5 mm²	0,5 mm²
	Max. wire cross section	1 mm²	1 mm²
	Screw head	slotted screw	slotted screw
	Tightening torque	1.5 Nm	1.5 Nm
	Wire stripping lenght	6 mm	6 mm
Climatic condition			
Operating temperature		-40°C to +70°C	
Storage temperature		-40°C to +85°C	
Environmental conditions, operation		Indoor with extended operating temperature; dry locations	
Altitude		2000 m	
Humidity		75% yearly average, 95% on 30 days/year	
Resistance to fire and heat		Terminal 960°C, cover 650°C (IEC 60695-2-1) – UL V0	
Resistance to water and dust		IP 20 on terminal block without protective enclosure and IP 51 in protective enclosure, according to IEC 60529.	
Mechanical environment		Class M2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).	
Electromagnetic environment		Class E2 in accordance with the Measuring Instrument Directive. (MID), (2014/32/EU).	
User interface			
Access to device		3 pushbuttons	5 pushbuttons
Display type		Single line LCD	Single line LCD
		Fixed backlight	Fixed backlight
Display dimensions		32 x 22,5 mm, 1,8" as diagonal	32 x 22,5 mm, 1,8" as diagonal
Number of digits counter 1		7 digits	7 digits
I/O			
Digital Output			
Number of output		2 (Optional)	2 (Optional)
Current		2 - 100mA	2 - 100mA
Voltage		5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC	5 - 240 V AC/DC. For meters with only 1 output 5 - 40 VDC
Pulse output frequency		Programmable 1–999999 imp/kWh	Programmable 1–999999 imp/kWh
Pulse length		10–990 ms	10–990 ms

Three phase – Indirect Energy meters

Technical features



Three phase - Indirect		
Terminal characteristics	B24	A44
Digital Input		
Number of input	2 (Optional)	2 (Optional)
Max Voltage (absolute rating)	0 - 240 V AC/DC	0 - 240 V AC/DC
Off state Voltage	0 - 5 V AC/DC	0 - 5 V AC/DC
ON state Voltage	57 - 240 VAC / 24 - 240 VDC	57 - 240 VAC / 24 - 240 VDC
Min. pulse length and pulse pause	30 ms	30 ms
Communication protocol		
M-Bus		
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200, 38400	300, 600, 1200, 2400, 4800, 9600, 19200, 38400
Address	1-250	1-250
Access level	Open, Open with password, close	Open, Open with password, close
Modbus RTU		
Baud rate	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Parity	Odd, Even, None	Odd, Even, None
Address	1-247	1-247
Pulse Led		
Pulse Frequency	5000 imp/kWh	5000 imp/kWh
Pulse length	40 ms	40 ms
EMC Compatability		
Impulse voltage test	6 kV 1.2/50µs (IEC 60060-1)	
Surge voltage test	4 kV 1.2/50µs (IEC 61000-4-5)	
Fast transient burst test	4 kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields	80 MHz~2 GHz at 10 V/m (IEC 61000-4-3)	
Immunity to conducted disturbance	150kHz~80MHz, (IEC 61000-4-6)	
Immunity to electromagnetic disturbances	2~150 kHz for kWh-meters	
Radio frequency emission	EN 55022, class B (CISPR22)	
Electrostatic discharge	15 kV (IEC 61000-4-2)	
Standard	IEC 62052-11	
	IEC 62053-21 class 1 & 2	
	IEC 62053-22 class 0,5 S	
	IEC 62053-23 class 2	
	IEC 62054-21	
	GB/T 17215.211-2006	
	GB/T 17215.312-2008 class 1 & 2	
	GB/T 17215.322- 2008 class 0,5 S	
	GB 4208-2008	
	EN 50470-1	
	EN 50470-3 category A & B	

Three phase – Indirect Energy meters

Product codes



B24

Three phase electricity meter, 4DIN with IR Port, 6A, 3 x 230/400 VAC

Class B (Cl. 1) with functionality level Steel. Active energy

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	Pulse Output	Cl.B (Cl.1) - Active	001779	B24 111 - 100	2CMA100177R1000	0.250	1
Modbus RTU	MID	Pulse Output	Cl.B (Cl.1) - Active	001786	B24 112 - 100	2CMA100178R1000	0.250	1
Mbus	MID	Pulse Output	Cl.B (Cl.1) - Active	001793	B24 113 - 100	2CMA100179R1000	0.270	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze.

Active and reactive energy, import/export.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	Pulse Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	001809	B24 212 - 100	2CMA100180R1000	0.250	1

Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Silver.

Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Class C / Cl. 0.5 S - Active Cl. 2 - Reactive	001830	B24 352 - 100	2CMA100183R1000	0.270	1
Mbus	MID	2 Dig Input 2 Dig. Output	Class C / Cl. 0.5 S - Active Cl. 2 - Reactive	001847	B24 353 - 100	2CMA100184R1000	0.290	1



A44

Three phase electricity meter, 7DIN with IR Port, 6A, 3 57.7/100...288/500 VAC

Class B (Cl. 1) with functionality level Steel. Active energy

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	Pulse Output	Cl.B (Cl.1) - Active	705332	A44 111 - 100	2CMA170533R1000	0.350	1
Modbus RTU	MID	Pulse Output	Cl.B (Cl.1) - Active	002486	A44 112 - 100	2CMA100248R1000	0.350	1
Mbus	MID	Pulse Output	Cl.B (Cl.1) - Active	002493	A44 113 - 100	2CMA100249R1000	0.350	1

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Bronze. Active and reactive energy, import/export.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	Pulse Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	000130	A44 211 - 100	2CMA100013R1000	0.350	1
Modbus RTU	MID	Pulse Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705349	A44 212 - 100	2CMA170534R1000	0.350	1
Mbus	MID	Pulse Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705356	A44 213 - 100	2CMA170535R1000	0.350	1

Three phase – Indirect Energy meters

Product codes



A44

Three phase electricity meter, 7DIN with IR Port, 6A, 3 57.7/100...288/500 VAC

Class B (Cl. 1) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
–	MID	2 Dig Input 2 Dig. Output	Cl.B (Cl.1) - Active Cl. 2 - Reactive	705363	A44 311 - 100	2CMA170536R1000	0.350	1

Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Silver. Active and reactive energy, import/export, tariffs 1-4, tariff control via inputs and communication.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705370	A44 352 - 100	2CMA170537R1000	0.350	1
Mbus	MID	2 Dig Input 2 Dig. Output	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705387	A44 353 - 100	2CMA170538R1000	0.350	1

Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Gold. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	2 Dig Input 2 Dig. Output	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705400	A44 452 - 100	2CMA170540R1000	0.350	1

Class C (Cl. 0.5 S) (Reactive Cl. 2) with functionality level Platinum. Active and reactive energy, import/export, tariffs 1-4, tariff controlled via inputs, communication or clock, previous values, max and min demand, advanced load profiles, harmonics and THD.

Communic. Protocol	Certif.	I/O	Energy Accuracy	Bbn 7392696	Order details		Weight 1 piece	Pack unit
				EAN	Type code	Order code	kg	pc.
Modbus RTU	MID	Configurable 4 I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705455	A44 552 - 100	2CMA170545R1000	0.350	1
Mbus	MID	Configurable 4 I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705462	A44 553 - 100	2CMA170546R1000	0.350	1
Modbus RTU	MID	Configurable 4 I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705493	A44 552 - 110	2CMA170549R1000	0.350	1
Mbus	MID	Configurable 4 I/O	Class C / Cl. 0.5 S- Active Cl. 2- Reactive	705486	A44 553 - 110	2CMA170548R1000	0.350	1



InSite energy management system - SCU100

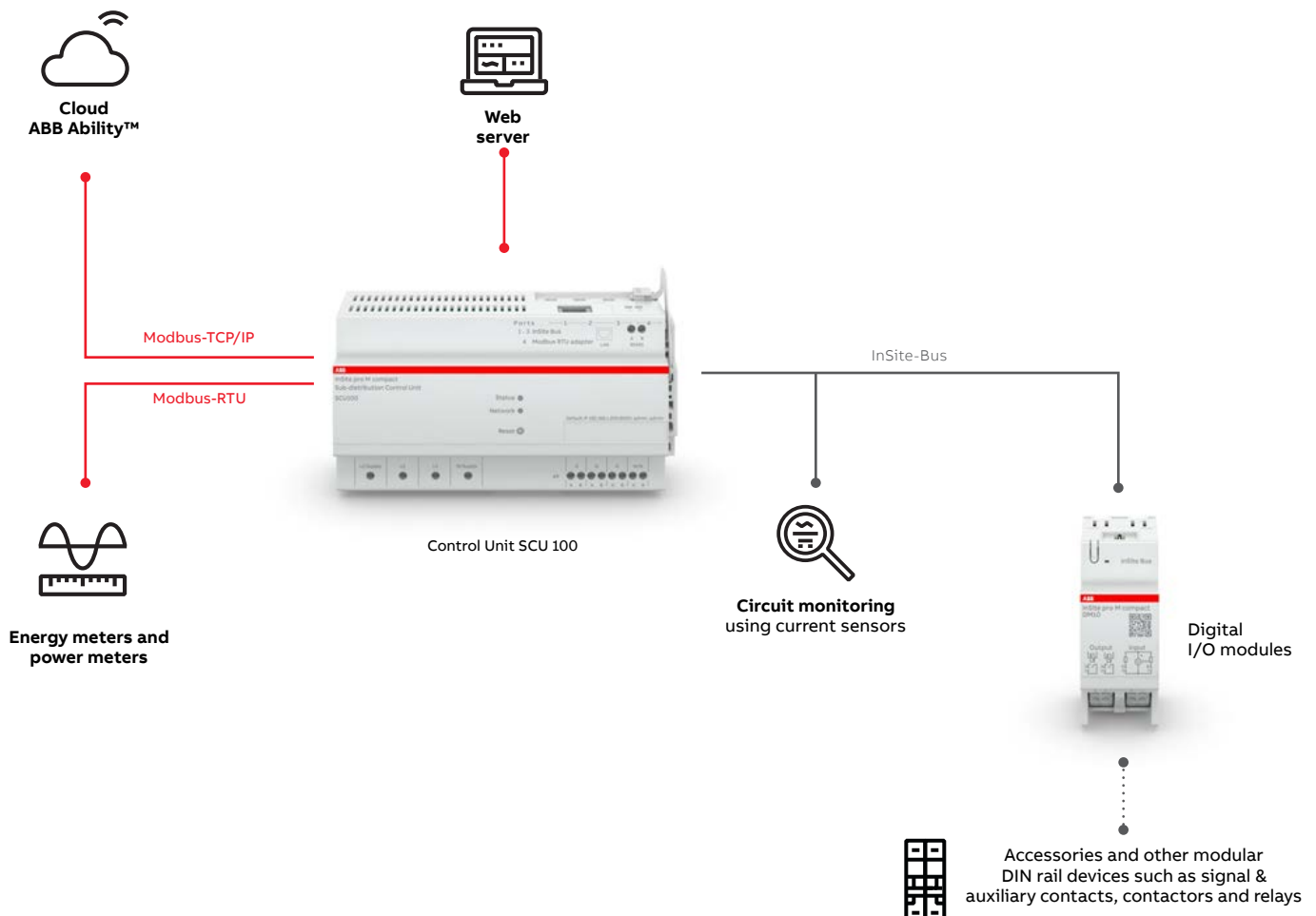
Connected solution for sub distribution

The InSite energy management system allows you to collect data from field devices in electrical distribution, as well as control and automate them through the use of accessories. Specifically recommended for large commercial and industrial applications, the SCU100 control unit is capable of simultaneously gathering measurement data from up to 16 energy and power meters, as well as 96 current sensors and digital sensors.

Thanks to its modular system, InSite is designed to easily upgrade new and existing installations, reducing installation and configuration time to near zero and minimizing disruption and costly downtime.

In addition to the current sensors, the range is complemented by a selection of Digital Input and Output Modules that can be easily connected to ABB System pro M compact® protection devices and accessories, as well as to pulse meters such as gas or water meters to collect consumption data.

Based on a variety of data, the available functionalities range from simple monitoring of the plant to analysis of historical data, customized alarms and implementation of automatic measures to reduce energy consumption. Reduce energy consumption, identify potential risks and ensure business continuity.

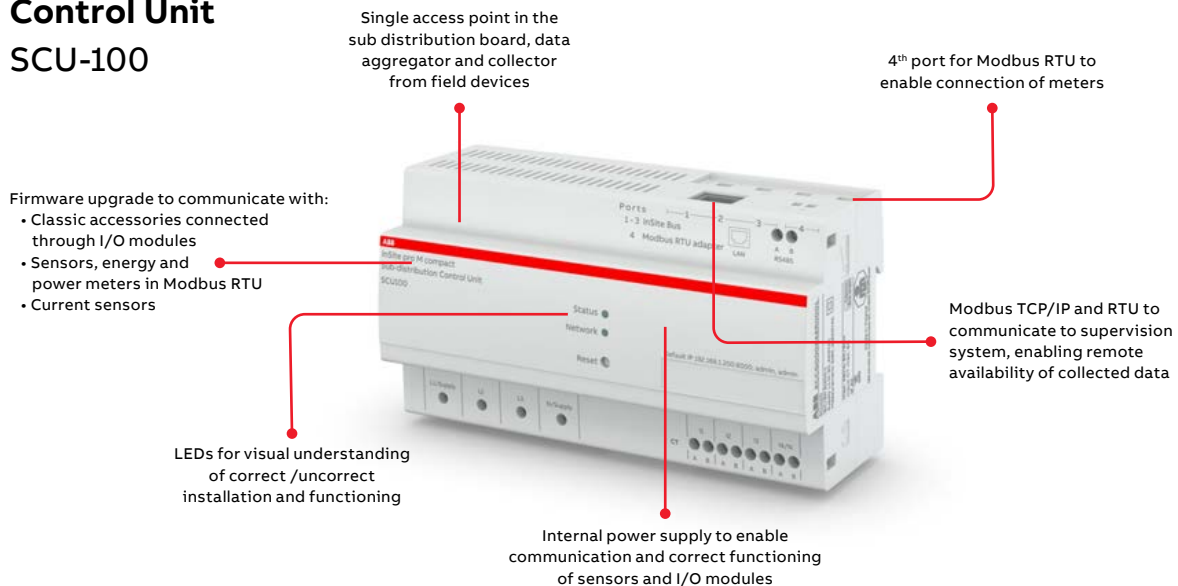




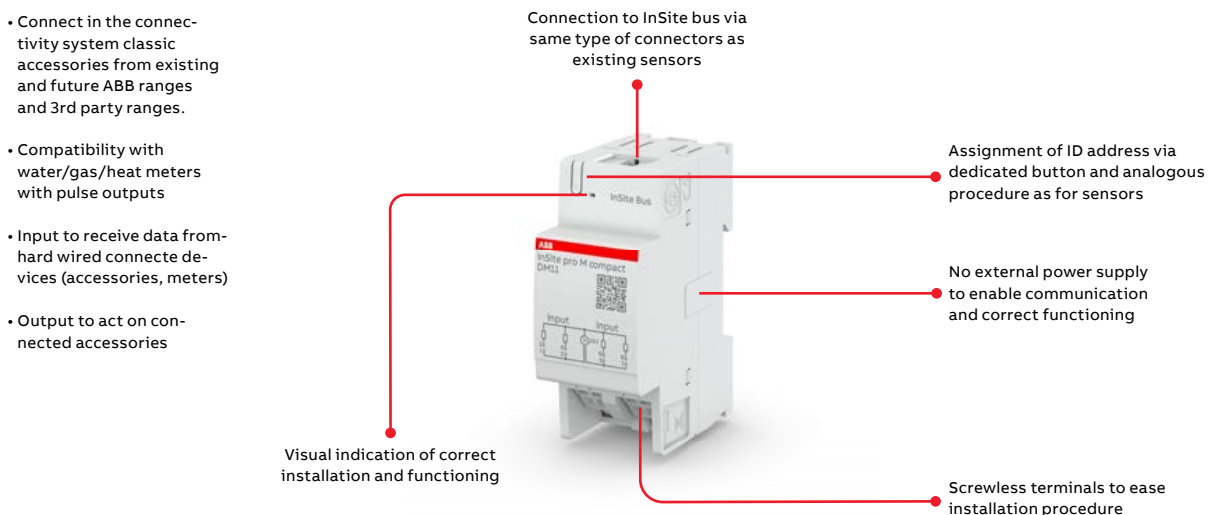
What to include in the panel:

