

GUIDE

RESIDENTIAL AND COMMERCIAL

POWER PROTECTION



THE **GLOBAL SPECIALIST**
IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES



SUPERIOR PROTECTION

The world class offer from Legrand provides one of the most comprehensive power protection solutions across all residential and commercial applications



ACBs



MCCBs



MCBs



RCBOs



TIME SWITCHES



ENERGY METERING

THE WORLD CLASS OFFER

CASE STUDIES



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RESIDENTIAL PROTECTION



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5 Digit Cat. Nos.			043 10	18	10	073 81	23	1	133 02	121	10	171 50	115	3	227 32	106	1
			14 -	10		82 -	-	1	04 -	-	10	55 -	-	3	98 -	-	1
			30 -	5					06 -	-	10	60 -	-	3	250 00		
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010 00			50 -	3		84 -	-	1	10 -	-	10				255 21	86	1
			54 -	3		86 -	-	1	16 -	-	10	173 50	115	3	22 -	-	1
			82 165	10		87 -	-	1	20 -	-	10	55 -	-	3	23 -	-	1
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			046 31	184	1	88 -	-	1	16 -	-	10	75 -	-	3	40 -	-	1
			34 -	1		89 -	-	1	20 -	-	10	178 60	115	3	43 -	-	1
			36 -	1		90 -	-	1	25 -	-	10	65 -	-	3	44 -	-	1
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260 63	87	1	264 09	88	1	286 58	50	1	287 88	51	1	289 21	53	1	0 146 69	183	1
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44	-	1	75	-	1	71	-	1	02	-	1	82	-	1	79	-	1
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						84	-	1				72	-	1	0 031 43		
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Cat. No.	Page	Pack	Cat. No.	Page	Pack	Cat. No.	Page	Pack	Cat. No.	Page	Pack	Cat. No.	Page	Pack	Cat. No.	Page	Pack
4 079 71	143	1	4 092 82	142	1	4 104 28	148	1	4 117 24	146	1	4 131 05	179	1	4 202 39	80	1
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18	-	1	12	-	1				51	-	2	4 201 10	78	1	4 204 32	82	1
19	-	1	13	-	1	4 111 85	147	1	53	-	1	11	-	1	35	-	1
20	-	1	14	-	1	86	-	1	56	-	1	12	-	1	37	-	1
40	-	1	15	-	1	87	-	1	57	-	1	13	-	1	39	-	1
41	-	1	20	-	1	88	-	1	58	-	1	14	-	1	42	-	1
42	-	1	21	-	1	89	-	1	59	-	1	15	-	1	45	-	1
95	-	1	22	-	1	90	-	1	60	-	1	16	-	1	47	-	1
96	-	1	23	-	1	91	-	1	61	-	1	17	-	1	49	-	1
97	-	1	24	-	1	92	-	1	62	-	1	20	-	1	52	-	1
99	-	1	25	-	1				63	-	1	21	-	1	55	-	1
			26	-	1	4 112 33	147	1				22	-	1	57	-	1
4 092 00	142	1	27	-	1	34	-	1	4 126 02	175	10	23	-	1	59	-	1
01	-	1	28	-	1	35	-	1	23	176	1	24	-	1	62	-	1
02	-	1				36	-	1	26	-	1	25	-	1	65	-	1
03	-	1	4 101 34	145	1	37	-	1	30	172	1	26	-	1	67	-	1
04	-	1	35	-	1				31	-	1	27	-	1	69	-	1
05	-	1	36	-	1	4 115 04	146	1	41	-	1	30	-	1	72	-	1
06	-	1	37	-	1	05	-	1	54	-	1	31	-	1	75	-	1
07	-	1	38	-	1	06	-	1	57	-	1	32	-	1	77	-	1
08	-	1	39	-	1	07	-	1				33	-	1	79	-	1
47	-	1	40	-	1	14	-	1	4 127 80	173	1	34	-	1	82	-	1
48	-	1	41	-	1	15	-	1	90	-	1	35	-	1	85	-	1
49	-	1	60	-	1	25	-	1	94	-	1	36	-	1	87	-	1
51	-	1	61	-	1	26	-	1	95	-	1	37	-	1	89	-	1
52	-	1	62	-	1	54	-	1				50	-	1			
53	-	1	63	-	1	55	-	1	4 128 12	173	1	51	-	1	4 205 22	83	1
54	-	1	64	-	1	56	-	1	13	-	1	52	-	1	25	-	1
55	-	1	65	-	1	57	-	1	58	176	1	53	-	1	27	-	1
56	-	1	66	-	1	70	-	1	72	172	1	54	-	1	29	-	1
57	-	1	67	-	1	71	-	1	73	-	1	55	-	1	32	-	1
58	-	1										56	-	1	35	-	1
59	-	1	4 104 01	148	1	4 117 02	146	1	4 130 91	178	1	57	-	1	37	-	1
60	-	1	02	-	1	03	-	1	92	-	1				39	-	1
80	-	1	13	-	1	04	-	1	93	-	1	4 202 35	80	1	42	-	1
81	-	1	14	-	1	05	-	1	96	-	1	37	-	1	45	-	1
						23	-	1	98	-	1	38	-	1			

Legrand
success stories

Tunnel of Landy **France**
Sector: Infrastructure

CRITICAL SAFETY FOR ROAD USERS



KEY DATA:

End-user: DIRIF

Builder: ARTELIA / EGIS / Barbier

Contractor: SATELEC & SPIE

Switch-Board Builder: AES FAMATEC

Legrand solution installed:

- Main Switch-Board XL³ 4000
- Sub-Board XL³ 800 and XL³ 400
- DMX³ ACB draw-out with automatic transfer switch
- Zucchini busbar system 2500 A and 3200 A
- Altis metallic enclosures
- Emergency lighting

France is progressively upgrading its road tunnels to make them more secure through new fire and emergency exits standards. This long process started with 22 tunnels in the Paris region, accounting for 2.5 Million vehicles per day, including the Tunnel of Landy which connects Paris north to the A1 motorway. It represents a very large project for the local Road Traffic Authority which trusted Legrand for its Power Protection installation.



CUSTOMER TESTIMONIAL

“Protect the road user first”

“The specificity of a tunnel like Landy is that despite a supply shortage by the energy supplier, all fans and lighting equipment must keep operating. Legrand Automatic Transfer Switches contributed to ensure continuity of operation. In the event of a fire, smoke must be sucked out and fresh air is injected. The next step is to ensure communication with the remote control centre, which monitors day-to-day activity of the tunnel. One of the new clauses in the 2005 tunnel upgrade standards requires the automatic detection of accidents through information communicated to a remote control centre via different alarms. Legrand Power Protection is essential for a tunnel such as Landy, if a serious accident was to happen, traffic jams would be huge.”

Jean Da Col

Operations Management for infrastructures and tunnels
DIRIF



transmission, lighting, ventilation) to the most modern technologies implied a full renovation of its electrical equipment to be able to maintain a continuity of service. To take up this challenge, Legrand teams joined forces with contractors SPIE and SATELEC. They built a solid development application along with board-builder AES FAMETEC (Fayat Group). “The Landy tunnel project started February 2010, with the first switch-boards delivery in Autumn 2010,” explains Francis Couvert, Business Developer Infrastructure at SPIE. “The main constraint was to operate while the tunnel remained open to traffic, hence we had to double the electrical equipment and keep them running. Main switch-board and sub-boards installation in different technical factories at the surface of the tunnel spread over a year, making space in every room as we were making progress through the site” continued Mr Couvert. In each of the three technical factories dedicated to lighting and ventilation, 2 main switch-boards were installed next to an emergency switch-board. The installation total power is 8500 kVA, with 24 boosters of 37 kW at the entrance and exit of the tunnel, 4 fans of 400 kW adding onto 8 fans of 200 kW and 62 of 37 kW for the main section...fully necessary to ensure smooth ventilation in the 1,357m long tunnel. Everything went well thanks to effective cooperation of all the stakeholders and by the end of February 2012, the electrical renovation was fully completed.

After the tragic events in the Tunnel of Mont-Blanc 15 years ago, France decided to increase protection against potential fires in tunnels. By setting new stringent safety standards on smoke extraction, fresh air input and emergency lighting and exits, it aimed to have all its road tunnels equipped by 2014. One of the most frequented road tunnels in Europe with a daily traffic of approximately 220,000 vehicles, the Tunnel of Landy was a major roadblock. Upgrading its installations (emergency exits, CCTV system, RF

Legrand
success stories

Roshen Confectionnary **Ukraine**
Sector: Industrial

A SWEET TOOTH FOR LEGRAND



KEY DATA:

End-user: Roshen

Legrand solution installed:

- Zucchini busbars (1250 A, 2000 A, 2500 A, 4000 A)
- XL³ enclosures
- DMX³ Air Circuit Breakers
- DPX Moulded Case Circuit Breakers
- DX Modular Circuit Protection
- Power Factor Correction (Alpimatic)
- Viking 3 terminal blocks
- Memocab cable marking system
- Plexo³ IP65 enclosures
- Atlantic stainless steel enclosures



When you rank among the top 20 manufacturers of confectionery worldwide, you want to ensure your production lines and workforce are well protected. Better keep things moving! Roshen Confectionery Corporation produce around 200 types of candies and chocolate. The total output of its 9 manufacturing sites spread across Russia and Eastern Europe reaches 450,000 tons per year.



Roshen prides itself on high manufacturing food and safety quality standards, backed-up by ISO 22000:2005 and ISO 9001:2000, and uses cutting edge technologies as well as modern high capacity equipment. As a consequence, it had to rely on a trustworthy electrical solutions manufacturer for its new plant in Vinnitsa, which opened on the 21st of August 2012.

This new production facility, built over 62,000 m² in a complex of 14.4 hectares, also comprising engineering and administrative buildings, will produce an additional 100,000 tons of confectionery products per annum.