- 1 Control Unit
- 2 Digital I/O modules

1 Control Unit SCU-100



2 Digital Input/Output modules DM00, DM10, DM11



The evolution of the InSite system

Range comparison for optimal product selection

SECTION 12

SCU100



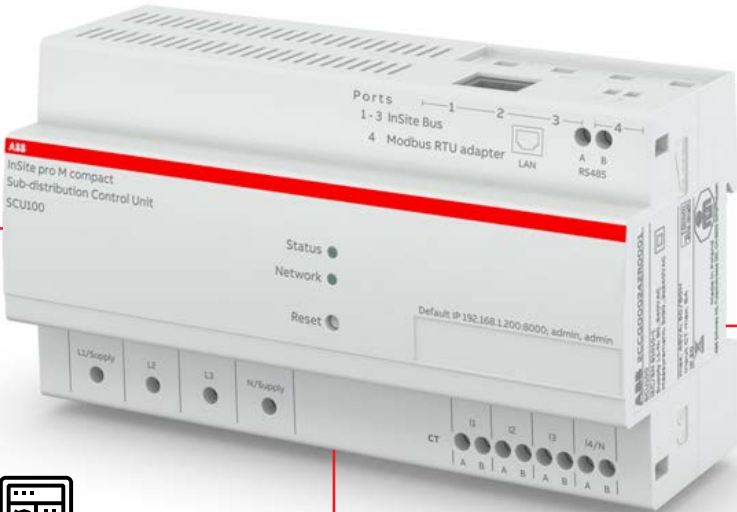
Comprehensive approach



Mainly for installations with high number of branches to be monitored



More suitable for integration with local 3rd party monitoring systems



Technical feature	Description
Number of connectable devices (CMS sensors, IO modules, smart aux/sign)through CMS flat cable	Up to 96
Smart signal/auxiliary contact connection	no
Number of integrable Modbus devices	Up to 16 (RTU or TCP/IP)
Max current measurable directly by an InSite device	Depending on the 5A current transformers connected to the control unit
Number of Modbus RTU interfaces	2
Wi-Fi connection	no
Power supply	AC
Expandable memory storage	no

RECOMMENDED APPLICATIONS



Industrial



Data Centers



Large Commercial

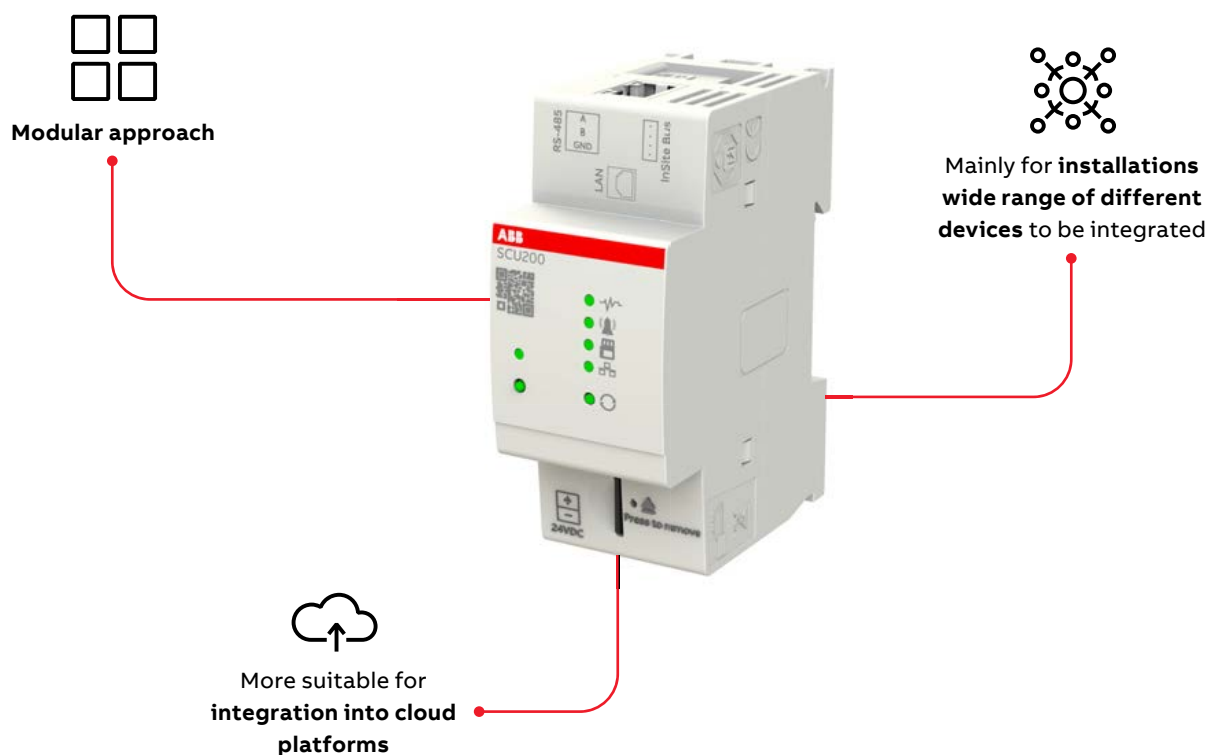
SUITABLE FEATURES

- **Higher number of loads** monitored through sensors by a single control unit
- **Wired connection to LAN** that empowers **cybersecurity**
- **Higher mains current magnitude measurement** thanks to 5A current transformers

The evolution of the InSite system

Range comparison for optimal product selection

SCU200



Technical feature	Description
Number of connectable devices (CMS sensors, IO modules, smart aux/sign)through CMS flat cable	Up to 32
Smart signal/auxiliary contact connection	yes
Number of integrable Modbus devices	Up to 32 (16 RTU + 16 TCP/IP)
Max current measurable directly by an InSite device	80A
Number of Modbus RTU interfaces	1
Wi-Fi connection	yes
Power supply	AC and DC
Expandable memory storage	Yes (SD card)

RECOMMENDED APPLICATIONS



SUITABLE FEATURES

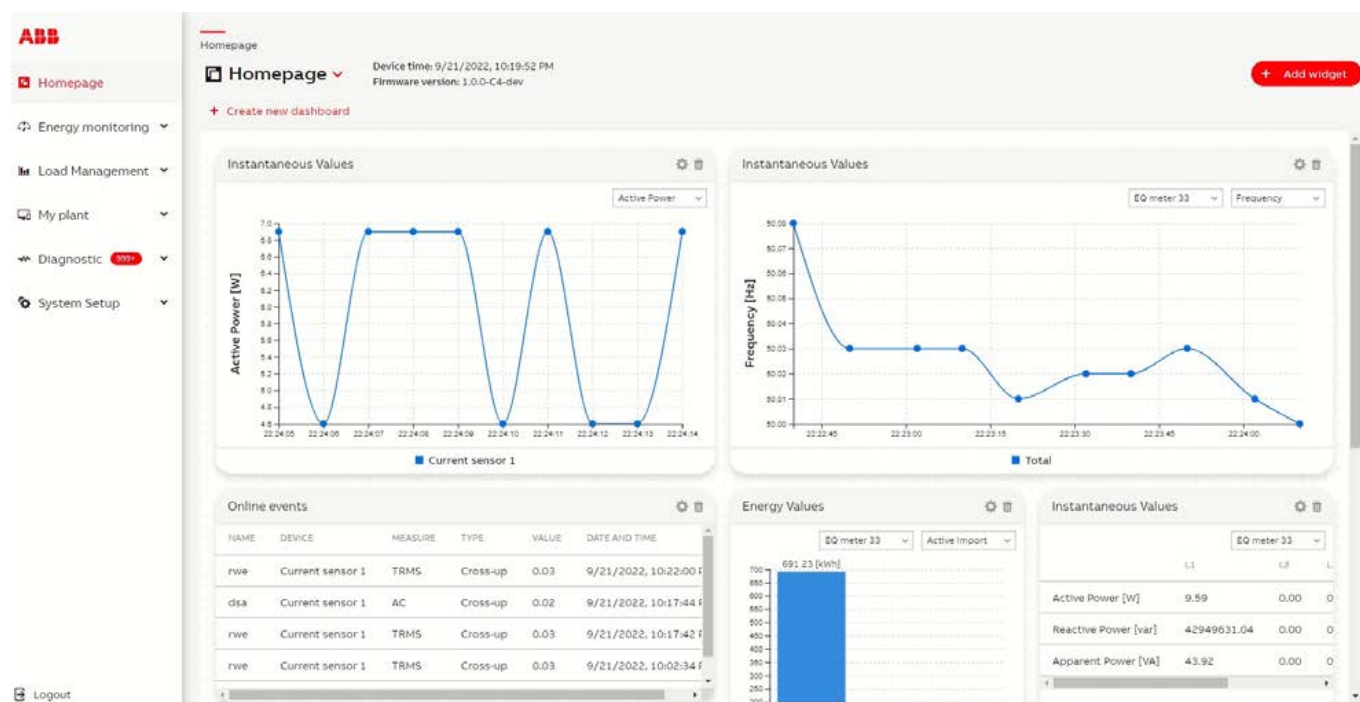
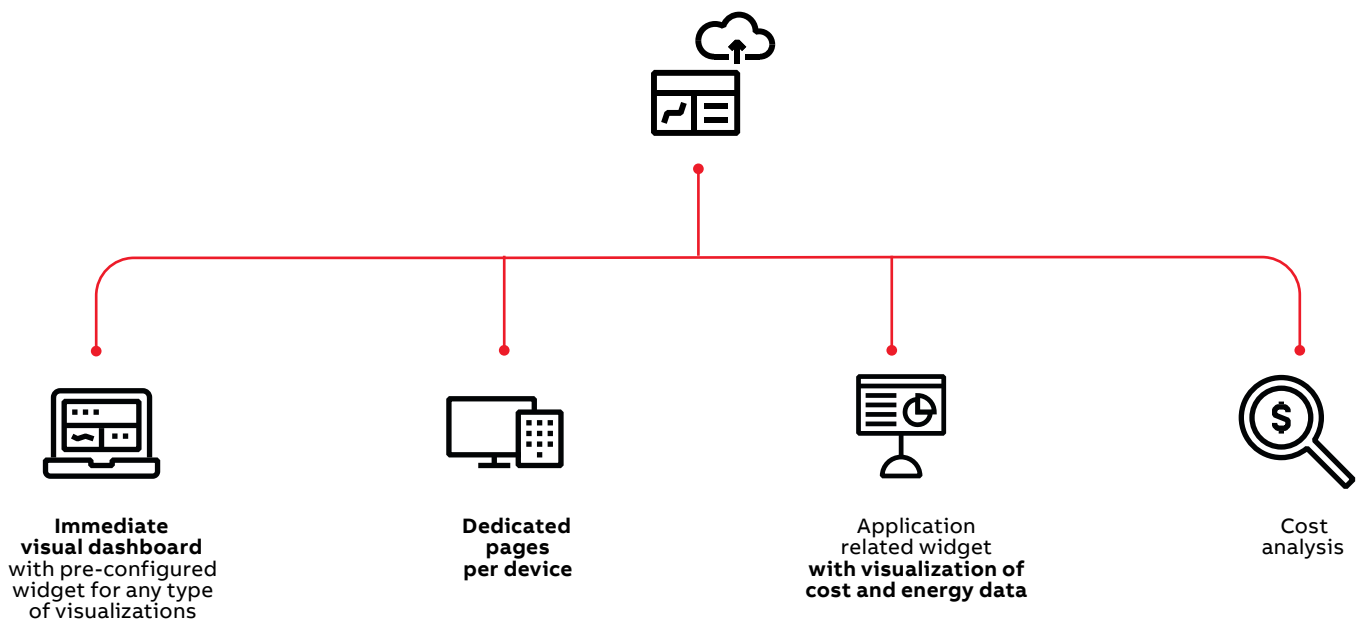
- **Reduced dimensions**
- **Wi-Fi connection**
- **Higher number of Modbus devices**
that can be connected to one control unit
- **Smart signal/auxiliary contact** available
- **DC power supply** possible

InSite SCU200 web server

Highlights

Once the system is installed, it can be connected to the integrated InSite web server with automatic device recognition. It provides remote access to data transmitted of the field devices, as well as a step-by-step

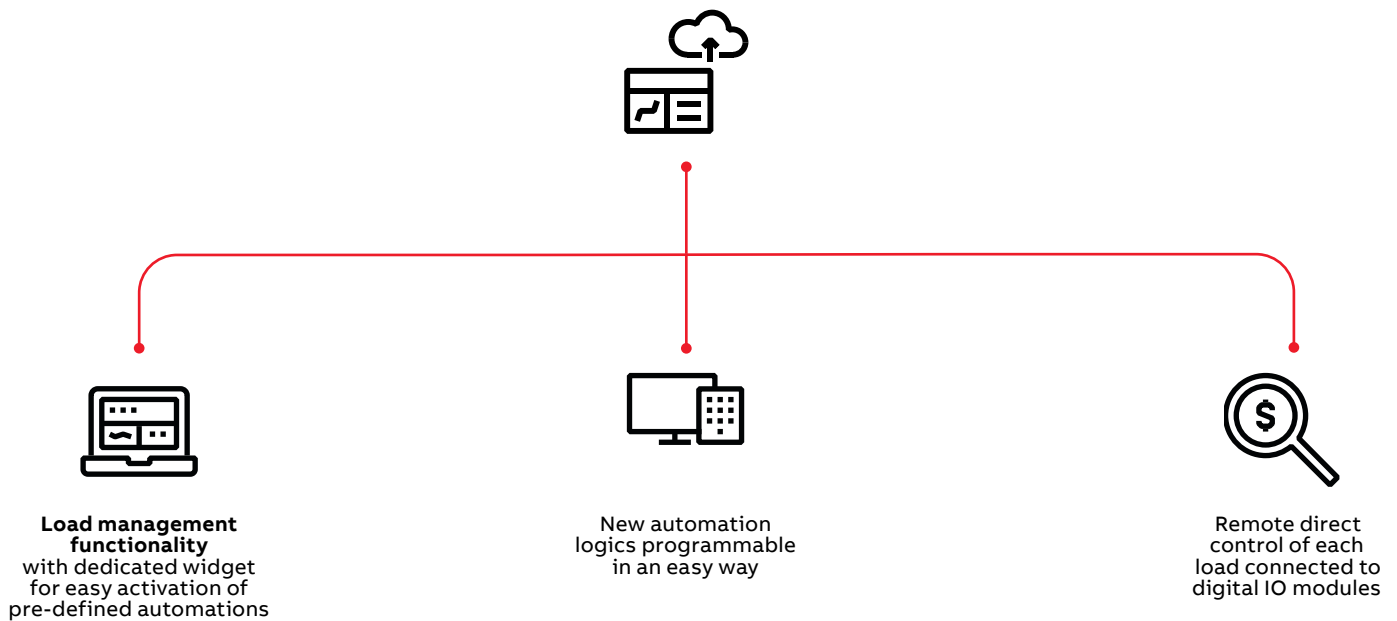
installation wizard, a cost calculation feature, and automated actions to optimize the prioritization of loads for the most efficient use of energy.



InSite web server dashboard

InSite SCU200 web server

Highlights



ABB

- Homepage
- Energy monitoring
- Load Management**
 - Dashboard
 - Control**
 - Automations
- My plant
- Diagnostics 315
- System Setup
- Logout

Load Management

Control

MODBUS ID	PORT	PORT NAME	DEVICE TYPE	ACCESSORY TYPE	STATUS	ACTION
1	1	I/O Module 1 Port 1	-	-	Close	☒
1	2	I/O Module 1 Port 2	-	-	Close	☒
3	1	I/O Module 3 Port 1	-	-	Open	☐
3	2	I/O Module 3 Port 2	-	-	Open	☐
3	3	I/O Module 3 Port 3	-	-	Open	☐
3	4	I/O Module 3 Port 4	-	-	Open	☐

InSite web server - load management functionality

InSite energy management system

The evolution of the system - SCU200

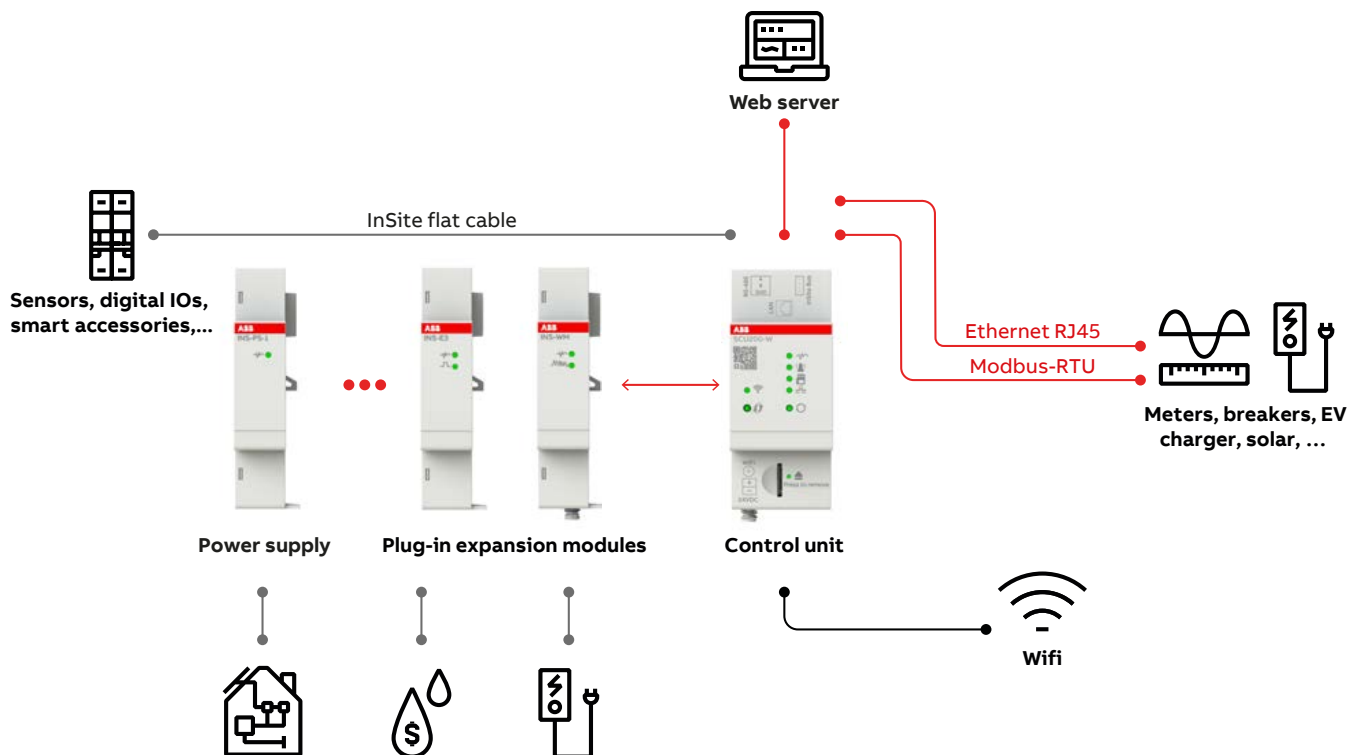
The InSite system takes smart energy and load management to the next level, providing a complete solution to optimize energy usage in both sub and final distribution. Through the compact control unit SCU200, data is gathered from the field devices, and then can be accessed via the InSite web server, the ABB Ability™ Energy & Asset Manager or any third-party application.