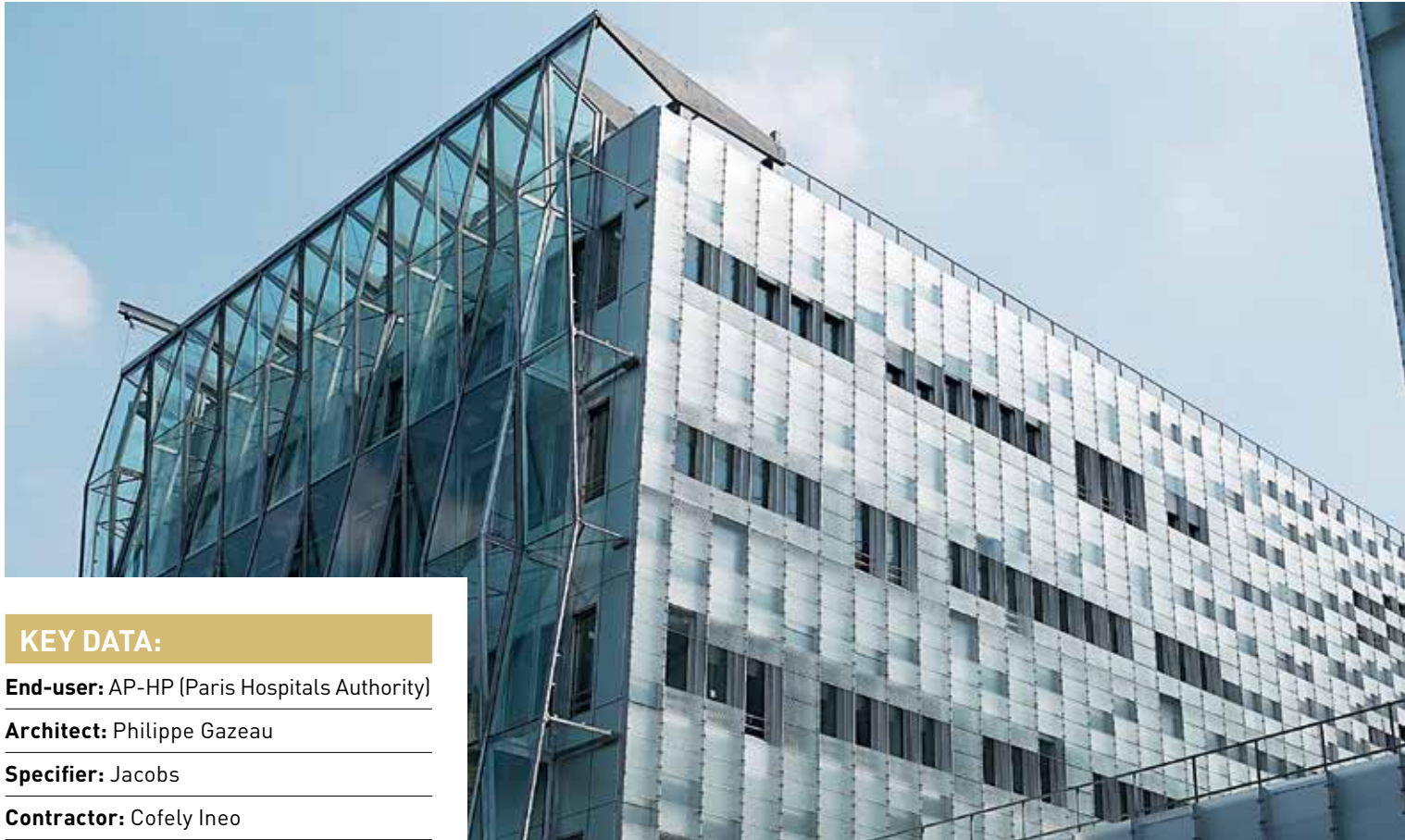
The factory specializes in producing wafers and jelly products, glazed chocolate wafer cake, aerated chocolate bars, biscuit products, hard candies, chocolate-praline and coated and whipped candy with different tastes.

Legrand was selected as it could provide an end-to-end solution in Power Protection: as Zucchini busbars are ensuring distribution of high currents and an XL³ main switch-board hosts protection devices from the main incomers DMX³ to modular breakers DX. The system also relies on high-corrosion resistance Atlantic enclosures for switchgear and control equipment as well as Plexo³ IP65 rated. Viking 3 terminal blocks and Memocab cable marking complete the full solution to deliver the high performance Roshen expects from its latest factory.

Legrand
success stories

Necker Hospital **France**
Sector: Healthcare

SELECTIVITY WELL TAKEN CARE OF



KEY DATA:

End-user: AP-HP (Paris Hospitals Authority)

Architect: Philippe Gazeau

Specifier: Jacobs

Contractor: Cofely Ineo

Switch-Board Builder: Hazemeyer and SCY

Legrand solution installed:

- Main Switch-Board XL³ 4000
- DMX³ Air Circuit Breakers and Trip-free switches
- DPX³ Moulded Case Circuit Breakers
- DX³ Modular Circuit Protection
- EMDX³ metering units
- Zucchini busbar system 3200 A
- Arteor wiring devices
- Emergency lighting

The Necker hospital in Paris built new premises specifically dedicated to the care of children. Directly opposite the historic hospital complex, a glass building 60,000 m² hosts administrative offices, rooms with a capacity of 400 beds and a top-of-the-range surgical ward. Five years were necessary (design stage included) to implement the electrical part of the project, critical to ensure lives at stake were fully protected.



CUSTOMER TESTIMONIAL

"A quality commitment to end-users"

"Choosing Legrand is the guarantee to have consistent and quality products. In this particular case, total discrimination was ensured," explains Francois Chetcuti, branch manager for Hazemeyer Switchboards. "Legrand's philosophy is based around easy-to-install products, especially terminal connections. It is a plus!" Daniel Cardarelli, General Manager for switch-board builder SCY, adds: "Legrand solutions offer ease of maintenance. Their new modular range is more robust and looks good. For a switch-board builder like us, it means a quality commitment to our customers".

boards project. The new building was to deliver 8,000 kVA through 4 transformers. "For this project we advocated the Legrand solution for the end-user as we knew it would be within budget as well as ensuring total selectivity, a mandatory requirement with health buildings". Since the early stage of design, Legrand was involved to assist with discrimination studies using its breakers, and sent technical support staff to the switch-board builders Hazemeyer (main switch-board) and SCY (sub-boards). 50 DMX³ Air circuit breakers and trip-free switches were installed in the main switch-boards. "On those protection devices, the electronic trip units helped us coordinate precisely with downstream breakers" explains Bertrand Debusschere, foreman on the project. Down the line, 300 DPX³ Moulded Case Circuit breakers protect different outgoing circuits. In the health industry, due to critical requirements, the ratio of three sockets outlets maximum per breaker implies a high number of protection devices. In order to ensure the connection between transformer and main switch-board, prefabricated 3200 A Zucchini busbars were implemented to comply with standards (for more than 3 cables per phase, busbars are to be installed). A decision Francis Jan approved as "it is a much tidier solution than cables". Along with protection devices, wiring devices as well as emergency lighting were installed.

"To design all the building networks, preliminary studies were very complex" acknowledges Francis Jan, project manager at Ineo Tertiaire. "The implementation was very demanding, with an obligation to succeed, especially on fire equipment. Regarding power protection, continuity of service and the perfect discrimination between the breakers were essential." Having worked with Legrand on a previous office building in la Defense, Francis Jan decided to entrust them again for this 8 main switch-board - 183 sub-

Legrand
success stories

IKEA Rennes **France**
Sector: Commercial

IKEA ENSURES ITS DISTRIBUTION WITH LEGRAND



KEY DATA:

End-user: Ikea

Specifier: Boplan engineering

Contractor: SPIE Ouest-centre

Switch-Board Builder: BCI6

Legrand solution installed:

- Main Switch-Board XL³ 4000
- DMX³ Air Circuit Breakers and Trip-free switches
- DPX³ Moulded Case Circuit Breakers
- DX³ Modular Circuit Protection
- EMDX³ metering units
- Zucchini busbar system 3200 A
- Arteor wiring devices
- Emergency lighting

Since its opening, the Ikea store in Rennes-Pace experienced success and generate a lot of traffic: 1.5 Million visitors in 2009 browsed through its 27,000 m² shopping area. Needless to say its day-to-day operations rely on a spot-on electrical installation for which Legrand offered its Power Protection solutions.



CUSTOMER TESTIMONIAL

"Partnership is key"

"At BCIG, we believe in cooperation with both the manufacturer and wholesaler. Respecting delivery schedules is key to us. On the IKEA store project, both the manufacturer and wholesaler did great work. Legrand offers everything I need for Power Protection and service is also important. Legrand staff were present on the field to assist and listened to our comments."

Jacky Poulhet

Sales Manager
BCIG Switch-Boards

All IKEA stores in France are designed with the same electrical installation and power supply. The GEI division (General Electrical Installation), of the SPIE Group (west-center branch) implemented the air conditioning and electrical systems within 7 months. Even if the scope of work was set for the store, they suggested a few clever improvements: all 9 sub-boards (except for the ones for the offices and the restaurant) are housed within the main-switch board. "By doing this we facilitate maintenance work, with everything located in one central place. It is practical for us to have it this way as the sub-boards do not take unnecessary exhibition spaces dedicated to furniture," said Mr Petit. Another specific point for this project is that DX Modular Circuit Breakers, DMX³ 2500A draw-out Air Circuit Breakers and DPX Moulded Case Circuit Breaker were hosted in an Altis enclosure. Mr Petit underlined, "I made this decision because Altis enclosures offered a large depth enabling door mounting of equipment with rear connections. Generally speaking, regarding Legrand, one has to acknowledge that service won it all. I had an issue with a locking key on one DMX³, and the information was relayed to technical support for further modification of the products. They pay attention to customer's feedback".

"Energy distribution plays an essential part here," said Arnaud Petit, technical manager. "The store fully depends on electricity for energy, there is no gas used in the building. The scope of work must take into account the 2 private 20 kV transformers to size correctly the electrical devices. Also, emergency equipment, HVAC system and fire safety devices consume a lot of power. They all work on backed-up electrical circuits as well as our sales and cash-machines systems."

WELL-PROTECTED DATA



KEY DATA:

End-user: Polcom

Legrand solution installed:

- Zucchini transformers
- Zucchini busbars
- DMX³ Draw-out Air Circuit Breakers
- DPX Moulded Case Circuit Breakers
- DX Modular Circuit Protection
- XL³ 400 and 800 enclosures
- Energy meters
- Cablofil cable tray system
- Floor boxes
- Data cabinets with racks
- LCS² patch panels, sockets and cables

Polcom built its newest data centre in 2011, trusting Legrand for protecting its electrical circuits while ensuring continuity of service. Indeed, no interruption of Polcom operations can be permitted when dealing with enormous amounts of data per second. Think of the disaster if any banking financial transactions were to halt, or if a data back-up for a trading company did not get completed in full.



CUSTOMER TESTIMONIAL

"The POLCOM Data center built in 2011 used a wide range of Legrand products divided into two major groups: supply and distribution of electricity, and structured cabling. All installed devices work flawlessly and are convenient to use. This is ensured by high quality based on world-class design. The implementation of Legrand products are facilitated by detailed technical documentation that is widely available. In addition, the training of staff responsible for the operation and maintenance, organised by Legrand team, results in a conscious and correct exploitation of installed devices."

Wielisław Wilk

Board vice-president
POLCOM.

It can now pride itself to have a sound customer base including some large banking firms such as ING or BNP Paribas. Dynamic development and support of European Union structural funds enabled the construction of one of the largest and most modern data centers in Poland.

The new POLCOM data center has an area of over 6,000 m², which hosts several thousand servers, advanced network systems and devices. This data center also allows Polcom to provide cloud services ("cloud computing") to its customers.

Two main switch-boards were installed, each of those hosting 6 DMX³ Air Circuit Breakers draw-out version with 65 kA breaking capacity and 4,000 A ratings. Downstream, an array of approx 60 DPX125 fixed and DPX630 draw-out Moulded Case Circuit Breakers (3P and 4P) provide full selectivity with the ACBs. Back-up is optimized with the use of DX Modular Circuit Breakers installed in XL³ quality enclosures for the final distribution.

As the integrity of the data stored or passing through the building is critical, a generator is ready to take over in case of power failure from the substation. This can be achieved thanks to a mechanical interlock between DMX³ breakers, as well as a 4,000 A 4 Pole trip-free switch DMX³-I.

Polcom is a company with more than 20 years of experience in the Polish and European markets. At its early stage, the company dealt with the integration of information systems (storage systems, computer systems to process large amounts of information). During many years of their activity in the IT services market, the Polcom company gained valuable experience in providing customers with optimal information technology.

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SWITCHBOARDS & ENCLOSURES



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Consumer units



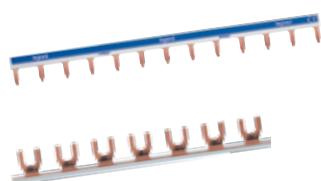
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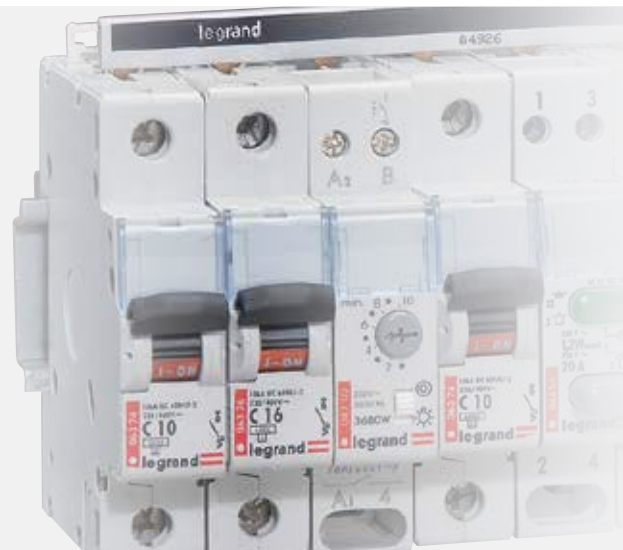
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Changeover switches



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XL³ 160 enclosures

DX: a universal range

Particularly well suited to residential applications, DX offers a complete range of protection devices and control/signalling auxiliaries. DX is one of the most comprehensive offers on the market and also ensures clean aesthetics and overall uniformity of appearance.



“In choosing DX, I feel we have opted for a universal solution which answers all the problems we may encounter on site. This complete range guarantees consistency and uniformity in our consumer units.”

All DX switches and circuit breakers have large-capacity 25 mm² (flexible) - 35 mm² (rigid) terminals for ease of connection.



- They can take both copper and aluminum cables.
- The shape of the screws and terminals guarantees excellent mechanical withstand of the wires and limits the contact impedance, temperature rise and heat loss.

Being compliant with AS/NZS 60898-1 (MCBs), AS/NZS 61008-1 (RCCBs), AS/NZS 61009-1 (RCBOs) standards, DX is adapted to residential applications.

The wide choice of residual current devices means users can be protected in any scenario.

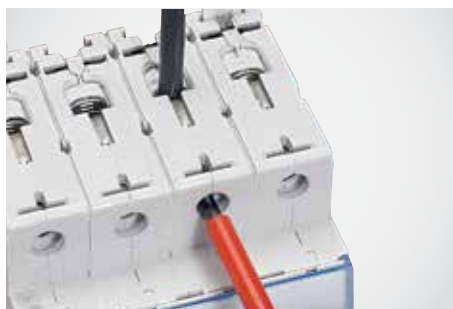
DX: safety and ease of connection

The DX range ensures safety of installation and simplifies wiring operations. With wide terminals providing reliable, lasting connections, a wire guide and enhanced cable tensile resistance, DX ensures ease of installation and peace of mind.

The DX range guarantees IP2x protection. It prevents any risk of contact with live parts, even when the enclosure is open.



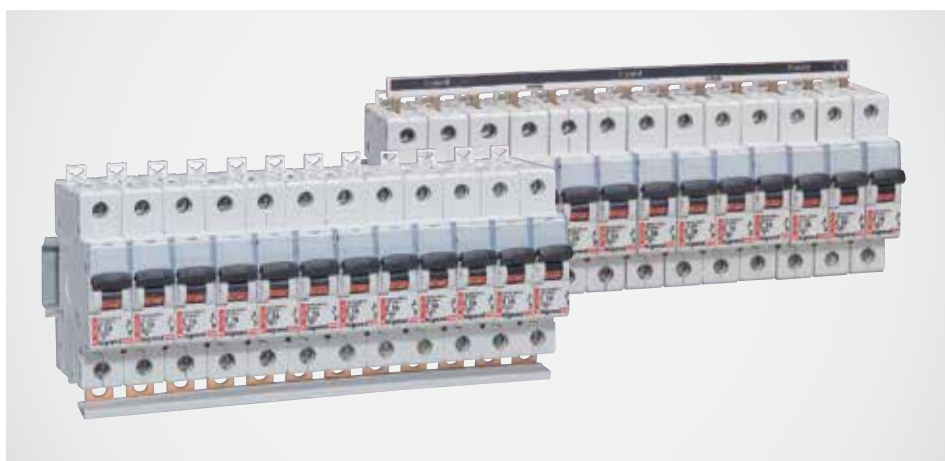
DX devices have a wire guide flap on their terminals, which avoids connection errors.



DX devices can be wired with power supply via the bottom or the top to suit all types of wiring practice.



Prong or fork-type supply busbars eliminate any risk of short-circuits and provide a totally reliable connection via the top or bottom of the device. Easy to use, they can be adapted to suit any type of connection practice.



“The DX range is reassuringly well designed. All the devices have 25 mm² - flexible/ 35 mm² - rigid terminals so I can make connections which are perfectly safe. I have complete peace of mind when wiring up my switchboards.”

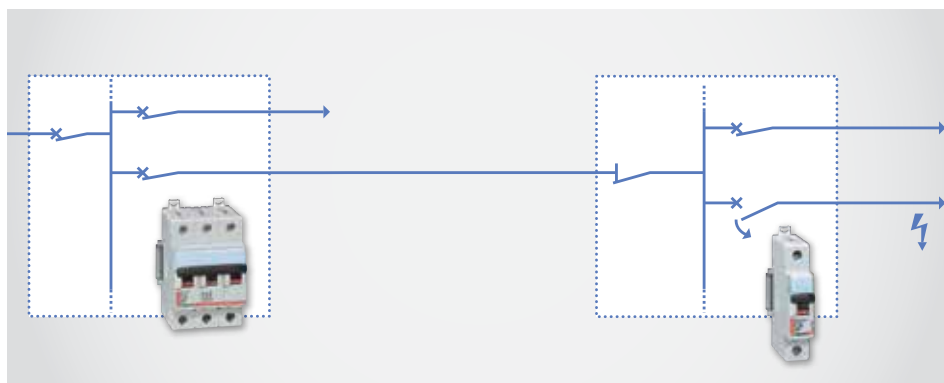
DX: impeccable quality

Legrand pays particular attention to how its devices perform, so each of them is set and tested individually on the production lines. Legrand's factories are certified ISO 9001 for quality and ISO 14001 for environmental protection.



The tripping characteristics are calculated and adjusted to ensure correct discrimination between the different protection levels in order to improve the user experience.

“I know that Legrand attaches particular importance to the performance of its DX circuit breakers. Individually tested in the factory and conforming to international standards such as RCM, the user can be sure of high-quality operation. We find it very reassuring!”