The new plug-in expansion modules allow the system to be adapted even better to the respective application needs.

Depending on measurement and optimization goals, Wireless M-Bus and Energy Meter modules can be used and plugged to the control unit without tools.

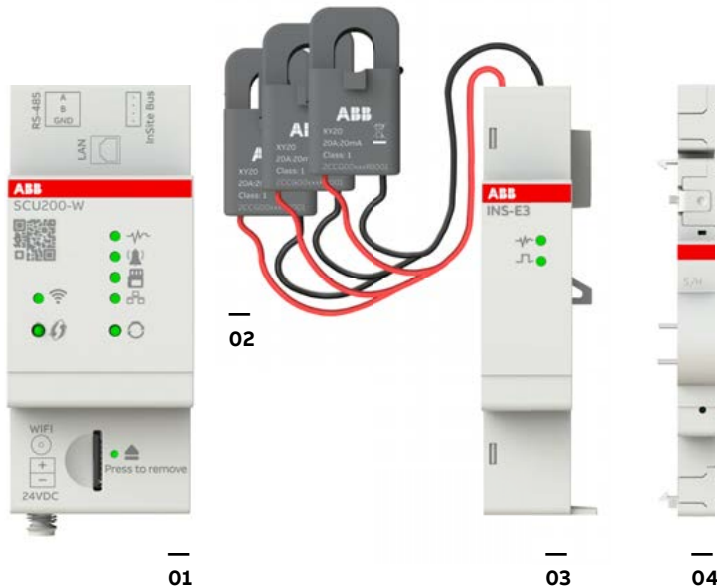
With more automation logics available, load prioritization is optimized, enabling the most efficient use of energy in any residential, commercial or industrial space. And thanks to the openness to third-party integration, loads such as heat pumps, Electrical Vehicles chargers or energy storage units can also be easily connected to the system, further increasing the potential for energy savings.

The integrated InSite web server has evolved to now include a cost calculation feature, a step-by-step installation wizard and advanced options for setting automated actions to control loads in residential, commercial and industrial buildings, enabling energy savings of up to 20%.



InSite energy management system

Range overview

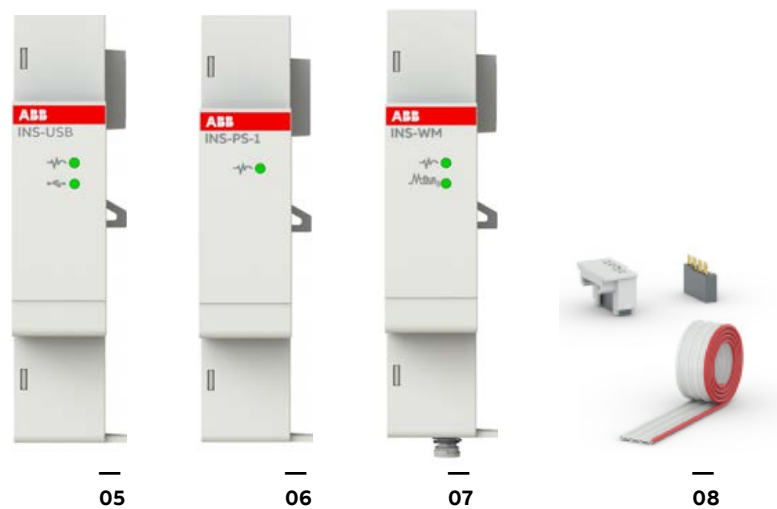


01
Control Unit SCU200 / SCU200-W
The core of the system
with integrated web server

02
Split-core Current Transformers
Connectable to Energy Meter module,
for up to 20A, 50A and 80A, Class 1

03
Energy Meter module
for 1-phase and 3-phase measurement

04
Smart Auxiliary and Signal device
for protection device smart monitoring



05
USB module
for the connection of smart meters
with P1 port

06
Power Supply module
AC to DC converter

07
Wireless M-Bus plug-in expansion module
for the integration of
Wireless M-Bus devices

08
InSite flat cable (INS)
for an easy and fast connection of CMS
sensors, I/O modules and smart accessories



09
Power Supply module - 2

10
Energy Metering module - 5A

11
Tap-off Box module

Electronic relays and controls

331	Monitoring relays - Three phase
335	Timers
336	Power supplies
338	Pluggable interface relays and optocouplers



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

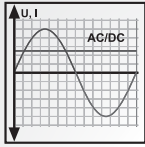
or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Measuring and monitoring relays

Assortment overview

Single-phase current and voltage monitoring



Current monitoring

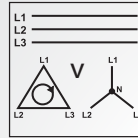
- Monitoring of motor current consumption
- Monitoring of lighting installations and heating circuits
- Monitoring of transportation equipment overload
- Monitoring of locking devices, electromechanical brake gear and locked rotors

Voltage monitoring

- Speed monitoring of DC motors
- Monitoring of battery voltages and other supply networks

Please contact us for more information.

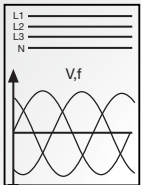
Three-phase monitoring



- Voltage monitoring of mobile three-phase equipment
- Protection of personnel and installations against phase reversal
- Monitoring of the supply voltage of machines and installations
- Protection of equipment against damage caused by unstable supply voltage
- Switching to emergency or auxiliary supply
- Protection of motors against damage caused by unbalanced phase voltages and phase loss

See “Ordering details - Singlefunctional” on page 329 or “Ordering details - Multifunctional” on page 330.

Grid feeding monitoring relays

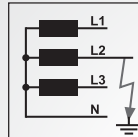


The CM-UFx range monitors all voltage and frequency parameters in a grid and ensures the safe feeding of decentral produced electrical energy into the grid.

- Monitoring of the voltage with up to 2 thresholds for over- and undervoltage
- Monitoring of the frequency with up to 2 thresholds for over- and underfrequency
- ROCOF (rate of change of frequency) and vector shift detection
- In compliance with several local standards

Please contact us for more information.

Insulation monitoring



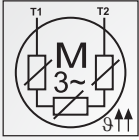
- Monitoring of electrically isolated supply mains for insulation resistance failure
- Detection of initial faults
- Protection against earth faults

Please contact us for more information.

Measuring and monitoring relays

Assortment overview

Thermistor motor protection

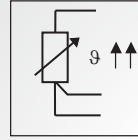


CM-MSE and CM-MSS provide full protection of motors with integrated PTC resistor sensors.

- Protection of motors against thermal overload, e. g. caused by insufficient cooling, heavy load starting conditions, undersized motors, etc.

Please contact us for more information.

Temperature monitoring

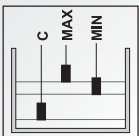


Acquisition, messaging and regulation of temperatures of solid, liquid and gaseous media in processes and machines.

- Motor and system protection
- Control panel temperature monitoring
- Frost monitoring
- Temperature limits for process variables, e.g. in the packing or electroplating industry
- Control of systems and machines like heating, air-conditioning and ventilation systems, solar collectors, heat pumps or hot water supply systems
- Monitoring of servomotors with KTY sensors
- Bearing and gear oil monitoring
- Coolant monitoring

Please contact us for more information.

Liquid level monitoring and control



- Protection of pumps against dry running
- Protection against container overflow
- Control of liquid levels
- Detection of leaks
- Control of mixing ratios

Please contact us for more information.

Three-phase monitoring relays

Selection table - Singlefunction

Rated control supply voltage U_c



CM-PSS.41P

1SVR730794R2300

Type	Order number	CM-PBE	CM-PBE	CM-PVE	CM-PVE	CM-PFE	CM-PFE.2	CM-PFS.S	CM-PFS.P	CM-PSS.31S	CM-PSS.31P	CM-PSS.41S	CM-PSS.41P	CM-PVS.31S	CM-PVS.31P	CM-PVS.41S	CM-PVS.41P	CM-PVS.81S	CM-PVS.81P	CM-PAS.31S	CM-PAS.31P	CM-PAS.41S	CM-PAS.41P
	1SVR550881R9400		1SVR550882R9500	1SVR550870R9400	1SVR550871R9500	1SVR550824R9100	1SVR550826R9100	1SVR730824R9300	1SVR740824R9300	1SVR730784R2300	1SVR740784R2300	1SVR730784R3300	1SVR740784R3300	1SVR730794R1300	1SVR740794R1300	1SVR730794R3300	1SVR740794R3300	1SVR730794R2300	1SVR740794R2300	1SVR730774R1300	1SVR740774R1300	1SVR730774R3300	1SVR740774R3300
Rated control supply voltage U_c																							
Phase to phase																							
160-300 V AC														■	■					■	■		
200-400 V AC																		■	■				
200-500 V AC							■	■	■														
208-440 V AC						■																	
300-500 V AC																■	■					■	■
320-460 V AC				■	■																		
380 V AC										■	■												
380-440 V AC	■	■																					
400 V AC												■	■										
Phase to neutral																							
185-265 V AC			■																				
220-240 V AC	■																						
Rated frequency																							
50/60 Hz	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Suitable for monitoring																							
Single-phase mains	■		■																				
Three-phase mains	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Monitoring function																							
Phase failure	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Phase sequence					■	■	■	■	sel	sel	sel	sel	sel	sel	sel	sel	sel	sel	sel	■	■	■	■
Overvoltage			■	■					■	■	■	■	■	■	■	■	■	■	■				
Undervoltage			■	■					■	■	■	■	■	■	■	■	■	■	■				
Unbalance																				■	■	■	■
Neutral ¹⁾	■		■																				
Thresholds																							
adjustable (adj) or fixed (fix)	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	fix	adj	adj	adj	adj	adj	adj	adj	adj
Timing functions for tripping delay																							
ON delay							fix	fix												sel	sel	sel	sel
On and OFF delay	fix	fix	fix	fix	fix	fix			adj	adj	adj	adj	adj	adj	adj	adj	adj	adj					
Connection type																							
Push-in terminals										■		■		■		■		■		■		■	■
Double-chamber cage connection terminals										■		■		■		■		■		■		■	■

¹⁾ The external conductor voltage towards the neutral conductor is measured.

adj: adjustable.

sel: selectable.

fix: fixed.

Three-phase monitoring relays

Selection table - Multifunctional

Rated control supply voltage U_c



CM-MPS.23P

	Type	Order Code
	CM-MPS.11S	1SVR730885R1300
	CM-MPS.11P	1SVR740885R1300
	CM-MPS.21S	1SVR730885R3300
	CM-MPS.21P	1SVR740885R3300
	CM-MPS.31S	1SVR730884R1300
	CM-MPS.31P	1SVR740884R1300
	CM-MPS.41S	1SVR730884R3300
	CM-MPS.41P	1SVR740884R3300
	CM-MPS.23S	1SVR730885R4300
	CM-MPS.23P	1SVR740885R4300
	CM-MPS.43S	1SVR730884R4300
	CM-MPS.43P	1SVR740884R4300
	CM-MPN.52S	1SVR750487R8300
	CM-MPN.52P	1SVR760487R8300
	CM-MPN.62S	1SVR750488R8300
	CM-MPN.62P	1SVR760488R8300
	CM-MPN.72S	1SVR750489R8300
	CM-MPN.72P	1SVR760489R8300
Phase to phase		
160-300 V AC		
300-500 V AC		
350-580 V AC		
450-720 V AC		
530-820 V AC		
Phase to Neutral		
90-170 V AC		
180-280 V AC		
Rated frequency		
50/60 Hz		
50/60/400 Hz		
Suitable for monitoring		
Single-phase mains		
Three-phase mains		
Monitoring function		
Phase failure		
Phase sequence		
Automatic phase sequence correction		
Overvoltage		
Undervoltage		
Unbalance		
Neutral ¹⁾		
Thresholds		
adj adj adj adj adj adj adj adj adj adj adj adj adj adj adj adj adj adj		
Timing functions for tripping delay		
On and OFF delay		
Connection type		
Push-in terminals		
Double-chamber cage connection terminals		

¹⁾ The external conductor voltage towards the neutral conductor is measured.

adj: adjustable.
sel: selectable.

Timers

Order Codes – CT-D range



The CT-D range in MDRC design with a width of only 17.5 mm fits into all domestic installation and distribution panels. The CT-D range represents a link between industry and the installation types. For maximum flexibility in operation. The devices offer 4 or 7 time ranges from 0.05 seconds up to 100 hours. Their wide input range allows the use in applications worldwide.

Ordering details - CT-D range

Timing function	Rated control supply voltage	Time ranges	Control input	Output	Type	Order Code	Weight (1 pce) kg (lb)
Multi ¹⁾	24-240 V AC / 24-48 V DC	7 (0.05 s - 100 h)	■	1 c/o	CT-MFD.12	1SVR500020R0000	0.060 (0.132)
Multi ¹⁾	12-240 V AC/DC	7 (0.05 s - 100 h)	■	2 c/o	CT-MFD.12	1SVR500020R1100	0.065 (0.143)
ON-delay	24-240 V AC / 24-48 V DC	7 (0.05 s - 100 h)		1 c/o	CT-ERD.12	1SVR500100R0000	0.060 (0.132)
OFF-delay	24-240 V AC / 24-48 V DC	7 (0.05 s - 100 h)	■	1 c/o	CT-AHD.12	1SVR500110R0000	0.060 (0.132)
Impulse--ON	24-240 V AC / 24-48 V DC	7 (0.05 s - 100 h)		1 c/o	CT-VWD.12	1SVR500130R0000	0.060 (0.132)
Flasher starting with ON	24-240 V AC / 24-48 V DC	7 (0.05 s - 100 h)		1 c/o	CT-EBD.12	1SVR500150R0000	0.060 (0.132)
Pulse generator	24-240 V AC / 24-48 V DC	2 x 7 (0.05 s - 100 h)	■	1 c/o	CT-TGD.12	1SVR500160R0000	0.060 (0.132)
Star Delta changeover	24-240 V AC / 24-48 V DC	4 (0.05 s - 10 min)		2 c/o	CT-SAD.22	1SVR500210R0100	0.065 (0.143)

Power Supplies

Order Codes – CP-D & CP-E range



The CP-D of modular power supply units in MDRC design (modular DIN rail components) is ideally suited for installation in distribution panels. This range offers devices with output voltages of 12 V DC and 24 V DC at output currents of 0.42 A to 4.2 A. Thanks to their high thermal efficiency, these power supplies have very low power and heat dissipation and can be operated without forced cooling. All power supply units in the CP-D range are approved according to all relevant international standards.