The best-performing circuit breakers

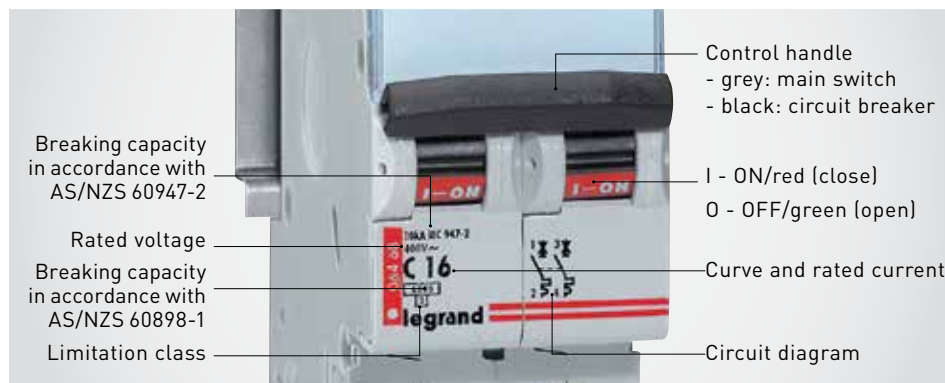
DX circuit breakers are in limitation class 3: they limit the short-circuit power in the cables and can prolong the installation's life by avoiding damage to the cables caused by the stress of power flowing through them. Products never work at the “limit” of their capacity.

DX products are certified in accordance with international and local product standards. They are marked with the approval number from the Office of Fair Trading.



DX: simplicity and safety of maintenance

The many advantages of the DX range can optimise intervention times during maintenance operations without compromising on safety: product marking, circuit identification and coloured handles mean functions can be quickly identified... genuinely useful features which simplify operation and maintenance.

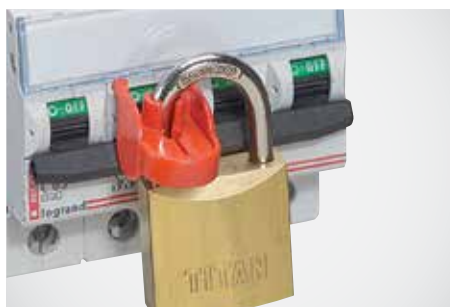


“Marking of product characteristics, protected label holder... really useful features which save me precious time when undertaking maintenance!”

The clear and comprehensive marking on products makes the technical characteristics easier to read and allows intervention quickly without the risk of making a mistake. The state of the contacts can be seen quickly thanks to the colour-coded marking on the handle (red: close, green: open).

The label holder on the product front face protects the labels effectively and durably so that the circuits are easily identifiable, resulting in a professional finished work.

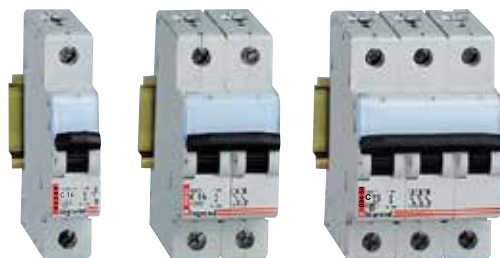
To make it safe to work on the consumer unit and prevent accidental restarts, the handles can be padlocked.



MCBs DX-E™ 6 000

Thermal magnetic MCBs from 6 to 63A
C curve

Approval No: N19929



033 86

034 33

034 53



043 10



Dimensions p. 21

Breaking capacity according to AS/NZS 60898-1
Do not accept add-on modules.

Pack	Cat. No.	Single pole - 230/400 V~	
	C Curve	Nominal rating (A)	Number of modules
10	033 82	6	1
10	033 84	10	1
10	033 86	16	1
10	033 87	20	1
10	033 88	25	1
10	033 89	32	1
10	033 90	40	1
10	033 91	50	1
10	033 92	63	1

	C Curve	Double pole - 230/400 V~	
		Nominal rating (A)	Number of modules
5	034 29	6	2
5	034 31	10	2
5	034 33	16	2
5	034 34	20	2
5	034 35	25	2
5	034 36	32	2
5	034 37	40	2
5	034 38	50	2
5	034 39	63	2

	C Curve	3 pole - 400 V~	
		Nominal rating (A)	Number of modules
1	034 47	6	3
1	034 49	10	3
1	034 51	16	3
1	034 52	20	3
1	034 53	25	3
1	034 54	32	3
1	034 55	40	3
1	034 56	50	3
1	034 57	63	3

Accessories

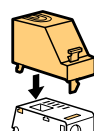
Padlocking

Support for Ø 5 mm
or Ø 6 mm padlock for DX
MCBs, and 2P RCDs and RCBOs



Terminal shields

Insulating shields for MCBs
Preset label for MCB/RCD/RCBO



Main switches DX™-IS

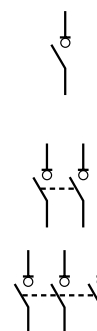
from 63 A to 100 A



Dimensions p. 21

AC 22 A according to AS/NZS 60947 - 3
Double break contacts

Pack	Cat. No.	Main switches	
		1P - 250 V~	
		Nominal rating (A)	Number of modules
10	043 10	63	1
10	043 14	100	1
		2P - 400 V~	
5	043 30	63	2
5	043 34	100	2
		3P - 400 V~	
3	043 50	63	3
3	043 54	100	3



RCBOs DX™ 6 000

Residual current devices
Type AC and A

Approval No: 19931



078 86



6027 86



Dimensions p. 21

AC Type: detect AC component fault
A Type: detect AC and DC components faults

Pack	Cat. No.	Type A 		
		Single pole + neutral 230V~ Uninterrupted neutral Breaking capacity 6000 A AS/NZS 61009-1		
		Sensitivity	Nominal rating (A)	Number of modules
1	602780	30mA	6	1
1	602782	30mA	10	1
1	602783	30mA	16	1
1	602784	30mA	20	1
1	602785	30mA	25	1
1	602786	30mA	32	1

		Type AC 		
		Single pole + neutral - 230V~		
		Neutral on right hand side		
		Breaking capacity 6000 A		
		AS/NZS 61009-1		
		Sensitivity	Nominal rating (A)	Number of modules
1	078 83	30mA	6	2
1	078 84	30mA	10	2
1	078 86	30mA	16	2
1	078 87	30mA	20	2
1	078 88	30mA	25	2
1	078 89	30mA	32	2
1	078 90	30mA	40	2

		Type A 		
		Single pole + neutral - 230V~		
		Neutral on right hand side		
		Breaking capacity 6000 A		
		AS/NZS 61009-1		
		Sensitivity	Nominal rating (A)	Number of modules
1	085 79	30mA	6	2
1	085 85	30mA	10	2
1	085 87	30mA	18	2
1	085 88	30mA	20	2
1	085 89	30mA	25	2
1	085 90	30mA	32	2
1	085 91	30mA	40	2

RCCBs DX™

Residual current devices
Type AC and A

Approval No: 19931



089 10



089 94



Dimensions p. 21

Conform to AS/NZS61008-1

Pack	Cat. No.	Type AC 		
		2 - pole - 230V~		
		Sensitivity	Nominal rating (A)	Number of modules
1	089 09	30mA	25	2
1	089 10	30mA	40	2
1	089 11	30mA	63	2
1	089 12	30mA	80	2

		Type A 		
		2 - pole - 230V~		
		Sensitivity	Nominal rating (A)	Number of modules
1	090 56	30mA	25	2
1	090 57	30mA	40	2
1	090 58	30mA	63	2

		Type AC 		
		4 - pole - 400V~		
		Neutral on right side		
		Sensitivity	Nominal rating (A)	Number of modules
1	089 93	30mA	25	4
1	089 94	30mA	40	4
1	089 95	30mA	63	4
1	089 96	30mA	80	4

Comb busbars entry terminals, distribution terminal blocks

Connection accessories



4 049 26



048 03



049 11

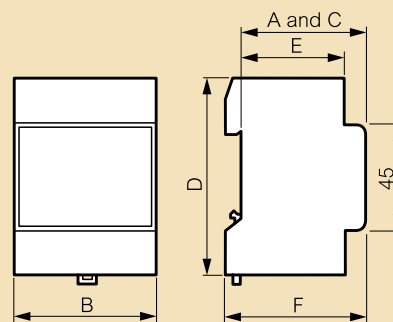
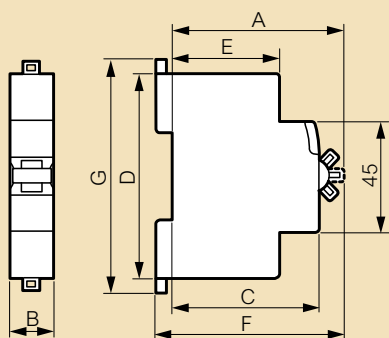
Pack	Cat. No.	Prong-type comb busbars	
		Universal single pole + neutral Reversible: blue for neutral, black for live	
		Max. Length	Max number of devices connected
20	4 049 26	1 row	13
10	049 37	Meter	57
		Double pole	
50	049 38 ⁽¹⁾	1 row	6
10	049 39	Meter	28
		Double pole balanced on 3 phases	
3	049 40 ⁽¹⁾	1 row	6
10	049 41	Meter	28
		Triple pole	
40	049 42 ⁽¹⁾	1 row	4
10	049 43	Meter	19
		Four pole	
30	049 44	1 row	3
10	049 45	Meter	14
		Fork-type comb busbars	
		Single pole	
20	049 11	1 row	12
10	049 12	Meter	57
		Double pole	
10	049 14	Meter	28
		Protection	
		Protection of prongs	
20	049 88	12 modules. Can be cut to length	
		Protection of supply busbar ends	
40	049 89	For single pole/single pole + neutral	
20	049 90	For double pole length 1 m and triple pole	
20	049 91	For four-pole	
		Adaptors	
20	049 05	For universal single pole + neutral or single pole supply busbars	
		Cross section: 4 to 25 mm ² - IP 2X	
20	049 06	For all supply busbars	
		Cross section: 6 to 35 mm ²	
		Distribution terminal blocks	
		Conform to standard IEC 60998-2-1	
		Supplied ready for use (screws not tightened)	
		100 A max. - 400 V± with 25 mm ² input	
		80 A max. - 400 V± with 16 mm ² input	
		Screw terminal blocks	
		Fit with Ø M4 screws	
		Number of connections (mm²)	Length (mm)
10	048 01	1 x 6 to 25 + 4 x 1.5 to 16	45
10	048 03	1 x 6 to 25 + 8 x 1.5 to 16	73
10	048 05	1 x 6 to 25 + 14 x 1.5 to 16	122
10	048 06	1 x 6 to 25 + 19 x 1.5 to 16	157
10	048 07	1 x 6 to 25 + 25 x 1.5 to 16	192
		Pole fillers	
		5 modules separable by single or half modules (1 module = 17.5 mm)	
20	016 50	White RAL 9010	

(1) Filled with end protection

Technical characteristics

	Busbars types	Max. number of devices connected	Length in number of 17.5 mm modules	Cross section (mm ²)	Permissible 1 central power supply point	current: 2 power supply point
Single pole or Single pole + neutral	1 row	13	13	16 ²	80	100
	Meter	57	57			
Double pole	1 row	6	12	10 ²	63	90
	Meter	28	56	16 ²	80	100
Double pole balanced on 3-phases	1 row	6	12	10 ²	63	90
	Meter	28	56	16 ²	80	100
Triple pole	1 row	4	12	10 ²	63	90
	Meter	19	57	16 ²	80	100
Four pole	1 row	3	12	10 ²	63	90
	Meter	14	56	16 ²	80	100

Modular DIN-rail equipment dimensions



	A	B					C	D	E	F	G
Thermal-magnetic MCBs DX-E up to 63 A	70		17.7	35.6	53.4	71.2	60	83	44	76	94
RCBOs (P+N 1 module)	69			17.5			58	86	43	75	95
RCBOs (P+N 2 modules)	70			35.6			60	83	44	76	94
RCCBs											
2-pole	70			35.6			60	83	44	76	94
4-pole	71.5					71.2	60	83	44	77.5	94
Main switches 63 - 100 A	72	17.7		35.6	53.4	71.2	60	83	44	74	94
Changeover switches											
Cat. No 043 82/85	68			17.7			60	83	44	74	94
Cat. No 043 83/85	68			35.6			60	83	44	74	94
Light sensitive Switches											
Cat. No 412623	60			35.6			60	85	37.5	66	70
Voltage surge protectors											
039 20 to 30	60	17.7		35.6	53.4	71.2	60	86	44	68	91
039 30 to 33	60	17.7		35.6	53.4	71.2	60	86	44	68	91
039 40/41/43	60	17.7		35.6		71.2	60	86	44	68	91
038 28/29	60	17.7					60	86	44	68	91

Description	A	B	C	D	E	F
Digital time switches 037 05	60	17.8	60	83	44	66
Digital time switches 603770/71	60	36	60	83	44	66
Analogue time switches 49750	34	72	34	170	34	44.5
Analogue time switches 037 30/44	60	17.8	60	83	44	66
Light sensitive switch 412623	60	36	60	85	37.5	66
Astronomical switch 412654	60	36	60	83	44	66
Contactors - 1 module 16 and 25 A	62	17.8	60	83	44	67.5

Voltage surge protectors

Type 2

Voltage surge protectors

For telephone lines and accessories for low voltage V.S.P.



039 30

039 34



038 28

038 29



Dimensions p. 21

Type 2 voltage surge protectors (V.S.P.) for main boards, distribution boards and consumer units
Conform to standards IEC 61643-1 and EN 61643-11
3 different impulse discharge ratings
For 230/400 V - 50/60 Hz networks

Pack	Cat. No.	Main board protection		
		High protection - H - Class I + II I_{max} = 70 kA Earthing systems: TT, TN, IT Consist of a base and a plug-in replacement module provided with a status indicator • Green: surge protector operational • Orange: module needs replacing Can be equipped with auxiliary contacts for remote monitoring purpose		
1	039 20	Number of poles 1P	Associated protection 40 A - C curve	Number of modules 1

		Distribution board protection For electrical equipment located at more than 30 m from the main distribution board Consists of a base and a plug-in replacement module provided with a status indicator • Green: surge protector operational • Orange: module needs replacing Can be equipped with auxiliary contacts for remote monitoring purpose		
1	039 30 ⁽¹⁾	Number of poles 1P	Associated protection 20 A - C curve	Number of modules 1
		Increased protection - I - Class II - I_{max} = 40 kA Earthing systems: TT, TN, IT		
1	039 40 ⁽¹⁾	Number of poles 1P	Associated protection 20 A - C curve	Number of modules 1

		Replacement modules for type 2 V.S.P.		
5	039 28	For V.S.P. Cat. No. 039 20		
5	039 34	For V.S.P. Cat. No. 039 30		
5	039 44	For V.S.P. Cat. No. 039 40		

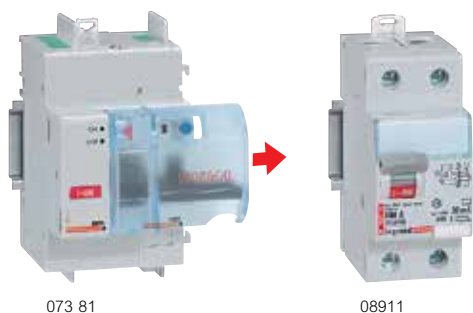
(1) Associated protection: MCBs DX-E or equivalent ranges according to required breaking capacity



Dimensions p. 21

Pack	Cat. No.	Voltage surge protector for telephone lines and data networks		
		Recommended for complete protection of installations already equipped with low voltage V.S.P. on power lines (standard IEC 60364) For protection of: telephone, fax, modem, etc., connected to the incoming telephone line, against overvoltages of atmospheric origin Connected in series with the telephone line Provided with a status indicator • green: surge protector operational • orange: surge protector needs replacing Conform to standards EN 61643-21 and IEC 61643-21 I _{max} : 10 kA and I _n : 5 kA (8/20)		
1	038 28	Analogue (RTC and ADSL)	Un (V) 170	Up (V) 260
1	038 29	Digital (signal lines, current loops)	48	100

STOP&GO automatic resetting for DX™



Pack	Cat. No.	STOP&GO automatic resetting	
		Clip on the left-hand side of devices Gives automatically an order of resetting of the associated device, following an unwanted tripping, caused by a temporary anomaly (such as lightning strikes) Verifies automatically the state of the installation, before resetting Visual and audible alarm signal in case of permanent fault detection (short-circuit or residual current) Compatible with the following devices: - RCCBs: 2P - 2 modules - RCBOs: 2P - 2 modules - RCBOs: 2P - 4 modules - MCBs: 2P ≤ 63 A - 2 modules	
1	073 81	Standard Control voltage: 230 V~	Number of modules 3
1	073 82	Autotest Periodical test of the associated RCD Control voltage: 230 V~	3

STOP&GO automatic resetting for DX™

Temporarily, electrical disturbances and other external events can cause unwanted tripping of different devices protecting electrical installations

STOP&GO automatically verifies the state of the installation, before resetting and launches a visual and audible alarm signal in case of permanent fault detection (short-circuit or residual current)

After verifying the state of the installation, STOP&GO automatically resets the associated protection device in order to immediately re-establish power supply and avoid unwanted consequences

STOP&GO does not protect the installation against lightning strikes
For an efficient protection against lightning, use voltage surge protectors (p. 22)

The Autotest version is especially suitable for installations equipped with residual current protection devices (RCD's and RCBOs)
STOP&GO periodically does an automatic test of the functioning of residual current protection devices. The manual test is no longer needed



Installation without STOP&GO

Mains fault due to temporarily electrical disturbances
Electrical devices are not powered anymore



Installation with STOP&GO

STOP&GO automatic resets the associated protection device in order to immediately re-establish power supply



Analogue time switches
Surface mounting



497 50

 Dimensions **p. 21**

Conform to EN 60730-1 and EN 60730-2-7
Supply voltage: 230 V~+10% -15% 50 Hz
1 outlet 16 A 250 V~ 50/60 Hz cos Ψ = 1
1000 W incandescent lamps
3 position changeover switch
With 72 x 72 mm display to DIN EN 50022 Part C

Pack	Cat. No.	Maxirex™
		With manual override
		24 hour - 1 channel
		Programmable for 20 minutes at 10 minute intervals
		Accuracy: ±5 minutes per day
		Without battery reserve
1	497 50	
1	044 09	Fixing accessory for MaxiRex time switch
1	498 32	Adaptor for rail EN 50022 
		Frame for panel mounting

Analogue time switches
DIN mounting



037 30

 Dimensions **p. 21**

Programmed via captive segment
1-module device: min. 1 segment
Power supply: 230 V~ - 50/60 Hz
3-position override switch "ON-AUTO-OFF" on front panel
Manual changeover to summer/winter time
1 outlet 16 A - 250 V~ - μ cos Ψ = 1

Pack	Cat. No.	Daily programme	Number of modules
		1 segment = 15 minutes	
		Accuracy: ± 5 minutes	
		Vertical dial	
		Minimum switching time: 15 mn	
		N/O contact	
1	037 30	Without battery reserve	1
			
		Weekly programme	
		1 segment = 2 hours	
		Accuracy: ± 30 minutes	
		Minimum switching time: 2 h	
		N/O contact	
1	037 44	With 100 h battery reserve	1

Digital time switches

Standard - daily/weekly



037 05



603770



Dimensions p. 21

Conform to EN 60730-1 and EN 60730-2-7

Supply voltage: 230 V +10% -15% 50/60 Hz

Accuracy: ± 1 second per day

LCD digital display

Mount on DIN rail EN 50022

Programmable for 1 minute minimum

Programming possibilities:

Capability of 28 programs

1 program consists of 1 "on" and 1 "off" time and the allocation of any

day of the week or a combination of days

Combination of days: Mon - Fri (1-5), Mon - Sun (1-7)

Any days of the week free programmable example:

1. Prog. on 7:00 off 8:15 Mon - Fri

2. Prog. on 16:00 off 20:15 Mon - Sun

3. Prog. on 10:00 off 16:15 Fri (5)

Pack	Cat. No.	1 module - Single channel
1	037 05	Battery reserve: 6 years clock Manual advance/override (ON/OFF) Automatic summer/winter setting 1 channel 16 A - 250 V $\cos \varphi = 1$

Pack	Cat. No.	2 modules - 1 or 2 channels
1	6 037 70	Daily - weekly programming Battery reserve: 3 years clock 1 channel 16 A - 250 V $\cos \varphi = 1$
1	6 037 71	2 channels 16 A - 250 V $\cos \varphi = 1$

Programmable time switches

Light sensitive switches

Astronomical switches



4 126 23



4 126 54



Dimensions p. 21

Pack	Cat. No.	Light Sensitive	Number of modules
1	4 126 23	Output 16 A - 250 V $\sim$ - $\mu \cos \varphi = 1$ 2000 W incandescent 2000 W series compensated fluorescent 1000 W parallel compensated fluorescent 70 μ F 1000 W energy-saving bulb 2000 W halogen bulb + ferromagnetic transformer 2000 W halogen bulb + electronic transformer Automatic timer response Adjustable from 1 to 100 000 lux Number of modules: 1 Supplied with photoelectric cell Cat.No. 4 128 58	1
1	4 126 54	Astronomical Power supply 230 V $\pm$ - 50/60 Hz 1 output 16 A - 250 V $\sim$ 28 programmes	2

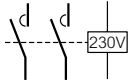
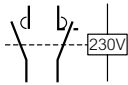
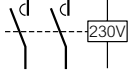
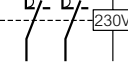
Contactors
 From 16 A to 25 A



041 58


 Dimensions **p. 21**

Conform to IEC/EN 61095
 Space for power supply busbar on top

Pack	Cat. No.	Low noise power contactors with 230 V~ coil			
1	041 49	2-pole - 250 V~		Type of contact	Number of modules
		I max 25 A		2 N/O	1
4	041 26	Power contactors with 230 V~ coil		Type of contact	Number of modules
		2-pole - 250 V~			
		I max 16 A		N/C + N/O	1
10	041 58	25 A		2 N/O	1
1	041 29	25 A		2 N/C	1

Contactors
 From 16 A to 25 A

■ Power contactors technical characteristics

- rated impulsive resistant current (Uimp): 4 kV
- mechanical life in cycles of operations: 10⁶ cycles
- temperature:
 - operation: - 25° C to + 40° C
 - storage: - 40° C to +70° C

Protection of contactors against short-circuits conforming to IEC EN 61095, conditional short-circuit current I_q = 6 kA

- MCB or gG fuse, rating:
- ≤ 16 A for 16 A rating
 - ≤ 25 A for 25 A rating

• Control coil consumption

	Power contactors 16 A and 25 A	
Control voltage	230 VA low noise	230 VA
Nominal current	25 A	16 - 25 A
Type of contact	2 N/O	N/O + N/C 2 N/O 2 N/C
Number of modules	1	1
Holding	6 mA	20 mA
Inrush	55 mA	90 mA

• Recommendations

Derating of contactors mounted in modular boxes
 if the internal temperature is > 40 °C

Contactor rating	40 °C	50 °C	60 °C	70 °C
I _e = 16 A	16 A	14 A	12 A	10 A
I _e = 25 A	25 A	22 A	20 A	18 A

Install a spacing unit every two contactors (Cat. No. 044 40 or 044 41)

• Max. connection cross-section in mm²

Type of conductor	Ratings ≤ 25 A
Rigid	1 x 6 ² or 2 x 2,5 ²
Flexible	1 x 6 ² or 2 x 2,5 ²
Flexible with single ferrule	1 x 6 ²
Flexible with double ferrule	2 x 4 ²

Changeover switches



043 83



Dimensions p.21

Conform to standard IEC 60669-1
Breaking capacity AC 22 A according to IEC 60947-3

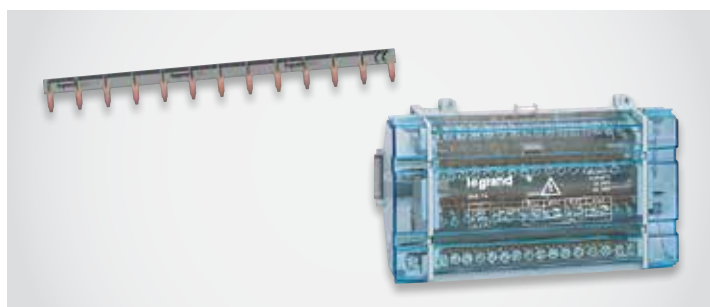
Pack	Cat. No.	Changeover switches		
		Nominal rating (A)	Connection	Number of modules
10	043 82	Two-way - 250 V~		
		20		1
5	043 83	Double two-way - 400 V~		
		20		2
10	043 85	Two-way with centre point - 250 V~		
		20		1
5	043 86	Double two-way with centre point - 400 V~		
		20		2

Comb busbars & distribution blocks

Standard distribution: accessories according to your needs

DISCOVER THE RANGE

- Standard distribution system: comb busbars and modular distribution blocks up to 250 A



Standard distribution system

+ MORE INFORMATION



www.legrand.com.au



Brochure quick-guide

Consumer units & loadcentres

NBN enclosures



HC02S

013 04

013 08



HL24F



HL48S



NBNBOX

Pack	Cat. No.	Consumer units	
		HC series consumer units Will fit into customer equipment area on NSW meter box panel. Complies with AS3132, AS3000/2.21.1.2. (Separate neutral and earth bars on rear of meter box panel).	
10	HC01S	1 pole	
6	HC02S	2 pole	
4	HC03S	3 pole	
4	HC04S	4 pole	
		Legrand series consumer units	
		Capacity in modules of 17.5 mm	Dimensions (mm) Height x Width xDepth
10	013 01	1	140 x 30 x 72
10	013 02	2	140 x 50 x 72
10	013 04	4	160 x 90 x 74
5	013 06 ⁽¹⁾	6	160 x 128 x 74
1	013 08 ⁽²⁾	(8 + 1)	180 x 190 x 83
		HM pole fillers	
1	HEEPF5	Bag of 4 x 18mm & 2 x 9mm pole fillers. Pole fillers	
1	014 91	Locking device for flush or surface mounting, supplied with 2 keys	

NBN enclosures		
Enclosure FTTH for NBN co. devices		
1	NBNBOX	Surface enclosure for NBN co. devices
1	NBNPPBOX	Surface enclosure with 8 port patch panel
1	NBNBOXBRACKET	Flush kit for NBNBOX
1	NBNPPBOXBRACKET	Flush kit for NBNPPBOX

(1) Supplied with earth connectors IP2X 4 holes 1.5-16mm². Non sealable cover
 (2) Supplied with earth connectors IP2X 8 holes 1.5-16mm². Non sealable cover

Pack	Cat. No.	Load centres
Flush mounting enclosure		
All supplied with door, neutral & earth bars, labels, accessories and DIN rail.		
1	HL12F	12 pole flush enclosure, 305(H)x315(W)x90(D) mm
1	HEE18F	18 pole flush enclosure 223(H)x392(W)x71(D) mm
1	HL24F	24 pole flush enclosure 430(H)x315(W)x90(D) mm
1	HL36F	36 pole flush enclosure 555(H)x315(W)x90(D) mm
1	HL48F	48 pole flush enclosure 680(H)x315(W)x90(D) mm
Above dimensions are cut-out dimensions		
Metal back plate for flush enclosure		
1	HL12FS-BP	Metal back plate for 12 pole flush enclosure
1	HEE18FS-BP	Metal back plate for 18 pole flush enclosure
1	HL24FS-BP	Metal back plate for 24 pole flush enclosure
1	HL36FS-BP	Metal back plate for 36 pole flush enclosure
1	HL48FS-BP	Metal back plate for 48 pole flush enclosure
Surface mounting enclosure		
All supplied with door, neutral & earth bars, labels, accessories and DIN rail.		
1	HL12S	12 pole surface enclosure, 240(H)x318(W)x109(D) mm
1	HEE18S	18 pole surface enclosure, 214(H)x383mm(W)x104(D) mm
1	HL24S	24 pole surface enclosure, 380(H)x318mm(W)x109(D) mm
1	HL36S	36 pole surface enclosure, 505(H)x318mm(W)x109(D) mm
1	HL48S	48 pole surface enclosure, 630(H)x318mm(W)x109(D) mm
Spare door for surface enclosure		
White		
1	601206	12 pole
1	601207	24 pole
1	601208	36 pole
1	601209	48 pole

Plexo³ enclosures



6019 74

6019 82

Self-extinguishing: resistance to incandescent wire 650°C
 Conform to EN 60439-3
 Weatherproof cabinets - IP 65 - IK 09 - Class II
 Door and cabinet fully reversible
 Removable chassis and faceplates from 2-row versions up
 2-position rail for modular products and moulded cases
 Spacing between rails 150 mm
 Lockable door handle, sealable cover and faceplate
 Shock-resistant polystyrene material
 Box colour light grey L750A, cover colour dark grey R746A
 Supplied with IP2X Earth and Neutral terminal blocks
 Spare blanking plate included as a standard for 12-24-36 modules

Pack	Cat. No.	Enclosures 4 to 8 modules	
		Number of rows	Number of modules
6	6019 74	1	4
6	6019 76	1	6
6	6019 78	1	8