Ordering details - CP-D range

Input voltage range	Rated output voltage / current	Type	Order Code	Weight (1 pce) kg (lb)
90-264 V AC / 120-375 V DC	12 V DC / 0.83 A	CP-D 12/0.83	1SVR427041R1000	0.06 (0.13)
90-264 V AC / 120-375 V DC	12 V DC / 2.1 A	CP-D 12/2.1	1SVR427043R1200	0.19 (0.41)
90-264 V AC / 120-375 V DC	24 V DC / 0.42 A	CP-D 24/0.42	1SVR427041R0000	0.06 (0.13)
90-264 V AC / 120-375 V DC	24 V DC / 1.3 A	CP-D 24/1.3	1SVR427043R0100	0.19 (0.41)
90-264 V AC / 120-375 V DC	24 V DC / 2.5 A	CP-D 24/2.5	1SVR427044R0200	0.25 (0.56)
90-264 V AC / 120-375 V DC	24 V DC / 4.2 A	CP-D 24/4.2	1SVR427045R0400	0.32 (0.71)

This range offers types with output voltages from 5 V DC to 48 V DC at output currents of 0.625 A to 20 A. With their high thermal efficiency of up to 90%, these power supplies have very low power and heat dissipation and can be operated without forced cooling. The functionality has been enhanced while the number of different types has been considerably reduced. Of course, all power supplies of the CP-E range are approved in accordance with all relevant international standards.

Ordering details - CP-E range

Input voltage range function	Rated output voltage / current	Type	Order Code	Weight (1 pce) kg (lb)
90-264 V AC / 120-375 V DC	24 V DC / 0.75 A	CP-E.24 / 0.75 A	1SVR427030R0000	0.15 (0.33)
90-264 V AC / 90-375 V DC	24 V DC / 1.25 A	CP-E.24 / 1.25 A	1SVR427032R1000	0.29 (0.64)
90-264 V AC / 90-375 V DC	24 V DC / 2.5 A	CP-E.24 / 2.5 A	1SVR427032R0000	0.36 (0.79)



CP-E.24 / 2.5 A

1SVR427032R0000



CP-E.24 / 5A

1SVR427034R0000

Input voltage range function	Rated output voltage / current	Type	Order Code	Weight (1 pce) kg (lb)
90-132 V AC, 180-264 V AC / 210-375 V DC	24 V DC / 5	CP-E.24 / 5A	1SVR427034R0000	1.0 (2.20)
90-132 V AC, 180-264 V AC / 210-375 V DC	24 V DC / 10 A	CP-E.24 / 10 A	1SVR427035R0000	1.36 (3.01)
90-264 V AC / 120-375 V DC	24 V DC / 20 A	CP-E.24 / 20 A	1SVR427036R0000	1.90 (4.18)

Power Supplies

Order Codes – CP-S.1 & CP-T range



ABB's new generation of CP-S.1 power supplies for machine building applications deliver high efficiency, high reliability and a minimised footprint. This advanced range of power supplies has an integrated 150% power reserve functionality for up to 5 s and operate at an efficiency of up to 94%. They come equipped with overheat protection and active power factor correction, combined with a broad AC and DC input voltage and extensive worldwide approvals. Make the all-new CP-S.1 power supplies your preferred choice for professional DC applications. UL listing as well as marine approvals complete the assortment offering.

Ordering details - CP-S.1 range

Description	Rated input voltage	Rated output voltage	Output power	Order Code
CP-S.1 24/3.0	100-240 V AC, 100-250 V DC	3.0 A	72 W	1SVR320361R1000
CP-S.1 24/5.0		5.0 A	120 W	1SVR320561R1000
CP-S.1 24/10.0		10.0 A	240 W	1SVR320661R1000
CP-S.1 24/20.0		20.0 A	480 W	1SVR320761R1000
CP-S.1 24/40.0	110-240 V AC, 110-250 V DC	40.0 A	960 W	1SVR320861R1000
CP-C.1-A-RU		10-56 V DC 2 x 20 A or 1 x 40 A	–	1SVR360060R1001



CP-T 24/5.0

2CDC 271 043 50009



CP-T 24/10.0, CP-T 24/20.0

2CDC 271 045 50009



CP-T 24/40.0, CP-T 24/50.0

2CDC 271 047 50009

In terms of design and functionality, the CP-T range perfectly supplements the existing products and extends the range appropriately. The devices can be supplied with a three-phase voltage as well as with two-phase mains. Here, ABB offers power supply units with 24 V DC and 48 V DC outputs with 5 A, 10 A, 20 A and 40 A and efficiency of up to 93%.

As in the case of all products, they are designed for an ambient temperature of up to 70°C. All products can be supplied within an AC supply voltage range between 340 to 575 V AC and a DC supply voltage range between 480 to 820 V DC.

Ordering details - CP-T range

Input voltage range	Rated output voltage / current	Type	Order Code	Weight (1 pce) kg (lb)
340-575 V AC / 480-820 V DC	24 V DC / 5 A	CP-T 24/5.0	1SVR427054R0000	0.80 (1.77)
340-575 V AC / 480-820 V DC	24 V DC / 10 A	CP-T 24/10.0	1SVR427055R0000	1.05 (2.31)
340-575 V AC / 480-820 V DC	24 V DC / 20 A	CP-T 24/20.0	1SVR427056R0000	1.75 (3.86)
340-575 V AC / 480-820 V DC	24 V DC / 40 A	CP-T 24/40.0	1SVR427057R0000	3.20 (7.05)
340-575 V AC / 480-820 V DC	48 V DC / 5 A	CP-T 48/5.0	1SVR427054R2000	1.05 (2.31)
340-575 V AC / 480-820 V DC	48 V DC / 10 A	CP-T 48/10.0	1SVR427055R2000	1.75 (3.86)
340-575 V AC / 480-820 V DC	48 V DC / 20 A	CP-T 48/20.0	1SVR427056R2000	3.40 (7.50)

Pluggable interface relays and optocouplers

Order Codes – CR-S range



CR-S Interface relay

2CDC 291 005 S0014



CR-S Optocoupler

2CDC 291 003 S0016



CR-S Interface relay

2CDC 291 005 S0014

The slim pluggable interface relays and optocouplers of the CR-S Range may be used for electrical isolation, amplification and signal matching. The CR-S relays are 6.2 mm wide and therefore allow for the switching high currents on a small footprint.

Ordering details - CR-S range pluggable interface relays

Rated control supply voltage	Outputs	Contact ratings	Type	Order Code	Pkg qty	Weight (1 pc.) kg (lb)
5 V DC	1 c/o (SPDT) standard contacts	250 V, 6 A	CR-S005VDC1R	1SVR405501R1010	10	0.005 (0.011)
12 V DC			CR-S012VDC1R	1SVR405501R2010		
24 V DC			CR-S024VDC1R	1SVR405501R3010		
48 V DC			CR-S048VDC1R	1SVR405501R4010		
60 V DC			CR-S060VDC1R	1SVR405501R5010		
5 V DC	1 c/o (SPDT) gold plated contacts	12 V, 250 mA (3W) ¹⁾	CR-S005VDC1RG	1SVR405501R1020	10	0.005 (0.011)
12 V DC			CR-S012VDC1RG	1SVR405501R2020		
24 V DC			CR-S024VDC1RG	1SVR405501R3020		
48 V DC			CR-S048VDC1RG	1SVR405501R4020		
60 V DC			CR-S060VDC1RG	1SVR405501R5020		

Ordering details - CR-S range pluggable optocouplers

Rated control supply voltage	Outputs	Type	Order Code	Pkg qty	Weight (1 pc.) kg (lb)
24 V DC	Transistor, 100 mA - 48 V DC	CR-S024VDC1TRA	1SVR405510R3050	10	0.004 (0.009)
	MOS-FET, 2 A - 24 V DC	CR-S024VDC1MOS	1SVR405510R3060		
	Triac, 2 A - 240 V AC	CR-S024VDC1TRI	1SVR405510R3070		

Ordering details - CR-S range sockets

Rated control supply voltage	Connection type	Type	Order Code	Pkg qty	Weight (1 pc.) kg (lb)
6-24 V DC	Screw	CR-S006/024VDC1SS	1SVR405521R1100	10	0.025 (0.055)
	Spring	CR-S006/024VDC1SZ	1SVR405521R1200		
12-24 V AC/DC	Screw	CR-S012/024VADC1SS	1SVR405521R3100		
	Spring	CR-S012/024VADC1SZ	1SVR405521R3200		
48-60 V AC/DC	Screw	CR-S048/060VADC1SS	1SVR405521R5100		
	Spring	CR-S048/060VADC1SZ	1SVR405521R5200		
110-125 V AC/DC	Screw	CR-S110/125VADC1SS	1SVR405521R6100		
	Spring	CR-S110/125VADC1SZ	1SVR405521R6200		
220-240 V AC/DC	Screw	CR-S220/240VADC1SS	1SVR405521R7100		
	Spring	CR-S220/240VADC1SZ	1SVR405521R7200		

Ordering details - CR-S range accessories

Version	Type	Order Code	Pkg qty	Weight (1 pc.) kg (lb)
Jumper bar 20 pole, blue colour	CR-SJB20-BLUE	1SVR405598R0700	10	0.008 (0.018)
Jumper bar 20 pole, red colour	CR-SJB20-RED	1SVR405598R0800		
Jumper bar 20 pole, black colour	CR-SJB20-BLACK	1SVR405598R0900		
Separator	CR-SSEP	1SVR405599R0000	10	0.012

Pluggable interface relays and optocouplers

Order Codes – CR-P range



CR-P relay

2CDC 291 045 F000 4



CR-P optocoupler

2CDC 291 006 S0016



CR-PLS

2CDC 291 006 F0011



CR-PJ

2CDC 291 004 F0007



CR-PLSX relay

2CDC 291 088 F0004

The CR-P range offers the highest current switching in an IP67 rated relay housing. This range comprises of pluggable interface relays and optocouplers offered in 10 different control supply voltages. Additionally, gold plated contacts are available for applications where sensitive signals are to be switched. The CR-P range also includes complete versions consisting of a relay, socket, holder and functional module.

Ordering details - CR-P range relays

Rated control supply voltage	Outputs	Contact ratings	Type	Order Code	Pkg	Weight (1 pc.)
					qty	kg (lb)
12 V DC	1 c/o (SPDT)	250 V, 16 A	CR-P012DC1	1SVR405600R4000	10	0.014 (0.031)
24 V DC			CR-P024DC1	1SVR405600R1000		
48 V DC			CR-P048DC1	1SVR405600R6000		
110 V DC			CR-P110DC1	1SVR405600R8000		
24 V AC			CR-P024AC1	1SVR405600R0000		
48 V AC			CR-P048AC1	1SVR405600R5000		
110 V AC			CR-P110AC1	1SVR405600R7000		
120 V AC			CR-P120AC1	1SVR405600R2000		
230 V AC			CR-P230AC1	1SVR405600R3000		
12 V DC	2 c/o (SPDT)	250 V, 8 A	CR-P012DC2	1SVR405601R4000	10	0.014 (0.031)
24 V DC			CR-P024DC2	1SVR405601R1000		
48 V DC			CR-P048DC2	1SVR405601R6000		
110 V DC			CR-P110DC2	1SVR405601R8000		
12 V AC			CR-P012AC2	1SVR405601R0200		
24 V AC			CR-P024AC2	1SVR405601R0000		
48 V AC			CR-P048AC2	1SVR405601R5000		
110 V AC			CR-P110AC2	1SVR405601R7000		
120 V AC			CR-P120AC2	1SVR405601R2000		
230 V AC			CR-P230AC2	1SVR405601R3000		

Ordering details - CR-P range pluggable optocouplers

Rated control supply voltage (Us)	Outputs	Type	Order Code	Pkg	Weight (1 pc.)
				qty	kg (lb)
10-32 V DC	MOS-FET, 5 A - 35 V DC	CR-P024MOS1	1SVR405610R4060	10	0.011 (0.618)
	Triac, 3 A - 275 V AC	CR-P024TRI1	1SVR405610R4070		

Ordering details - Accessories

Version	Connection terminal	Type	Order Code	Pkg	Weight (1 pc.)
				qty	kg (lb)
Logical socket with protective separation	screw	CR-PLS	1SVR405650R0000	10	0.045 (0.099)
Logical socket	screw	CR-PLSx	1SVR405650R0100		0.043 (0.095)
	spring	CR-PLC	1SVR405650R0200		0.042 (0.093)
Standard socket	screw	CR-PSS	1SVR405650R1000	10	0.038 (0.084)
Plastic holder for socket		CR-PH	1SVR405659R0000		0.002 (0.004)
Metal holder		CR-PH1	1SVR405659R0100		–
Jumper bar for sockets with screw connection		CR-PJ	1SVR405658R5000		0.018 (0.040)
Marker		CR-PM	1SVR405658R0000		0.0002 (0.0004)

Pluggable interface relays and optocouplers

Order Codes – CR-M range



CR-M

2CDC 291.002 F0015

The CR-M range offers the possibility of switching up to 4 different circuits with a single relay. The integrated LED and test button allow for easy testing and commissioning. This range of relays are available at a wide range of different coil voltages and are accompanied by a wide variety of functional modules. The CR-M range also includes complete versions consisting of a relay, socket, holder and functional module.

Ordering details - CR-M range without LED

Rated control supply voltage	Outputs	Contact ratings	Type	Order Code	Pkg	Weight (1 pc.)
					qty	kg (lb)
12 V DC	2 c/o (SPDT)	250 V, 12 A	CR-M012DC2	1SVR405611R4000	10	0.033 (0.073)
24 V DC			CR-M024DC2	1SVR405611R1000		
48 V DC			CR-M048DC2	1SVR405611R6000		
60 V DC			CR-M060DC2	1SVR405611R4200		
110 V DC			CR-M110DC2	1SVR405611R8000		
125 V DC			CR-M125DC2	1SVR405611R8200		
220 V DC			CR-M220DC2	1SVR405611R9000		
24 V AC	3 c/o (SPDT)	250 V, 10 A	CR-M024AC2	1SVR405611R0000	10	0.033 (0.073)
48 V AC			CR-M048AC2	1SVR405611R5000		
110 V AC			CR-M110AC2	1SVR405611R7000		
120 V AC			CR-M120AC2	1SVR405611R2000		
230 V AC			CR-M230AC2	1SVR405611R3000		
12 V DC			CR-M012DC3	1SVR405612R4000		
24 V DC			CR-M024DC3	1SVR405612R1000		
48 V DC			CR-M048DC3	1SVR405612R6000		
60 V DC			CR-M060DC3	1SVR405612R4200		
110 V DC			CR-M110DC3	1SVR405612R8000		
125 V DC			CR-M125DC3	1SVR405612R8200		
220 V DC			CR-M220DC3	1SVR405612R9000		
24 V AC			CR-M024AC3	1SVR405612R0000		
48 V AC			CR-M048AC3	1SVR405612R5000		
60 V AC			CR-M060AC3	1SVR405612R5200		
110 V AC			CR-M110AC3	1SVR405612R7000		
120 V AC			CR-M120AC3	1SVR405612R2000		
230 V AC			CR-M230AC3	1SVR405612R3000		
12 V DC	4 c/o (SPDT)	250 V, 6 A	CR-M012DC4	1SVR405613R4000	10	0.033 (0.073)
24 V DC			CR-M024DC4	1SVR405613R1000		
48 V DC			CR-M048DC4	1SVR405613R6000		
60 V DC			CR-M060DC4	1SVR405613R4200		
110 V DC			CR-M110DC4	1SVR405613R8000		
125 V DC			CR-M125DC4	1SVR405613R8200		
220 V DC			CR-M220DC4	1SVR405613R9000		
24 V AC			CR-M024AC4	1SVR405613R0000		
48 V AC			CR-M048AC4	1SVR405613R5000		
110 V AC			CR-M110AC4	1SVR405613R7000		
120 V AC			CR-M120AC4	1SVR405613R2000		
230 V AC			CR-M230AC4	1SVR405613R3000		

Pluggable interface relays and optocouplers

Order Codes – CR-M range



CR-M

2CDC 291 002 F0015

Ordering details - CR-M range with LED

Rated control supply voltage	Outputs	Contact ratings	Type	Order Code	Pkg	Weight (1 pc.)
					qty	kg (lb)
12 V DC	2 c/o (SPDT)	250 V, 12 A	CR-M012DC2L	1SVR405611R4100	10	0.033 (0.073)
24 V DC			CR-M024DC2L	1SVR405611R1100		
48 V DC			CR-M048DC2L	1SVR405611R6100		
60 V DC			CR-M060DC2L	1SVR405611R4300		
110 V DC			CR-M110DC2L	1SVR405611R8100		
125 V DC			CR-M125DC2L	1SVR405611R8300		
220 V DC			CR-M220DC2L	1SVR405611R9100		
12 V AC			CR-M012AC2L	1SVR405611R0300		
24 V AC			CR-M024AC2L	1SVR405611R0100		
48 V AC			CR-M048AC2L	1SVR405611R5100		
110 V AC			CR-M110AC2L	1SVR405611R7100		
120 V AC			CR-M120AC2L	1SVR405611R2100		
230 V AC			CR-M230AC2L	1SVR405611R3100		
12 V DC			3 c/o (SPDT)	250 V, 10 A		
24 V DC	CR-M024DC3L	1SVR405612R1100				
48 V DC	CR-M048DC3L	1SVR405612R6100				
60 V DC	CR-M060DC3L	1SVR405612R4300				
110 V DC	CR-M110DC3L	1SVR405612R8100				
125 V DC	CR-M125DC3L	1SVR405612R8300				
220 V DC	CR-M220DC3L	1SVR405612R9100				
12 V AC	CR-M012AC3L	1SVR405612R0300				
24 V AC	CR-M024AC3L	1SVR405612R0100				
48 V AC	CR-M048AC3L	1SVR405612R5100				
110 V AC	CR-M110AC3L	1SVR405612R7100				
120 V AC	CR-M120AC3L	1SVR405612R2100				
230 V AC	CR-M230AC3L	1SVR405612R3100				
12 V DC	4 c/o (SPDT)	250 V, 6 A			CR-M012DC4L	1SVR405613R4100
24 V DC			CR-M024DC4L	1SVR405613R1100		
48 V DC			CR-M048DC4L	1SVR405613R6100		
60 V DC			CR-M060DC4L	1SVR405613R4300		
110 V DC			CR-M110DC4L	1SVR405613R8100		
125 V DC			CR-M125DC4L	1SVR405613R8300		
220 V DC			CR-M220DC4L	1SVR405613R9100		
12 V AC			CR-M012AC4L	1SVR405613R0300		
24 V AC			CR-M024AC4L	1SVR405613R0100		
48 V AC			CR-M048AC4L	1SVR405613R5100		
110 V AC			CR-M110AC4L	1SVR405613R7100		
120 V AC			CR-M120AC4L	1SVR405613R2100		
230 V AC			CR-M230AC4L	1SVR405613R3100		

Pluggable interface relays and optocouplers

Ordering details – CR-M range



CR-M4SS

2CDC291009 F0011



CR-MJ

2CDC291005 F0007

Ordering details - Accessories

Version	Connection terminal	Type	Order Code	Pkg	Weight
				qty	(1 pc.) kg (lb)
Logical socket for 2 c/o	screw	CR-M2LS	1SVR405651R1100	10	0.055 (0.121)
Logical socket for 3 c/o		CR-M3LS	1SVR405651R2100		0.062 (0.137)
Logical socket for 2/4 c/o		CR-M4LS	1SVR405651R3100		0.066 (0.146)
Logical socket for 2 c/o	spring	CR-M2LC	1SVR405651R1200	10	0.065 (0.143)
Logical socket for 2/4 c/o		CR-M4LC	1SVR405651R3200		0.066 (0.146)
Standard socket for 2 c/o	screw	CR-M2SS	1SVR405651R1000	10	0.066 (0.146)
Standard socket for 3 c/o		CR-M3SS	1SVR405651R2000		0.068 (0.150)
Standard socket for 2/4 c/o		CR-M4SS	1SVR405651R3000		0.070 (0.154)
Standard socket for 2 c/o	fork type	CR-M2SF	1SVR405651R1300	10	0.040 (0.088)
Standard socket for 2/4 c/o		CR-M4SF	1SVR405651R3300		0.048 (0.106)
Plastic holder		CR-MH	1SVR405659R1000	10	0.003 (0.007)
Metal holder		CR-MH1	1SVR405659R1100	10	0.0005 (0.001)
Jumper bar for sockets with screw connection		CR-MJ	1SVR405658R6000	10	0.029 (0.064)
Marker		CR-MM	1SVR405658R1000	10	0.0005 (0.001)
Plug for test button replacement		CR-MP	1SVR405658R2000	100	0.001 (0.002)

Motor control and protection

344	Push buttons
345	Emergency stops, enclosures heavy duty push buttons
346	Standard and double push buttons
347	Emergency, stops and Selector switches
348	Key switches & pilot lights
349	Contacts, lamp blocks and accessories
350	3-pole contactor overview
352	AF09 ... AF38 3 pole contactors
353	AF40 ... AF96 3 pole contactors
356	Overload protection
358	Limit switches



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Pilot devices - compact 22mm
Push buttons

Order example:
Ex1: Type CP1-10 ■ -10, to order colour red replace ■ with R: CP1-10 R-10
Ex2: Order Code 1SFA619100R101 □
To order red replace □ with 1: 1SFA619100R1011

Colour Codes								
	Red	Green	Yellow	Blue	White	Black	Grey	Clear
Type ■	R	G	Y	L	W	B	U	c
Order Code □	1	2	3	4	5	6	7	8

Push buttons black plastic bezel

Type	Contacts		Part no.	Order Code
	N/O	N/C		
Flush momentary	1	–	CP1-10 ■ -10	1SFA619100R101 □
	2	–	CP1-10 ■ -20	1SFA619100R102 □
	–	1	CP1-10 ■ -01	1SFA619100R104 □
	–	2	CP1-10 ■ -02	1SFA619100R105 □
	1	1	CP1-10 ■ -11	1SFA619100R107 □
Flush maintained	1	–	CP2-10 ■ -10	1SFA619101R101 □
	2	–	CP2-10 ■ -20	1SFA619101R102 □
	–	1	CP2-10 ■ -01	1SFA619101R104 □
	–	2	CP2-10 ■ -02	1SFA619101R105 □
	1	1	CP2-10 ■ -11	1SFA619101R107 □
Extended momentary	1	–	CP3-10 ■ -10	1SFA619102R101 □
	2	–	CP3-10 ■ -20	1SFA619102R102 □
	–	1	CP3-10 ■ -01	1SFA619102R104 □
	–	2	CP3-10 ■ -02	1SFA619102R105 □
	1	1	CP3-10 ■ -11	1SFA619102R107 □
Extended maintained	1	–	CP4-10 ■ -10	1SFA619103R101 □
	2	–	CP4-10 ■ -20	1SFA619103R102 □
	–	1	CP4-10 ■ -01	1SFA619103R104 □
	–	2	CP4-10 ■ -02	1SFA619103R105 □
	1	1	CP4-10 ■ -11	1SFA619103R107 □

Push buttons chrome metal bezel

Type	Contacts		Part no.	Order Code
	N/O	N/C		
Flush momentary	1	–	CP1-30 ■ -10	1SFA619100R301 □
	2	–	CP1-30 ■ -20	1SFA619100R302 □
	–	1	CP1-30 ■ -01	1SFA619100R304 □
	–	2	CP1-30 ■ -02	1SFA619100R305 □
	1	1	CP1-30 ■ -11	1SFA619100R307 □
Flush maintained	1	–	CP2-30 ■ -10	1SFA619101R301 □
	2	–	CP2-30 ■ -20	1SFA619101R302 □
	–	1	CP2-30 ■ -01	1SFA619101R304 □
	–	2	CP2-30 ■ -02	1SFA619101R305 □
	1	1	CP2-30 ■ -11	1SFA619101R307 □
Extended momentary	1	–	CP3-30 ■ -10	1SFA619102R301 □
	2	–	CP3-30 ■ -20	1SFA619102R302 □
	–	1	CP3-30 ■ -01	1SFA619102R304 □
	–	2	CP3-30 ■ -02	1SFA619102R305 □
	1	1	CP3-30 ■ -11	1SFA619102R307 □
Extended maintained	1	–	CP4-30 ■ -10	1SFA619103R301 □
	2	–	CP4-30 ■ -20	1SFA619103R302 □
	–	1	CP4-30 ■ -01	1SFA619103R304 □
	–	2	CP4-30 ■ -02	1SFA619103R305 □
	1	1	CP4-30 ■ -11	1SFA619103R307 □

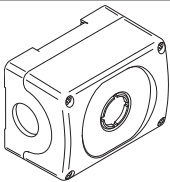
Pilot devices - compact 22mm

Emergency stops, enclosures and LED's

Emergency stop buttons

	Type	Contacts		Part no.	Order Code
		N/O	N/C		
	30mm Twist Release Red	0	1	CE3T-10R-01	1SFA619500R1041
		0	2	CE3T-10R-02	1SFA619500R1051
		1	1	CE3T-10R-11	1SFA619500R1071
	40mm Twist Release Red	0	1	CE4T-10R-01	1SFA619550R1041
		0	2	CE4T-10R-02	1SFA619550R1051
		1	1	CE4T-10R-11	1SFA619550R1071
	40mm Key Release Red	0	2	CE4K-10R-02	1SFA619552R1051
		1	1	CE4K-10R-11	1SFA619552R1071

Enclosures

	Type	Part no.	Order Code
	Enclosure 1 hole - yellow	CEPY1-0	1SFA619821R1000
	Enclosed E-Stop (twist release 2NO + 2NC)	CEPY1-1001	1SFA619821R1001
	Enclosed E-Stop with shroud (twist release)	CEPY1-2001	1SFA619821R2001
	E-Stop shroud for compact enclosure	CA1-8053	1SFA619920R8053

Compact LED pilot lights

	Colour	Part no.	Order Code
	Rated voltage 24 V AC/DC		
	Red	CL2-502R	1SFA619403R5021
	Green	CL2-502G	1SFA619403R5022
	Yellow	CL2-502Y	1SFA619403R5022
	Blue	CL2-502L	1SFA619403R5024
	Clear	CL2-502C	1SFA619403R5028
	Rated voltage 110-130 V AC		
	Red	CL2-513R	1SFA619403R5131
	Green	CL2-513G	1SFA619403R5132
	Yellow	CL2-513Y	1SFA619403R5133
	Rated voltage 110-130 V DC		
	Red	CL2-515R	1SFA619403R5151
	Green	CL2-515G	1SFA619403R5152
	Yellow	CL2-515Y	1SFA619403R5153
	Rated voltage 220 V DC		
	Red	CL2-520R	1SFA619403R5201
	Green	CL2-520G	1SFA619403R5202
	Yellow	CL2-520Y	1SFA619403R5203
	Rated voltage 230 V AC		
	Red	CL2-523R	1SFA619403R5231
	Green	CL2-523G	1SFA619403R5232
	Yellow	CL2-523Y	1SFA619403R5233
	Blue	CL2-523L	1SFA619403R5234
	Clear	CL2-523C	1SFA619403R5238
	Rated voltage 380-415 V AC		
	Red	CL2-542R	1SFA619403R5421
	Green	CL2-542G	1SFA619403R5422

Pilot devices - modular 22mm

Push buttons

Standard push buttons black plastic bezel

Type				Part no.	Order Code
	Flush	Momentary	Non illuminated	MP1-10 ■	1SFA611100R100 □
		Maintained		MP2-10 ■	1SFA611101R100 □
		Momentary	Illuminated	MP1-11 ■	1SFA611101R110 □
		Maintained		MP2-11 ■	1SFA611101R110 □
	Extended	Momentary	Non illuminated	MP3-10 ■	1SFA611102R100 □
		Maintained		MP4-10 ■	1SFA611103R100 □
		Momentary	Illuminated	MP3-11 ■	1SFA611102R110 □
		Maintained		MP4-11 ■	1SFA611103R110 □

Standard push buttons chrome plastic bezel

Type				Part no.	Order Code
	Flush	Momentary	Non illuminated	MP1-20 ■	1SFA611100R200 □
		Maintained		MP2-20 ■	1SFA611101R200 □
		Momentary	Illuminated	MP1-21 ■	1SFA611100R210 □
		Maintained		MP2-21 ■	1SFA611101R210 □
	Extended	Momentary	Non illuminated	MP3-20 ■	1SFA611102R200 □
		Maintained		MP4-20 ■	1SFA611103R200 □
		Momentary	Illuminated	MP3-21 ■	1SFA611102R210 □
		Maintained		MP4-21 ■	1SFA611103R210 □

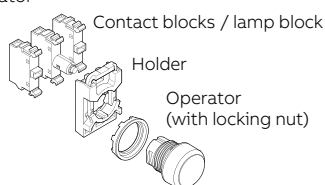
Standard push buttons metal bezel

Type				Part no.	Order Code
	Flush	Momentary	Non illuminated	MP1-30 ■	1SFA611100R300 □
		Maintained		MP2-30 ■	1SFA611101R300 □
		Momentary	Illuminated	MP1-31 ■	1SFA611100R310 □
		Maintained		MP2-31 ■	1SFA611101R310 □
	Extended	Momentary	Non illuminated	MP3-30 ■	1SFA611102R300 □
		Maintained		MP4-30 ■	1SFA611103R300 □
		Momentary	Illuminated	MP3-31 ■	1SFA611102R310 □
		Maintained		MP4-31 ■	1SFA611103R310 □

Select your colour by replacing with a digit from the chart below

How to order standard operators:

- Non-illuminated operator + holder
- Illuminated operator + holder + contact block(s) + lamp block



Color codes

Description	Type	Order Code
Red	R	1
Green	G	2
Yellow	Y	3
Blue	L	4
White	W	5
Black	B	6
Grey	U	7
Clear	C	8

Contact blocks including holder with 3 blocks

Description	Type	Order Code
1 NO	MCBH-10	1SFA611605R1101
1 NC	MCBH-01	1SFA611605R1110
2 NC	MCBH-02	1SFA611605R1120
2 NO	MCBH-20	1SFA611605R1102
1 NO+1 NC	MCBH-11	1SFA611605R1111
1 NO+2 NC	MCBH-12	1SFA611605R1121
Contact blocks		
1 NO	MCB-10	1SFA611610R1001
1 NC	MCB-01	1SFA611610R1010
Separate holder for 3 blocks		
Holder	MCBH-00	1SFA611605R1100

Ordering example:

Ex 1: Type CP1-10 ■ -10, to order color red replace ■ with R: CP1-10 R-10

Ex 2: Order code 1SFA619100R101 □, to order color red replace □ with 1: 1SFA619100R1011

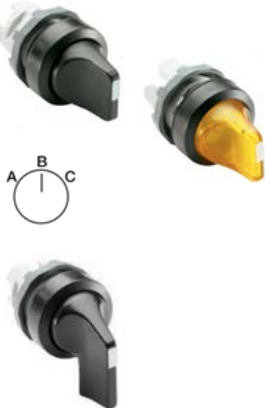
Pilot devices - modular 22mm

Emergency stops and selector switches

Emergency stops

Type			Part no.	Order Code
	30mm Red Non illuminated	Twist release	MPET3-10R	1SFA611520R1001
		Pull release	MPEP3-10R	1SFA611521R1001
		Key release	MPEK3-11R	1SFA611522R1101
	40mm Red Non illuminated	Twist release	MPET4-10R	1SFA611523R1001
		Pull release	MPEP4-10R	1SFA611524R1001
		Key release	MPEK4-11R	1SFA611525R1101
	40mm Red Illuminated	Twist release	MPMT3-11R	1SFA611510R1101
		Pull release	MPMP3-11R	1SFA611511R1101
	60mm Red Illuminated	Twist release	MPMT4-11R	1SFA611513R1101
		Pull release	MPMP4-11R	1SFA611514R1101

Selector switches black plastic bezel

Type				Part no.	Order Code
	Two position BC	Black	Short handle	M2SS1-10B	1SFA611200R1006
	Two position AC	Black		M2SS2-10B	1SFA611201R1006
	Two position spring return CB	Black		M2SS3-10B	1SFA611202R1006
	Two position BC	Black	Long handle	M2SS4-10B	1SFA611203R1006
	Two position AC	Black		M2SS5-10B	1SFA611204R1006
	Two position spring return CB	Black		M2SS6-10B	1SFA611205R1006
	Three position ABC	Black	Short handle	M3SS1-10B	1SFA611210R1006
	Three position spring return A to B - C to B	Black		M3SS2-10B	1SFA611211R1006
	Three position stay put A, spring return C to B	Black		M3SS3-10B	1SFA611212R1006
	Three position stay put C, spring return A to B	Black	Long handle	M3SS7-10B	1SFA611216R1006
	Three position ABC	Black		M3SS4-10B	1SFA611213R1006
	Three position spring return A to B - C to B	Black		M3SS5-10B	1SFA611214R1006
	Three position stay put A, spring return C to B	Black		M3SS6-10B	1SFA611215R1006
	Three position stay put C, spring return A to B	Black		M3SS8-10B	1SFA611217R1006

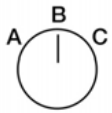
Selector switches chrome metal bezel

Type				Part no.	Order Code
  	Two position BC	Black	Short handle	M2SS1-30B	1SFA611200R3006
	Two position AC	Black		M2SS2-30B	1SFA611201R3006
	Two position spring return CB	Black		M2SS3-30B	1SFA611202R3006
	Two position BC	Black	Long handle	M2SS4-30B	1SFA611203R3006
	Two position AC	Black		M2SS5-30B	1SFA611204R3006
	Two position spring return CB	Black		M2SS6-30B	1SFA611205R3006
	Three position ABC	Black	Shrt handle	M3SS1-30B	1SFA611210R3006
	Three position spring return A to B - C to B	Black		M3SS2-30B	1SFA611211R3006
	Three position stay put A, spring return C to B	Black		M3SS3-30B	1SFA611212R3006
	Three position stay put C, spring return A to B	Black		M3SS7-30B	1SFA611216R3006
	Three position ABC	Black	Long handle	M3SS4-30B	1SFA611213R3006
	Three position spring return A to B - C to B	Black		M3SS5-30B	1SFA611214R3006
	Three position stay put A, spring return C to B	Black		M3SS6-30B	1SFA611215R3006
	Three position stay put C, spring return A to B	Black		M3SS8-30B	1SFA611217R3006