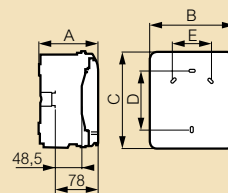
		Enclosures 12 modules per row	
		Number of rows	No. of 5-module blanking plates
1	6019 81	1	1
1	6019 82	2	2
1	6019 83	3	2

		Accessories	
1	019 66	Key lock	
		N° 850	
		Fixing lugs	
1	019 69	Set of 4 wall mounting lugs	
20	019 61	Blanking plates	
		5, separable into modules or 1/2 module, Grey R746A	
1	019 55	Direct piercing end caps	
		Pack consisting of 2 Ø32 mm ISO end caps, 5 Ø25 mm ISO end caps and 10 Ø20 mm ISO end caps	

Plexo³ enclosures

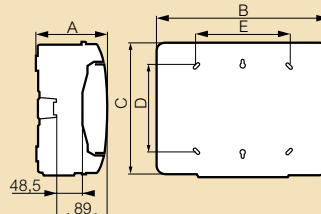
■ Dimensions

Cabinets 4, 6 and 8 modules



Cat. No.	Dimensions (mm)				
	A	B	C	D	E
6019 74	115.6	128	200	120	-
6019 76	115.6	164	200	120	70
6019 78	115.6	200	200	120	106

Cabinets 12, 24 and 36 modules



Cat. No.	Dimensions (mm)				
	A	B	C	D	E
6019 81	141	340	282	180	180
6019 82	161	340	432	330	180
6019 83	161	340	622	480	180

■ Number of knockouts on each side

Cat. No.	Top/bottom			Left/right		
	Ø20 mm	Ø25 mm	Ø32 mm	Ø20 mm	Ø25 mm	Ø32 mm
6019 74	2	1	-	2	-	-
6019 76	4	1	-	2	-	-
6019 78	6	1	-	2	-	-
6019 81	7	2	2	-	-	2
6019 82	13	2	2	-	-	3
6019 83	13	2	2	-	-	4

■ Direct piercing end caps

Cat.No	Type	Number of end caps per pack	Ø	
			Min. (mm)	Max. (mm)
019 55	ISO 20	10	4	13
	ISO 25	5	9	18
	ISO 32	2	12	25

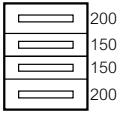
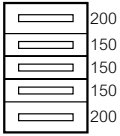
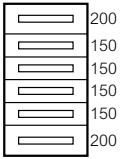
XL³ 160 enclosures

Surface mounting



200 06

Fireproof to 750 °C/5 s in accordance with IEC 60695-2-1 for installation in public buildings. Removable chassis with rails 2 fitted Brass bar for protective conductors fitted: 36 holes 1.5 to 10 mm² and 2 x 35 mm² holes. Capacity 24 modules per row. RAL 7035 Supplied complete with rails and faceplates. Doors to be ordered separately (p. 31)
For creating assemblies certified in accordance with IEC EN 60439-1
IP 43 – IK 08 with seal and door
IP 40 – IK 08 with door
IP 30 – IK 07 without door
Removable side panels. Removable, separable top and bottom panels for inserting adjustable cable gland plate

Pack	Cat. No.	Fully modular cabinets					
		Number of rows	Number of modules	Height (mm)	Width (mm)	Depth (mm)	
1	200 04	4	96	750	575	147	
1	200 05	5	120	900	575	147	
1	200 06	6	144	1050	575	147	

		Accessories	
1	200 20	Cable entry plates Additional adjustable plate	
1	200 35	Cable fixing support Holds cable in place on entry to cabinet	
1	201 00	Wall mounting lugs Set of 4 metal lugs for IP 43 cabinets and enclosures	
1	200 21	Plate with knock-out entries 2 x Ø4 to 32 mm and 22 x Ø4 to 20 mm	

XL³ 160 enclosures

Flush mounting



200 14 + door 202 84

Fireproof to 750 °C/5 s in accordance with IEC 60695-2-1 for installation in public buildings
Supplied complete:
- metal flush-mounting box,
- removable chassis with rails fitted,
- brass bar for protective conductors fitted:
36 holes 1.5 to 10 mm², 2 x 35 mm² holes,
- finishing frame and plastic faceplates
Flush-mounting depth: 100 mm min.
Capacity: 24 modules per row
RAL 7035
Doors to be ordered separately (p. 31)
Can take DPX 125 units
IP 40 – IK 08 with door
IP 30 – IK 04 without door

Pack	Cat. No.	Fully modular cabinets						
		Number of rows	Number of modules	Front panel		Box		
				Height	Width (mm)	Height	Width (mm)	
1	200 14	4	96	845	670	790	617	 200 150 150 200
1	200 15	5	120	995	670	940	617	 200 150 150 150 200
1	200 16	6	144	1145	670	1090	617	 200 150 150 150 150 200

		Fixing accessory
1	200 10	For hollow partition

XL³ 160

Doors, equipment, wiring, connection of protective conductor



202 55



202 74

202 84



200 93



373 00

Pack	Cat. No.		Doors
	Metal		Supplied with handle with interchangeable barrels (to be ordered separately)
			Curved
			Faceplate/door distance: metal - 57 mm
			For cabinet/enclosure Height (mm):
1	202 54		750/790
1	202 55		900/940
1	202 56		1050/1090
	Metal	Glass	Flat
			Faceplate/door distance: metal - 38 mm ; glass - 34 mm
1	202 74	202 84	750/790
1	202 75	202 85	900/940
1	202 76	202 86	1050/1090

			Equipment for doors
			Key barrels for metal or transparent doors
			Supplied with a set of 2 keys
1	202 91		Type 405
1	202 92		Type 455
1	202 93		Type 1242 E
1	202 94		Type 2433 A
			Seal for IP 43 protection
1	201 30		Supplied ready to use length 5.5 m for cabinets (width 660 and 910 mm), enclosures and cable sleeves

		Self-adhesive document holders for plan				
		Open - RAL 7035				
		External dim.		Internal dim.		
		Height (mm)	Width (mm)	Height (mm)	Width (mm)	Depth (mm)
20	365 80	235	340	200	310	18
20	365 81	165	260	130	230	18
		Closed - RAL 9002				
1		Rigid plastic - IP 50				
		Internal dim.: 324 x 120 x 18 mm				
		Transparent				
10	097 99	Flexible plastic - A4 - 305 x 220 mm				

Pack	Cat. No.	Wiring
		Wire guide
10	200 94	For horizontal wiring
		Fits directly on the rails
		Takes brass bar Cat.No 373 00 and 12 x 4 bar with clamps Cat.No 373 02
1	200 93	For vertical wiring
		Fits directly on cabinet chassis - Set of 2
		Ducting support
1	200 70	For direct vertical mounting of Lina 25 ducting
		Fits directly on cabinet chassis - Set of 2
		Finishing strip
1	201 60	For a perfect finish at the join between DLP trunking and XL ³ cabinet or enclosures RAL 7035
		Connection of protective conductors
		Additional brass bar
1	373 00	Length 416 mm, 12 x 6.5 mm cross-section
		Fits directly on the supports integrated in XL ³ 160 cabinet or on rail with wire guides Cat.No 200 94 or on the support end stop Cat.No 375 12
		- 36 holes Ø5.3 mm (1.5 to 10 mm ²)
		- 2 holes Ø9 mm (35 mm ²)
		Support for IP 2X terminal block
1	200 50	Set of 2 supports
		Fit directly at the back of cabinets (horizontal or vertical position)
		Takes 12 x 2 flat bar Cat.No 048 19
		Equipotential link conductor
1	373 85	Length 350 mm
		Cross-section 6 mm ² , ensures equipotential continuity when fitting auxiliaries on door (signalling units > 50 V)