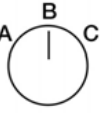
Pilot devices - modular 22mm

Key switches, pilot lights

Key switches black plastic bezel

 	Type			Part no.	Order Code
	Two position Key release in BC positions	71/Ronis 455	Maintained BC	M2SSK1-101	1SFA611280R1001
		72/Ronis 421		M2SSK1-102	1SFA611280R1002
		73/Ronis 3433-E		M2SSK1-103	1SFA611280R1003
	Two position Key release in B positions	71/Ronis 455	Momentary BC	M2SSK2-101	1SFA611281R1001
		72/Ronis 421		M2SSK2-102	1SFA611281R1002
		73/Ronis 3433-E		M2SSK2-103	1SFA611281R1003
	Two position	71/Ronis 455	Momentary BC	M2SSK3-101	1SFA611282R1001
		72/Ronis 421		M2SSK3-102	1SFA611282R1002
		73/Ronis 3433-E		M2SSK3-103	1SFA611282R1003
	Three position	71/Ronis 455	Maintained ABC	M3SSK1-101	1SFA611283R1001
		72/Ronis 421		M3SSK1-102	1SFA611283R1002
		73/Ronis 3433-E		M3SSK1-103	1SFA611283R1003

Key switches chrome metal bezel

 	Type			Part no.	Order Code
	Two position Key release in BC positions	71/Ronis 455	Maintained BC	M2SSK1-301	1SFA611280R3001
		72/Ronis 421		M2SSK1-302	1SFA611280R3002
		73/Ronis 3433-E		M2SSK1-303	1SFA611280R3003
	Two position Key release in B positions	71/Ronis 455	Momentary BC	M2SSK2-301	1SFA611281R3001
		72/Ronis 421		M2SSK2-302	1SFA611281R3002
		73/Ronis 3433-E		M2SSK2-303	1SFA611281R3003
	Two position	71/Ronis 455	Momentary BC	M2SSK3-301	1SFA611282R3001
		72/Ronis 421		M2SSK3-302	1SFA611282R3002
		73/Ronis 3433-E		M2SSK3-303	1SFA611282R3003
	Three position	71/Ronis 455	Maintained ABC	M3SSK1-301	1SFA611283R3001
		72/Ronis 421		M3SSK1-302	1SFA611283R3002
		73/Ronis 3433-E		M3SSK1-303	1SFA611283R3003

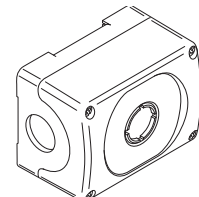
Pilot lights

		Part no.	Order Code
	Red	ML-100 R	1SFA611400R1001
	Green	ML-100 G	1SFA611400R1002
	Yellow	ML-100 Y	1SFA611400R1003
	Blue	ML-100 B	1SFA611400R1004
	White	ML-100 W	1SFA611400R1005
	Clear	ML-100 C	1SFA611400R1008
	Light diffusing lens	KA1-8005	1SFA616920R8005

Pilot devices - modular 22mm

Contacts, lamp blocks and accessories

Contacts and lampblocks

	Part no.	Order Code
	Separate holder	
	Holder for 3 blocks	MCBH-00 1SFA611605R1100
	Holder for 5 blocks	MCBH-50 1SFA611601R1100
	Contact blocks	
	1 NO	MCB-10 1SFA611610R1001
	1 NC	MCB-01 1SFA611610R1010
	2 NO	MCB-20 1SFA611610R1020
	2 NC	MCB-02 1SFA611610R1002
	1 NO + 1 NC	MCB-11 1SFA611610R1011
	Contact blocks with 3-holder included	
	1 NO	MCBH-10 1SFA611605R1101
	1 NC	MCBH-01 1SFA611605R1110
	2 NO	MCBH-20 1SFA611605R1102
	2 NC	MCBH-02 1SFA611605R1120
	1 NO + 1 NC double contacts	MCBH-11 1SFA611605R1111
	2 NO + 1 NC double contacts	MCBH-21 1SFA611605R1112
	Legend plate holders	
	Holder black	KA1-8120 1SFA616920R8120
	Inserts without text	KA1-8121 1SFA616920R8121
	Legend plate holder for plastic enclosures	MA6-1060 1SFA611930R1060
	Inserts without text for plastic enclosures	MA6-1061 1SFA611930R1061
	General accessories	
	Shroud	MA1-8053 1SFA611920R8053
	Mounting tool	MA1-8015 1SFA611920R8015
	Membrane of silicone flush button	KA1-8052 1SFA616920R8052
	Blanking plug	MA1-8130 1SFA611920R8130
	Spacer	– SK615516-1
	Spacer for emergency stop	KA1-8045 1SFA616920R8045
	Empty enclosures	
	Empty Grey Enclosure - 1 Seat	1SFA611811R1000
	Empty Grey Enclosure - 2 Seat	1SFA611812R1000
	Empty Grey Enclosure - 3 Seat	1SFA611813R1000
	Empty Grey Enclosure - 4 Seat	1SFA611814R1000
	Empty Yellow Enclosure - 1 Seat	1SFA611821R1000
	Contact blocks for enclosures	
	1 NO	1SFA611610R2001
	1 NC	1SFA611610R2010
	2 NO	1SFA611610R2002
	2 NC	1SFA611610R2020
	1 NO + 1 NC	1SFA611610R2011

3-pole contactor overview

Contactors for motor control and power switching



IEC (1)	AC-3 Rated operational power	$\leq 60^{\circ}\text{C (2), 400 V}$	kW	4	5.5	7.5	11	15	18.5	18.5	22	30	37	45
UL/CSA	3-phase motor rating	480 V	hp	5	7.5	10	15	20	25	30	40	50	60	60
AC / DC Control supply			Type	AF09	AF12	AF16	AF26	AF30	AF38	AF40	AF52	AF65	AF80	AF96
AC Control supply			Type	AF09	AF12	AF16	AF26	AF30	AF38	AF40	AF52	AF65	AF80	AF96
DC Control supply			Type	AF09	AF12	AF16	AF26	AF30	AF38	AF40	AF52	AF65	AF80	AF96
IEC	AC-3 Rated operational current	$\leq 60^{\circ}\text{C (2), 400 V}$	A	9	12	18	26	32	38	40	53	65	80	96
	AC-1 Rated operational current	$\leq 40^{\circ}\text{C, 690 V}$	A	25	28	30	45	50	50	70	100	105	125	130
UL/CSA	General use rating	600 V	A	25	28	30	45	50	50	60	80	90	105	115
NEMA	NEMA Size			00	0	-	1	-	-	2	-	-	3	-

Main accessories

Auxiliary contact blocks	Front mounting	CA4-10 (1 x N.O.) CA4-01 (1 x N.C.)		
	Side mounting	CAL4-11 (1 x N.O. + 1 x N.C.)		
Timers	Electronic	TEF4-ON TEF4-OFF		
Interlocking units ⁽³⁾	Mechanical	VM4		VM96-4
	Mechanical / Electrical	VEM4		
Connection sets	For reversing contactors	BER16-4	BER38-4	BER65-4 BER96-4
Surge suppressors	Varistor (AC/DC)			
	RC type (AC)		Built-in surge protection	
	Transil diode (DC)			

Overload relays

Thermal relays		Class 10 (Class 10A for TF140, TA200DU)	TF42 (0.10...38 A)	TF65 (22...67 A)	TF96 (40...96 A)
Electronic relays		Class 10E, 20E, 30E	EF19 (0.10...18.9 A)	EF19 (0.10...18.9 A) EF45 (9...45 A)	EF65 (20...70 A) EF96 (36...100 A)

Manual motor starters

	Thermal / magnetic protection Class 10	MS116 (0.10...32 A) Ics up to 50 kA for class 10 A	MS450 (28...50 A) Ics up to 50 kA	
		MS132 (0.10...32 A) Ics up to 100 kA		MO495 (63...100 A) Ics up to 50 kA
			MS497 (22...100 A) Ics up to 100 kA	
	Magnetic only types	MO132 (0.16...32 A) Ics up to 100 kA		MO496 (32...100 A) Ics up to 100 kA
Accessories	For contactor mounting	BEA16-4	BER38-4	MO450 (40...50 A) Ics up to 50 kA MO495 (63...100 A) Ics up to 50 kA



55	75	75	90	110	132	160	200	200	250	315	400	–	475	560	–	–
75	100	100	125	150	200	250	300	350	400	500	600	–	800	900	–	–
AF116	AF116	AF146	AF190	AF205	AF265	AF305	AF370	AF400	AF460	AF580	AF750	AF1250	AF1350	AF1650	AF2050	AF2650
AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370	AF400	AF460	AF580	AF750	AF1250	AF1350	AF1650	AF2050	AF2650
AF116	AF140	AF146	AF190	AF205	AF265	AF305	AF370	AF400	AF460	AF580	AF750	AF1250	AF1350	AF1650	AF2050	AF2650
116	140	146	190	205	265	305	370	400	460	580	750	–	860	1050	–	–
160	200	225	275	350	400	500	600	600	700	800	1050	1260	1350	1650	2050	2650
160	200	200	250	300	350	400	520	550	650	750	900	1210	1350	1650	2100	2700
–	4	–	–	–	5	–	–	–	6	–	7	–	–	8	–	–

CAL19-11 (1 x N.O. + 1 x N.C.)

CAL18-11 (1 x N.O. + 1 x N.C.)

TEF4-ON TEF4-OFF

VM19 (for same size contactors)

VM750H VM750V

VM1650H

BER140-4

BER205-4

BER370-4

BEM460-30

BEM750-30

Built-in surge protection

TF140DU
(66...142 A) ≤ 55 °CTA200DU
(66...200 A) ≤ 55 °CEF146
(54...150 A)EF205
(63...210 A)EF370
(115...380 A)EF460
(150...500 A)EF750
(250...800 A)E1250DU
(375...1250 A)

Short-circuit protection devices



Push-in spring motor devices



With the new complete **Push-in Spring motor** starting solution, one push is all you need for extremely fast wiring. No tool is required, so you can save up to 50% wiring time with Push-in Spring compared to conventional spring solutions. And the connections are just as reliable. So for speed, ease and reliability, just push it.

Faster than ever installation

Imagine a motor starting solution that's twice as fast to install. With Push-in Spring, you no longer need to imagine – it's a reality. Push-in mode allows you to insert both ferruled and rigid cables without the need to use any tools, boosting your productivity like never before.

AF09 ... AF38 3 pole contactors

4 to 18.5kW AC/DC operated

AF09 ... AF38 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC and 220 V DC. These contactors are of the block type design with 3 main poles.

- Control circuit: AC or DC operated with electronic coil interface accepting a wide control voltage range (e.g. 100...250 V AC and DC), only 4 control voltage ranges covering 24...500V 50/60 Hz and 20...500 V DC

- Can manage large control voltage variations
- Reduced panel energy consumption
- Very distinct closing and opening
- Built-in surge suppression
- Add-on auxiliary contact blocks for front or side mounting and a wide range of accessories

	IEC		UL/CSA						Auxiliary contacts fitted		Part no. ⁽¹⁾	Order Code		
	Rated operational power 400 V AC-3 kW	current ≤ 40 °C AC-1 A	3-phase motor rating 480 V 600 V AC hp	General use rating 600 V AC A	Rated control circuit voltage									
					Uc min. ... V 50/60 Hz	Uc max. ... V DC								
														
 AF09-30-10	4	25	5	25	24...60	20...60	1	0	AF09-30-10-11	1SBL137001R1110				
							0	1	AF09-30-01-11	1SBL137001R1101				
					48...130	48...130	1	0	AF09-30-10-12	1SBL137001R1210				
							0	1	AF09-30-01-12	1SBL137001R1201				
					100...250	100...250	1	0	AF09-30-10-13	1SBL137001R1310				
							0	1	AF09-30-01-13	1SBL137001R1301				
					250...500	250...500	1	0	AF09-30-10-14	1SBL137001R1410				
							0	1	AF09-30-01-14	1SBL137001R1401				
					5.5	28	7.5	28	24...60	20...60	1	0	AF12-30-10-11	1SBL157001R1110
									0	1	AF12-30-01-11	1SBL157001R1101		
 AF26-30-00	5.5	28	7.5	28	48...130	48...130	1	0	AF12-30-10-12	1SBL157001R1210				
							0	1	AF12-30-01-12	1SBL157001R1201				
					100...250	100...250	1	0	AF12-30-10-13	1SBL157001R1310				
							0	1	AF12-30-01-13	1SBL157001R1301				
					250...500	250...500	1	0	AF12-30-10-14	1SBL157001R1410				
							0	1	AF12-30-01-14	1SBL157001R1401				
					7.5	30	10	30	24...60	20...60	1	0	AF16-30-10-11	1SBL177001R1110
									0	1	AF16-30-01-11	1SBL177001R1101		
					48...130	48...130	1	0	AF16-30-10-12	1SBL177001R1210				
							0	1	AF16-30-01-12	1SBL177001R1210				
	7.5	30	10	30	100...250	100...250	1	0	AF16-30-10-13	1SBL177001R1310				
							0	1	AF16-30-01-13	1SBL177001R1301				
					250...500	250...500	1	0	AF16-30-10-14	1SBL177001R1410				
							0	1	AF16-30-01-14	1SBL177001R1401				
					11	45	15	45	24...60	20...60	0	0	AF26-30-00-11	1SBL237001R1100
									48...130	48...130	0	0	AF26-30-00-12	1SBL237001R1100
									100...250	100...250	0	0	AF26-30-00-13	1SBL237001R1300
									250...500	250...500	0	0	AF26-30-00-14	1SBL237001R1400
					15	50	20	50	24...60	20...60	0	0	AF30-30-00-11	1SBL277001R1100
									48...130	48...130	0	0	AF30-30-00-12	1SBL277001R1200
				100...250	100...250	0	0	AF30-30-00-13	1SBL277001R1300					
				250...500	250...500	0	0	AF30-30-00-14	1SBL277001R1400					
	18.5	50	25	50	24...60	20...60	0	0	AF38-30-00-11	1SBL297001R1100				
					48...130	48...130	0	0	AF38-30-00-12	1SBL297001R1200				
					100...250	100...250	0	0	AF38-30-00-13	1SBL297001R1300				
					250...500	250...500	0	0	AF38-30-00-14	1SBL297001R1400				

¹⁾ For other auxiliary contacts arrangements, please contact your ABB local sales organization.

AF40 ... AF96 3 pole contactors

18.5 to 45kW AC/DC operated

AF40 ... AF96 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC and 220 V DC. These contactors are of the block type design with 3 main poles.

- Control circuit: AC or DC operated with electronic coil interface accepting a wide control voltage range (e.g. 100...250 V AC and DC), only 4 control voltage ranges covering 24...500V 50/60 Hz and 20...500 V DC

- Can manage large control voltage variations
- Reduced panel energy consumption
- Very distinct closing and opening
- Built-in surge suppression
- Add-on auxiliary contact blocks for front or side mounting and a wide range of accessories

	IEC		UL/CSA				Auxiliary contacts fitted		Part no. ⁽¹⁾	Order Code
	Rated operational power 400 V AC-3 kW	current ≤ 40 °C AC-1 A	3-phase motor rating 480 V hp	General use rating 600 V AC A	Rated control circuit voltage					
					Uc min. ... V 50/60 Hz	Uc max. V DC				
	18.5	70	30	60	24...60	–	0	0	AF40-30-00-41	1SBL347001R4100
					24...60	20...60	0	0	AF40-30-00-11	1SBL347001R1100
					48...130	48...130	0	0	AF40-30-00-12	1SBL347001R1200
					100...250	100...250	0	0	AF40-30-00-13	1SBL347001R1300
					250...500	250...500	0	0	AF40-30-00-14	1SBL347001R1400
	22	100	40	80	24...60	–	0	0	AF52-30-00-41	1SBL367001R4100
					24...60	20...60	0	0	AF52-30-00-11	1SBL367001R1100
					48...130	48...130	0	0	AF52-30-00-12	1SBL367001R1200
					100...250	100...250	0	0	AF52-30-00-13	1SBL367001R1300
					250...500	250...500	0	0	AF52-30-00-14	1SBL367001R1400
	30	105	50	90	24...60	–	0	0	AF65-30-00-41	1SBL387001R4100
					24...60	20...60	0	0	AF65-30-00-11	1SBL387001R1100
					48...130	48...130	0	0	AF65-30-00-12	1SBL387001R1200
					100...250	100...250	0	0	AF65-30-00-13	1SBL387001R1300
					250...500	250...500	0	0	AF65-30-00-14	1SBL387001R1400
	37	125	60	105	24...60	–	0	0	AF80-30-00-41	1SBL397001R4100
					24...60	20...60	0	0	AF80-30-00-11	1SBL397001R1100
					48...130	48...130	0	0	AF80-30-00-12	1SBL397001R1200
					100...250	100...250	0	0	AF80-30-00-13	1SBL397001R1300
					250...500	250...500	0	0	AF80-30-00-14	1SBL397001R1400
45	130	60	155	24...60	–	0	0	AF96-30-00-41	1SBL407001R4100	
				24...60	20...60	0	0	AF96-30-00-11	1SBL407001R1100	
				48...130	48...130	0	0	AF96-30-00-12	1SBL407001R1200	
				100...250	100...250	0	0	AF96-30-00-13	1SBL407001R1300	
				250...500	250...500	0	0	AF96-30-00-14	1SBL407001R1400	

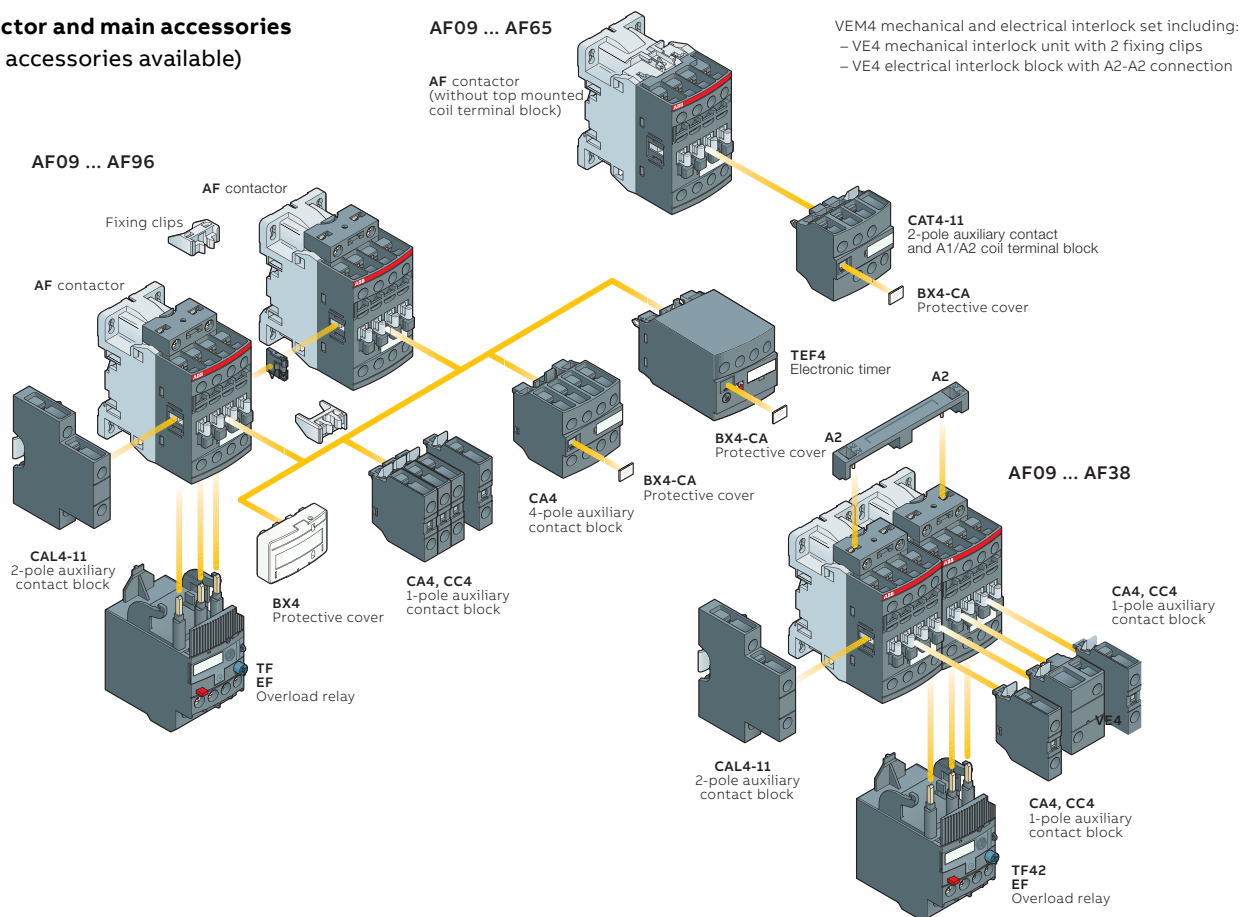
¹⁾ For other auxiliary contacts arrangements, please contact your ABB local sales organisation.

** Note: larger sizes and 4 pole versions available - contact us for further information.

AF09 ... AF96 3 pole contactors

Main accessories

Contactor and main accessories
(other accessories available)



Main accessory fitting details

Many configurations of accessories are possible depending on whether these are front-mounted or side-mounted.

Contactor types	Main poles Built-in auxiliary contacts				Front-mounted accessories					Side-mounted accessories	
					Auxiliary contact blocks			Electronic timer	Electrical & mechanical interlock set (between 2 contactors)	Auxiliary contact blocks	
										Left side	Right side
1-pole CA4	2-pole CAT4-11	4-pole CA4	TEF4	VEM4	2-pole CAL4-11						
1-pole CC4	Max. N.C. built-in and add-on N.C. auxiliary contacts: 4 N.C. max. on positions 1, 2, 3, 4 and 3 N.C. max. on positions 1 ±30°, 5										
AF09 ... AF16	3	0	0	1	4 max. or	1 or	1 or	1	– +	1	–
AF09 ... AF16	3	0	1	0	2 max. or	1	– or	1	– +	1 +	1
AF26 ... AF38	3	0	0	0	3 max.	–	–	– +	1 +	1 or	1
Max. add-on N.C. auxiliary contacts: 6 N.C. max. on positions 1, 1 ±30°, 2, 3, 4, 5											
AF40 ... AF65	3	0	0	0	4 max. or	1	1	1	– +	1 +	1
AF80, AF96	3	0	0	0	4 max.	–	1	1	– +	1 +	1

Overload relays fitting details (1)

Contactor types	Thermal overload relays	Electronic overload relays
AF09 ... AF38	TF42 (0.10...38 A)	EF19 (0.10...19 A)
AF26 ... AF38	TF42 (0.10...38 A)	EF45 (9...45 A)
AF40 ... AF65	TF65 (22...67 A)	EF65 (20...70 A)
AF80, AF96	TF96 (40...96 A)	EF96 (36...100 A)

AF09 ... AF96 3 pole contactors

Main accessories

		Auxiliary contacts		Part no. ⁽¹⁾	Order Code	
For contactors		   				
Front-mounted instantaneous auxiliary contact blocks						
 CA4-10	 CAL4-11	AF09 ... AF38	1 0 - -	CA4-10	1SBN010110R1010	
			1 0 - -	CA4-10-T	1SBN010110T1010	
			0 1 - -	CA4-01	1SBN010110R1001	
			0 1 - -	CA4-01-T	1SBN010110T1001	
 CA4-22E	 CAT4-11E	AF09 ... AF16..-30-10	2 2 - -	CA4-22M	1SBN010140R1122	
		AF26 ... AF96..-30-00	2 2 - -	CA4-22E	1SBN010140R1022	
		AF09 ... AF16..-30-01	2 2 - -	CA4-22U	1SBN010140R1322	
Front-mounted auxiliary contact blocks with N.O. leading contact and N.C. lagging contact						
 CC4-10	 CC4-01	AF09 ... AF96	- - 1 0	CC4-10	1SBN010111R1010	
			- - 0 1	CC4-01	1SBN010111R1001	
Side-mounted instantaneous auxiliary contact blocks						
 CAL4-11	 CAL4-11-T	AF09 ... AF96	1 1 - -	CAL4-11	1SBN010120R1011	
			1 1 - -	CAL4-11-T	1SBN010120T1011	
Front-mounted instantaneous auxiliary contact and A1/A2 coil terminal blocks						
 CAT4-11M	 CAT4-11E	AF09 ... AF16..-30-10	1 1 - -	CAT4-11M	1SBN010151R1111	
		AF26 ... AF65..-30-00	1 1 - -	CAT4-11E	1SBN010151R1011	
		AF09 ... AF16..-30-01	1 1 - -	CAT4-11U	1SBN010151R1311	
Note: CAT4 not suitable for AF..Z contactors with DC control voltage 12...20 V DC.						
Mechanical interlock unit						
 VM4	 VM96-4	AF09 ... AF38		VM4	1SBN030105T1000	
		AF40 ... AF96		VM96-4	1SBN033405T1000	
Note: VM4 and VM96-4 include 2 fixing clips (BB4) to maintain together both contactors.						
Mechanical and electrical interlock set						
 VEM4	 VEM4	AF09 ... AF16 AF26 ... AF38	0 2 - -	VEM4	1SBN030111R1000	
		Note: - VEM4 includes a VM4 mechanical interlock unit with 2 fixing clips (BB4), a VE4 electrical interlock block. VE4 block must be used with A2-A2 connection to respect the electrical connection diagram. - VEM4 not suitable for AF..Z contactors with DC control voltage 12...20 V DC.				
For contactors		Time delay range selected by switch	Auxiliary contacts	Part no. ⁽¹⁾	Order Code	
			Delay type  			
Electronic timers						
 TEF4-ON	 BEA16-4	AF09 ... AF96	0.1...1 s 1...10 s 10...100 s	ON-delay - -	TEF4-ON	1SBN020112R1000
				OFF-delay - -	TEF4-OFF	1SBN020114R1000
		Note: Rated control circuit voltage Uc 24...240 V 50/60 Hz or DC.				
Connecting links with manual motor starters						
AF09 ... AF16	with	MS116-0.16 ... MS116-25, MS132-0.16 ... MS132-25		BEA16-4	1SBN081306T1000	
AF26 ... AF38	with	MS116-0.16 ... MS116-16, MS132-0.16 ... MS132-10		BEA26-4	1SBN082306T1000	
	with	MS116-20 ... MS116-32, MS132-12 ... MS132-32		BEA38-4	1SBN082306T2000	
Connection sets for reversing contactors						
AF09 ... AF16				BER16-4	1SBN081311R1000	
AF26 ... AF38				BER38-4	1SBN082311R1000	
AF40 ... AF65				BER65-4	1SBN083411R1000	
AF80 ... AF96				BER96-4	1SBN083911R1000	
Mechanical interlock unit						
AF09 ... AF16	With or without VM4			BEY16-4	1SBN081313R2000	
AF26 ... AF38	With or without VM4			BEY38-4	1SBN082713R2000	
AF40 ... AF65	With or without VM96-4			BEY65-4	1SBN083413R2000	
AF80 ... AF96	With or without VM96-4			BEY96-4	1SBN083913R2000	

¹⁾ For more information, refer to main catalogue "Accessories" section.

Overload protection

Selection



TF42

TF42

The TF42 thermal overload relays are economic electromechanical protection devices for the main circuit. They offer reliable protection for motors in the event of overload or phase failure. The devices have trip class 10.

The thermal overload relays are three pole relays with bimetal tripping elements. The motor current flows through the bimetal tripping elements and heats them directly and indirectly. In case of an overload (over current), the bimetal elements bent as a result of the heating. This leads to a release of the relay and a change of the contacts switching position (95-96 / 97-98).

- Manual or automatic reset selectable
- Phase loss sensitive acc. to IEC/EN 60947-4-1
- TEST and STOP function – Trip indication on the front
- Temperature compensation
- Suitable for three- and single-phase applications

TF42 0.10 to 38.0A

Setting range A	Short-circuit protective device	Trip class	Part no.
0.10 ... 0.13	0.5 A, fuse type T7.5	10	TF42-0.13
0.13 ... 0.17	1.0 A, fuse type T	10	TF42-0.17
0.17 ... 0.23	1.0 A, fuse type T	10	TF42-0.23
0.23 ... 0.31	1.0 A, fuse type T	10	TF42-0.31
0.31 ... 0.41	2.0 A, fuse type gG	10	TF42-0.41
0.41 ... 0.55	2.0 A, fuse type gG	10	TF42-0.55
0.55 ... 0.74	4.0 A, fuse type gG	10	TF42-0.74
0.74 ... 1.00	6.0 A, fuse type gG	10	TF42-1.0
1.00 ... 1.30	6.0 A, fuse type gG	10	TF42-1.3
1.30 ... 1.70	10.0 A, fuse type gG	10	TF42-1.7
1.70 ... 2.30	10.0 A, fuse type gG	10	TF42-2.3
2.30 ... 3.10	10.0 A, fuse type gG	10	TF42-3.1
3.10 ... 4.20	20.0 A, fuse type gG	10	TF42-4.2
4.20 ... 5.70	20.0 A, fuse type gG	10	TF42-5.7
5.70 ... 7.60	35.0 A, fuse type gG	10	TF42-7.6
7.60 ... 10.0	35.0 A, fuse type gG	10	TF42-10
10.0 ... 13.0	40.0 A, fuse type gG	10	TF42-13
13.0 ... 16.0	40.0 A, fuse type gG	10	TF42-16
16.0 ... 20.0	63.0 A, fuse type gG	10	TF42-20
20.0 ... 24.0	63.0 A, fuse type gG	10	TF42-24
24.0 ... 29.0	63.0 A, fuse type gG	10	TF42-29
29.0 ... 35.0	80.0 A, fuse type gG	10	TF42-35
35.0 ... 38.0/40.0	80.0 A, fuse type gG	10	TF42-38

Note:

The overload in star delta starters should be fitted in the Delta loop, therefore overload rating equal to FLC x by 0.58*

Overload calculation for Star Delta starters

Motor FLC	Delta Loop Setting
5	2.9
6	3.5
7	4.0
8	4.6
9	5.2
10	5.8
12	7.0
14	8.1
16	9.3
18	10.4
20	11.6
25	14.5
30	17.4
35	20.3
40	23.2
45	26.1
50	29.0
55	32.0

Limit switches

Trustworthy detection devices



Using limit switches is the easiest way to convert mechanical movements in to electrical signals. They combine different types of actuators, casings and contacts and are perfectly suited to a large variety of applications, whatever the environment.



Reliable in extreme conditions



Continuous operation



Global availability

Ready for anything

Limit switches are designed to operate in the most difficult environments. A high degree of protection up to IP66 and the positive contact opening, guarantees reliable operation.

Keep your installation running 24h a day

Limit switches secures your uptime. Their high mechanical durability can handle up to 10 million operations with contacts that are mechanically linked to actuators.

Wherever you are

Easy product selection from our core offering that covers most applications. Thanks to global certification, our products can be used everywhere to ensure your peace of mind.

Main applications

Sustainability of detection for a wide variety of applications

Material handling equipment (cranes, ramps, elevators...) Escalators, parking barriers and automatic doors Machine tools and manufacturing lines.



Limit switches

A simple core range selection covering 80% of the applications...



11 13 41 51 91

Width 30 mm - Plastic casing - Double insulation □ - IP65

Head type	Cable inlet	Type	Order Code
 11 Plain plunger steel	Iso 16	LS32P11B11	1SBV010311R1211
	Iso 20	LS33P11B11	1SBV012211R1211
	1/2" NPT	LS35P11B11	1SBV012111R1211
 13 Roller plunger plastic	Iso 16	LS32P13B11	1SBV010313R1211
	Iso 20	LS33P13B11	1SBV012213R1211
	1/2" NPT	LS35P13B11	1SBV012113R1211
 41 Roller lever plastic	Iso 16	LS32P41B11	1SBV010341R1211
	Iso 20	LS33P41B11	1SBV012241R1211
	1/2" NPT	LS35P41B11	1SBV012141R1211
 51 Adjustable roller lever plastic	Iso 16	LS32P51B11	1SBV010351R1211
	Iso 20	LS33P51B11	1SBV012251R1211
	1/2" NPT	LS35P51B11	1SBV012151R1211
 91 Flexible rod steel	Iso 16	LS32P91B11	1SBV010391R1211
	Iso 20	LS33P91B11	1SBV012291R1211
	1/2" NPT	LS35P91B11	1SBV012191R1211

Width 40 mm - Plastic casing - Double insulation □ - IP65

Head type	Cable inlet	Type	Order Code
 11 Plain plunger steel	Iso 20	LS43P11B11	1SBV010711R1211
	1/2" NPT	LS45P11B11	1SBV012411R1211
 13 Roller plunger steel	Iso 20	LS43P13B11	1SBV010713R1211
	1/2" NPT	LS45P13B11	1SBV012413R1211
 41 Roller lever plastic	Iso 20	LS43P41B11	1SBV010741R1211
	1/2" NPT	LS45P41B11	1SBV012441R1211
 51 Adjustable roller lever plastic	Iso 20	LS43P51B11	1SBV010751R1211
	1/2" NPT	LS45P51B11	1SBV012451R1211
 91 Flexible rod steel	Iso 20	LS43P91B11	1SBV010791R1211
	1/2" NPT	LS45P91B11	1SBV012491R1211

Cable inlet:

ISO 16 (standard version) equivalent to Pg11 – Cable diameter: 4.5 mm ... 10 mm (according to cable gland manufacturer).

ISO 20 (standard version) equivalent to Pg13.5 – Cable diameter: 7 mm ... 14 mm (according to cable gland manufacturer).

Metal casing - IP66

Head type	Cable inlet	Type	Order Code
 11 Plain plunger steel	Iso 16	LS32M11B11	1SBV011911R1211
	Iso 20	LS33M11B11	1SBV013811R1211
	1/2" NPT	LS35M11B11	1SBV013711R1211
 13 Roller plunger plastic	Iso 16	LS32M12B11	1SBV011912R1211
	Iso 20	LS33M12B11	1SBV013812R1211
	1/2" NPT	LS35M12B11	1SBV013712R1211
 41 Roller lever plastic	Iso 16	LS32M41B11	1SBV011941R1211
	Iso 20	LS33M41B11	1SBV013841R1211
	1/2" NPT	LS35M41B11	1SBV013741R1211
 51 Adjustable roller lever plastic	Iso 16	LS32M51B11	1SBV011951R1211
	Iso 20	LS33M51B11	1SBV013851R1211
	1/2" NPT	LS35M51B11	1SBV013751R1211
 91 Flexible rod steel	Iso 16	LS32M91B11	1SBV011991R1211
	Iso 20	LS33M91B11	1SBV013891R1211
	1/2" NPT	LS35M91B11	1SBV013791R1211

Metal casing - IP66

Head type	Cable inlet	Type	Order Code
 11 Plain plunger steel	Iso 20	LS43M11B11	1SBV011611R1211
	1/2" NPT	LS45M11B11	1SBV013111R1211
 13 Roller plunger steel	Iso 20	LS43M13B11	1SBV011613R1211
	1/2" NPT	LS45M13B11	1SBV013113R1211
 41 Roller lever plastic	Iso 20	LS43M41B11	1SBV011641R1211
	1/2" NPT	LS45M41B11	1SBV013141R1211
 51 Adjustable roller lever plastic	Iso 20	LS43M51B11	1SBV011651R1211
	1/2" NPT	LS45M51B11	1SBV013151R1211
 91 Flexible rod steel	Iso 20	LS43M91B11	1SBV011691R1211
	1/2" NPT	LS45M91B11	1SBV013191R1211

Technical data	Plastic casing	Metal casing
Rated operational characteristics	AC-15: Ue = 400 V, Ie = 4 A; A600	AC-15: Ue = 400 V, Ie = 4 A; A300
	DC-13: Ue = 250 V, Ie = 0,27 A; Q600	DC-13: Ue = 250 V, Ie = 0,27 A; Q300
Casing material	UL-V0 thermoplastic	30 mm casing: zinc alloy / 40 mm casing: aluminium alloy
Contact types	1 N.O. + 1 N.C., snap action	
I _{the} conventional enclosed thermal current	10 A	
Screw terminals with cable clamp	M3.5 - Screwdriver type: Pozidriv 2	

Jokab safety products

360	Our range of safety products
362	Sentry safety relays
363	Eden safety sensors
364	Magne – Magnetic lock
365	Smile emergency stop buttons



For more detailed product information, please refer to our online technical brochures available at: new.abb.com/low-voltage/support/documentation

or contact our sales team via email: lvpsalesie@ie.abb.com

or call: +353 (1) 405 7300

Our range of safety products

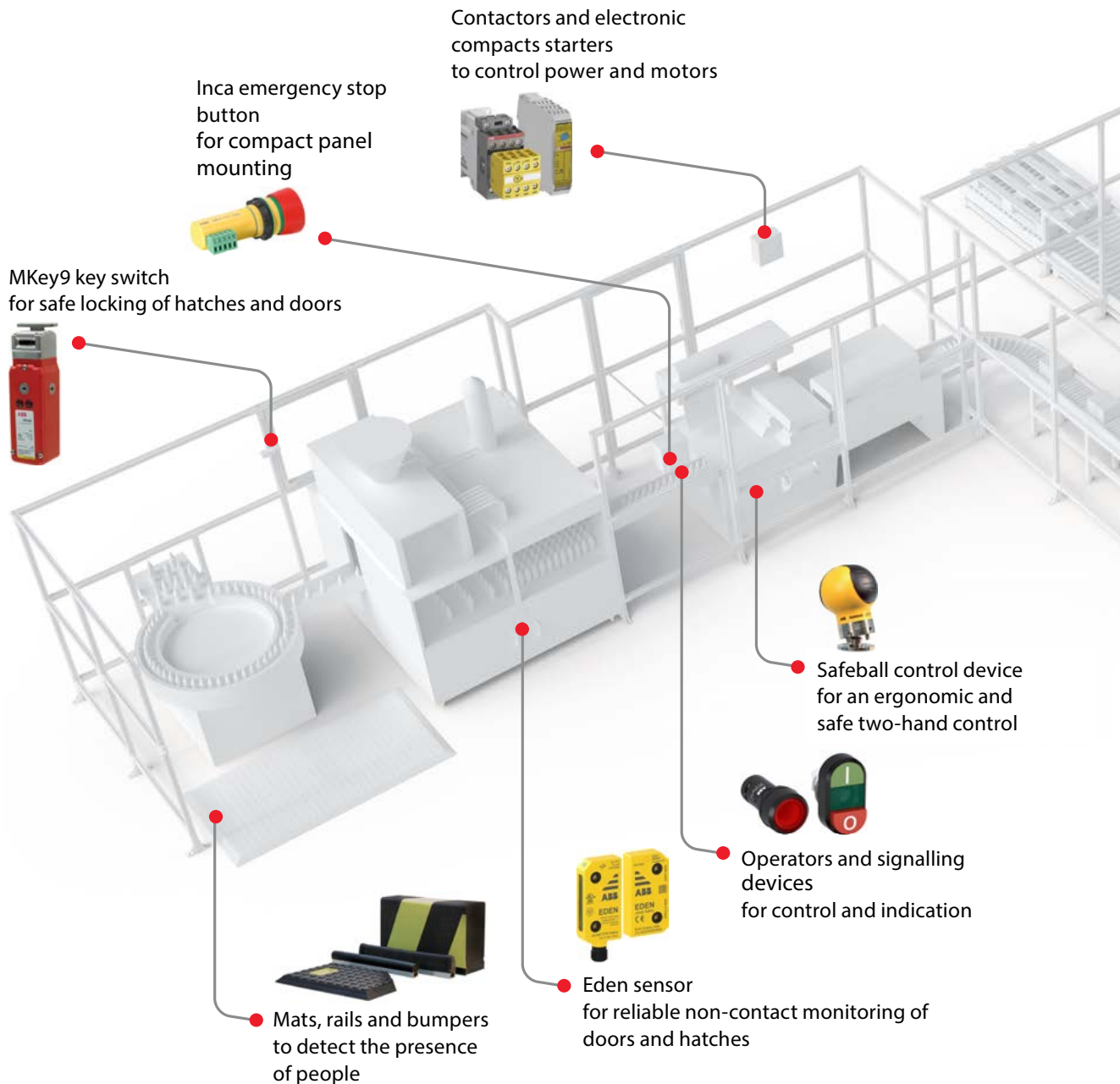
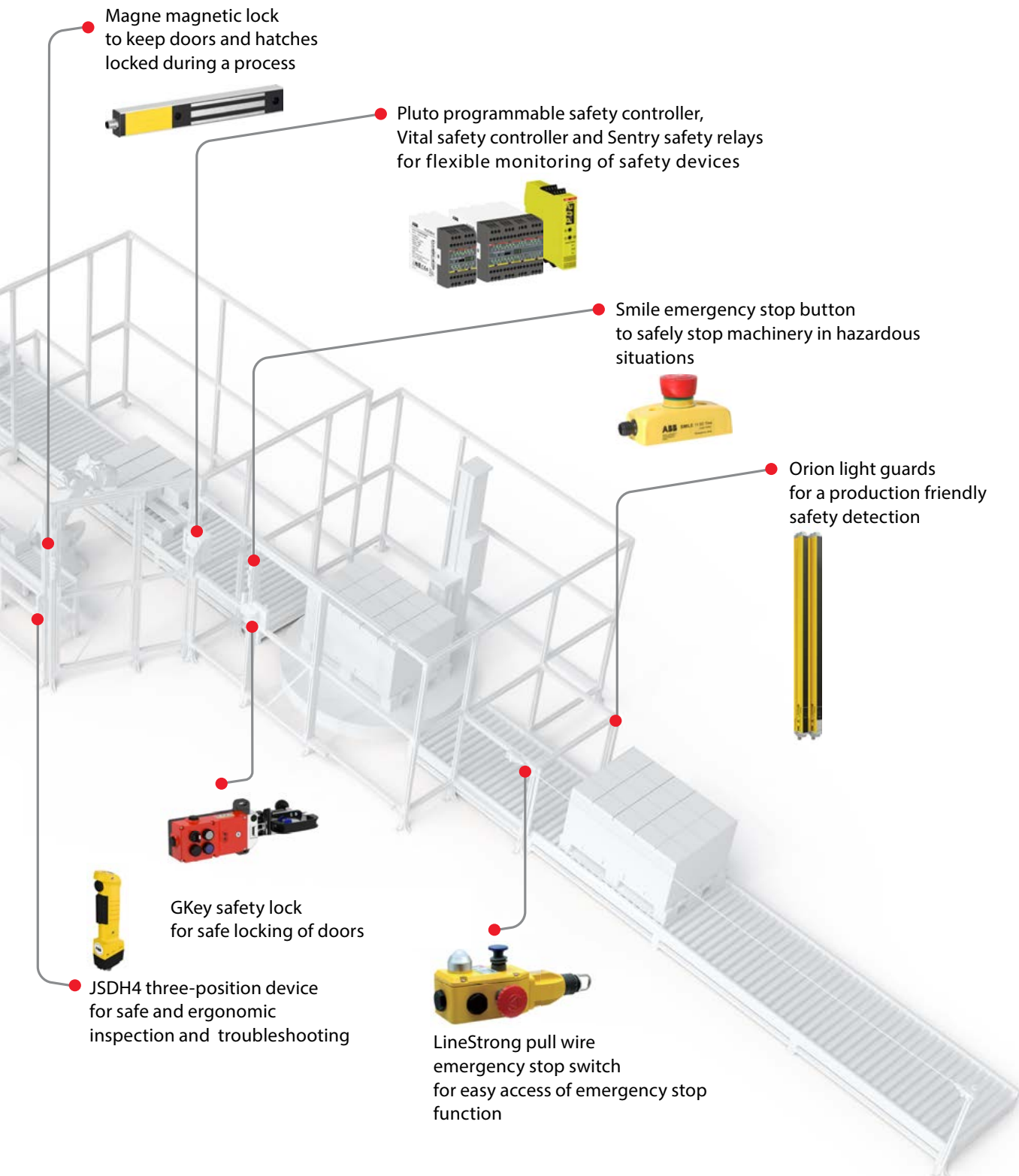


ABB can deliver all of the above safety solutions (including output devices such as contactors and frequency converters) together with automation solutions such as robotics, motors, drives and PLCs.



Sentry – Safety Relays

Order Codes

Expansion	Safety devices	Test/ Reset	Safety relay outputs	Timer function	Feature	Power supply	Type	Order Code
 BSR10 2TLCI72049V0201	Expansion of safety controller outputs							
	1 channel		3 NO + 1 NC	Off-delay 0.5 s				
	2 channels with equivalent contacts		4 NO	Off-delay 1.5 s				
	2 channels with antivalent contacts		2 NO + 2 delayed/delayable NO	Advanced timer functions 0 – 999 s ^{d)}				
	OSD outputs / PNP outputs		4 NO + 1 NC					
	Contact mats, bumpers and safety edges ^{c)}							
	Two-hand devices							
	Manual reset (all models have auto reset)							
	Start/Test							
						85-265 VAC / 120-375 VDC +24 VDC		
a)	• b)	•	•			•	BSR10	2TLA010040R0000
a)	• b)	•	•			•	BSR11	2TLA010040R0200
a)				•		•	BSR23 ^{e)}	2TLA010041R0600
•	• • •	•	•			•	SSR10	2TLA010050R0000
•	•	•	•			•	SSR10M	2TLA010050R0100
		•	•			•	SSR20	2TLA010051R0000
		•	•			•	SSR20M	2TLA010051R0100
	• • •	•		•		•	SSR32	2TLA010052R0400
	• • •	•		•		•	SSR42	2TLA010053R0400
•	• • •		•	• • •	•	•	TSR10	2TLA010060R0000
•	• • •		•	• •		•	TSR20	2TLA010061R0000
•	•		•	• •		•	TSR20M	2TLA010061R0100
	• • • • •	•	•	• • •	•	•	USR10	2TLA010070R0000
	• • • • •	•	•	• • •	•	•	USR22	2TLA010070R0400

a) These models can also be used for expansion of Pluto safe transistor outputs (-24 VDC)

b) No monitoring of two-channel fault, i.e. max Category 3 without fault exclusion.

c) The safety relay detects a short-circuit, not a change in resistance.

d) Off-delay, On-delay, Time bypass or Time reset.

e) BSR23 must be monitored by another device in order to reach higher than Category 1/PL c according to EN ISO 13849-1, for example a safety relay, a safety PLC or an Orion light guard (EDM function).



SSR32

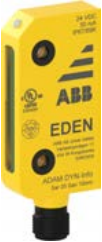
BSR10



Eden – Non-contact safety Sensors

Order Codes

Adam

	Type of safety controller	StatusBus	Info signal	Local reset	Series connection	Connector male	Type	Order Code
	OSSD compatible (incl. Pluto and Sentry)		x			M12-5	Adam OSSD-Info M12-5	2TLA020051R5400
			x		x	M12-8	Adam OSSD-Info M12-8	2TLA020051R5700

Adam OSSD-info M12-5

Eva

Compatible Adam	Code description	Code level	Type	Order Code
	Adam DYN and OSSD	General code. (Eva is interchangeable)	Low level	Eva General code
		Unique code. (Prevents defeat/fraud)	High level	Eva Unique code

Eva General code

Cables and connectors

Cable with connectors

	Connector	Female/male	Length	Special feature	Type	Order Code
	M12-5 *	Female	3 m		M12-C31	2TLA020056R0500
			6 m		M12-C61	2TLA020056R0000
				Harsh environment, halogen free	M12-C61HE	2TLA020056R8000
			10 m		M12-C101	2TLA020056R1000
				Harsh environment, halogen free	M12-C101HE	2TLA020056R8100
			20 m		M12-C201	2TLA020056R1400
		Female + male	0.3 m		M12-C0312	2TLA020056R5800
			0.06 m		M12-C00612	2TLA020056R6300
			1 m		M12-C112	2TLA020056R2000
			3 m		M12-C312	2TLA020056R2100
			6 m		M12-C612	2TLA020056R2200
			10 m		M12-C1012	2TLA020056R2300

Magne – Magnetic lock

Order Codes

Ordering details

For a complete Magne lock both door part and frame parts are necessary. Magne 4 also requires a separate Eva sensor.

	Safe interlocking with integrated Adam	Safety signal	Extra function	Connector	Type	Order Code
 Magne 3	No	–	–	M12-5 male	Magne 3X M12-5	2TLA042022R2700
	Yes	OSSD	"Locked" and "Closed" information outputs	M12-8 male	Magne 4 OSSD-Info	2TLA042022R4600



Magne 4

Door part

Description	Type	Order Code
Anchor plate with permanent magnet. Delivered with cellular rubber.	Magne Anchor 32B	2TLA042023R0400
Anchor plate without permanent magnet. Delivered with cellular rubber.	Magne Anchor 32A	2TLA042023R1300

Eva sensor for Magne 4 models

Compatible Adam	Code description	Code level	Type	Order Code
Adam DYN and OSSD	General code. (Eva is interchangeable)	Low level	Eva General code	2TLA020046R0800
	Unique code. (Prevents defeat/fraud)	High level	Eva Unique code	2TLA020046R0900

Smile emergency stop buttons

Order Codes

Smile stop button

	Connection type	Feature	Type	Order Code
 2TLC1218F0201	1 x M12-5 male	Status LED	Smile 11 EA	2TLA030051R0000
	2 x M12-5 male	Status LED	Smile 12 EA	2TLA030051R0200

Smile 12 EA

Smile safety stop buttons

Order Codes

Smile safety stop button

	Type of safety signal	Connection type	Feature	Type	Order Code
 2TLC12198F0201	2 NC	1 x M12-5	Status LED	Smile 11 SA	2TLA030051R0900
	* Can be adapted to DYNlink with Tina				

Smile 11 SA

Smile reset buttons

Order Codes

Smile reset button

	Type of contact	Intended use	Connectors	Type	Order Code
 2TLC127018V0201	1 NO	Most reset applications	M12-5 male	Smile 11 RA	2TLA030053R0000
	* See Pluto hardware manual for more information about the light button function				

Smile 11 RA

Additional information

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilisation of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG.



ABB Limited

Electrification Business Area
5th Floor, Beacon Concourse Block D
Beacon Court
Sandyford, Dublin
Ireland
Tel: +353 (1) 405 7300
E-Mail: lvpsalesie@ie.abb.com

new.abb.com/ie