Switchgear & energy distribution

POWER PROTECTION AND DISTRIBUTION



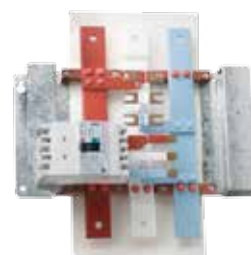
p. 50
DMX³ ACBs



p. 78
DPX³ / DPX MCCBs



p. 102
Automatic Transfer
Switches for MCCBs



p. 104
CDPX³ Chassis system
for MCCBs

MODULAR CIRCUIT PROTECTION



p. 106
DX³-IS
Main switches



p. 142
DX³ MCBs



p. 146
DX³ RCCBs



p. 147
DX³ RCB0s

CONTROL DEVICES



p. 166
Pulse integrated
switching delays



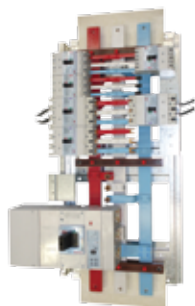
p. 168
CX³ contactors



p. 171
Pushbuttons
and indicators



p. 172
Digital and analogue
time switches



p. 105
HCDPX³ Chassis system
for MCCBs



p. 106
Isolating switches
16 A 1600 A



p. 114
SPX fuse carriers & fuses



p. 122
Distribution boards



p. 148
Add-on modules



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Auxiliaries



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Voltage surge protectors



p. 164
Domestic fuse carriers
and cartridge fuses

ENERGY METERING



p. 177
Time delay relays



p. 178
Transformers, bells
and buzzers



p. 182
EMDX³ energy meters



p. 182
EMDX³ multifunction
meter on rail and door

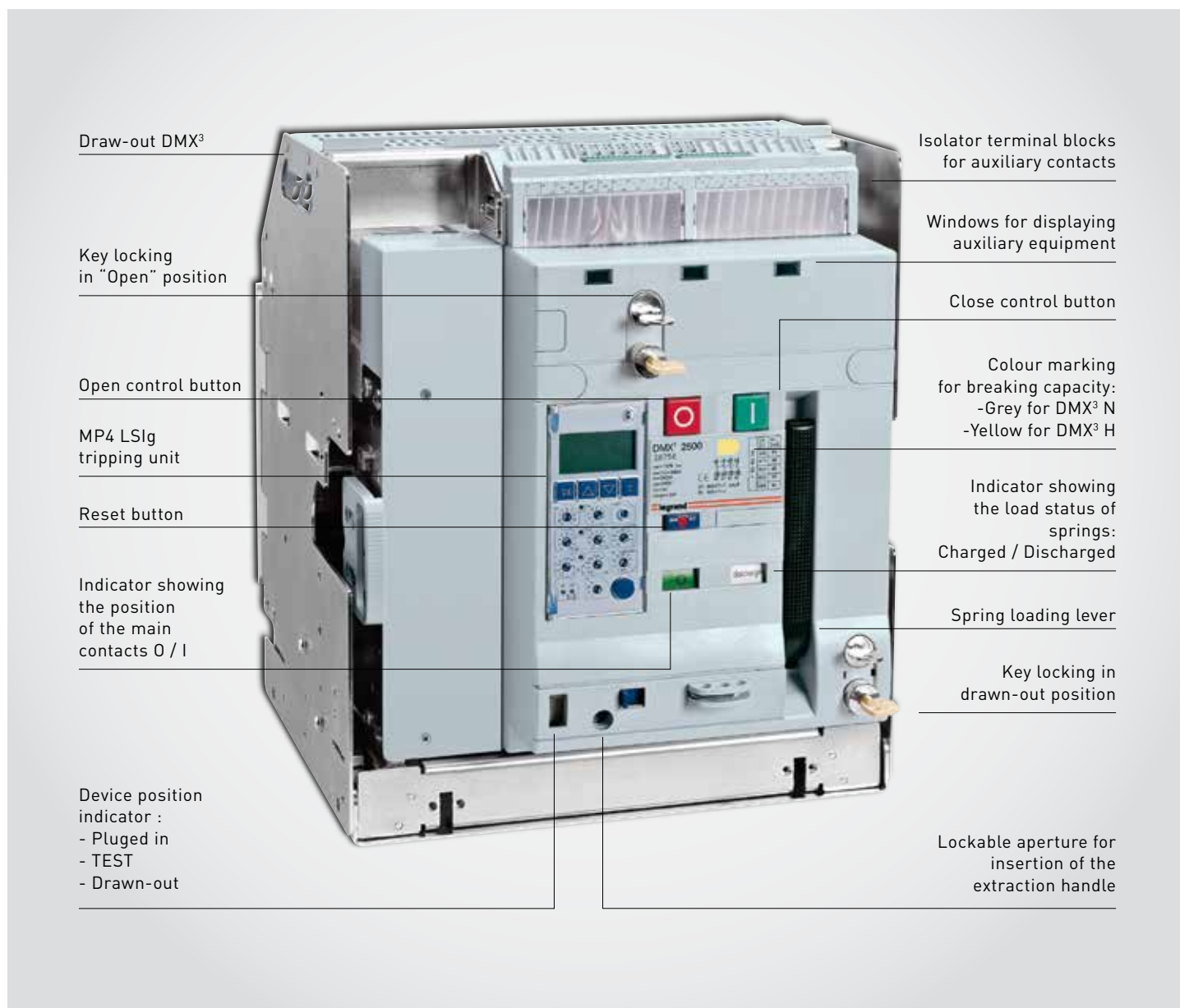
Efficient protection and control

DMX³ air circuit breakers and DMX³-I isolating switches are available in two frame sizes. There are 3 breaking capacities: 50 kA for the DMX³-N 65 kA for DMX³-H and 100 kA for DMX³-L. DMX³ Air Circuit Breakers can be factory-fitted with a complete set of options and accessories.

OPTIMISED PERFORMANCE UP TO 4 000 A

The range covers 8 rated currents, between 800 A and 4 000 A.

One of the most compact air circuit breakers and isolating switches range in Australia, DMX³ and DMX³-I are available in fixed and draw-out versions.





Breaking capacities and rated currents

	800 A	1 000 A	1 250 A	1 600 A	2 000 A	2 500 A	3 200 A	4 000 A
DMX³-N	50 kA FIXED/DRAW-OUT							
DMX³-H	65 kA FIXED/DRAW-OUT							
DMX³-L	100 kA FIXED/DRAW-OUT							

Overall dimensions and weight

Fixed version					
		Height	Depth	Width	Weight ⁽¹⁾
FRAME 1: DMX ³ -N 2500 DMX ³ -H 2500	3P	419 mm	354 mm	273 mm	41 kg
	4P	419 mm	354 mm	358 mm	48 kg
FRAME 2: DMX ³ -L 2500 DMX ³ -N/H/L 4000	3P	419 mm	354 mm	408 mm	59 kg
	4P	419 mm	354 mm	538 mm	76 kg



►►► Fixed version

Draw-out version					
		Height	Depth	Width	Weight ⁽¹⁾
FRAME 1: DMX ³ -N 2500 DMX ³ -H 2500	3P	465 mm	433 mm	327 mm	77 kg
	4P	465 mm	433 mm	412 mm	94 kg
FRAME 2: DMX ³ -L 2500 DMX ³ -N/H/L 4000	3P	465 mm	433 mm	425 mm	108 kg
	4P	465 mm	433 mm	555 mm	137 kg



►►► Draw-out version

Legrand advantage

The overall dimensions of the breakers contribute considerably to an efficient use of the space inside the electrical panel. The constant depth for all the rated currents facilitates connection of the busbars.

Other electrical features

Rated operational voltage U_e : 690 V~ 50/60 Hz
 Rated insulation voltage U_i : 1 000 V~ 50/60 Hz
 Rated impulse withstand voltage U_{imp} : 12 kV
 Category of use: B
 Ambient temperature: - 5 °C to 70 °C
 Humidity: + 55 °C with relative humidity of 95%, conforms to IEC 68-2-30

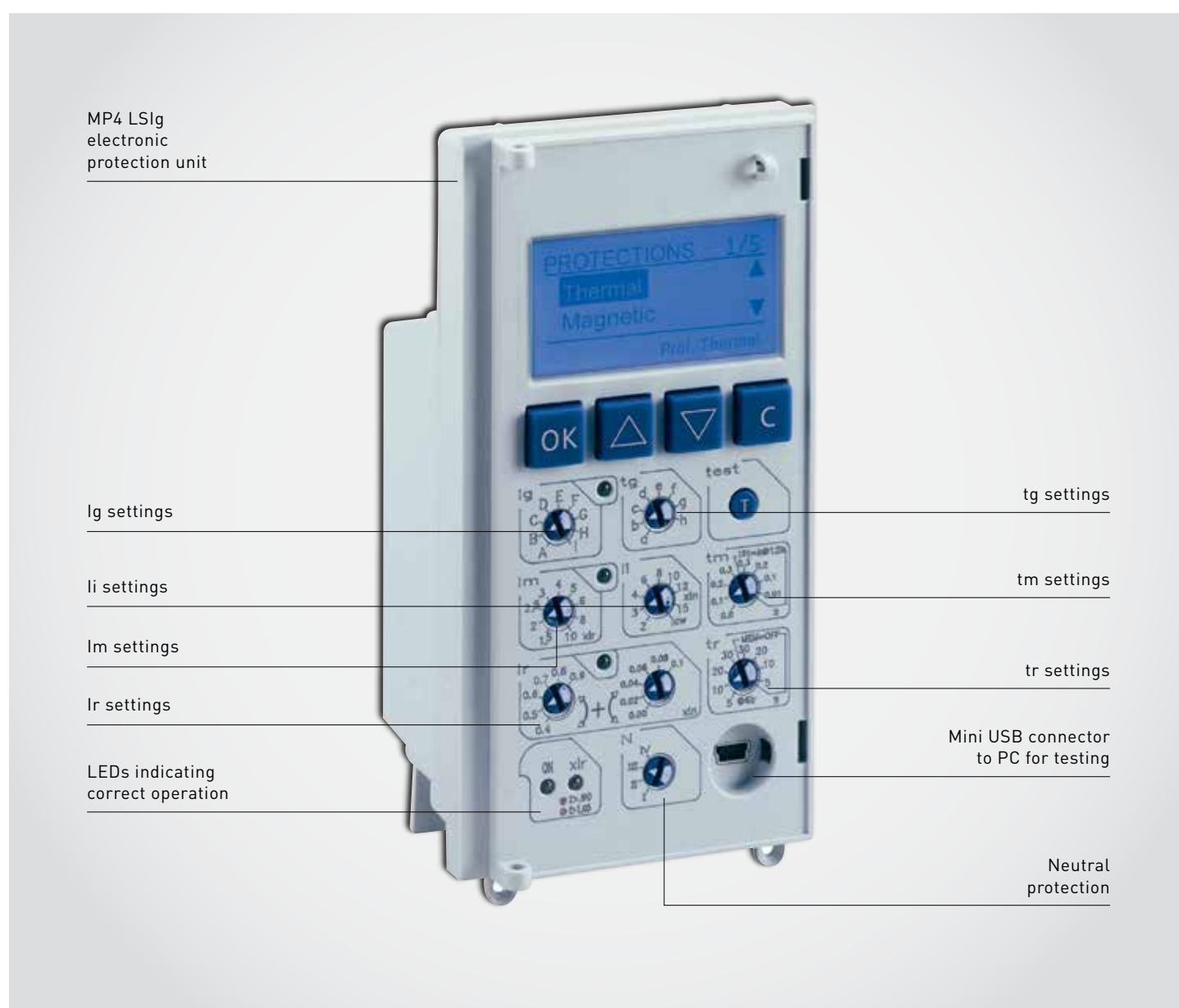
(1) For trip-free switches, please consult us

Electronic tripping units for precise protection

Besides their easy mounting and connection, strength and good continuity of operation, three types of electronic units allow precise adjustment of different limits for current values and time delay. The result is efficient protection against electrical faults while maintaining total discrimination with downstream breakers.

PRECISE & USER FRIENDLY LCD TRIPPING UNITS

The LCD display lets you monitor the measured current values and informs you on fault adjustment and log (the cause of last trip and maintenance operations).

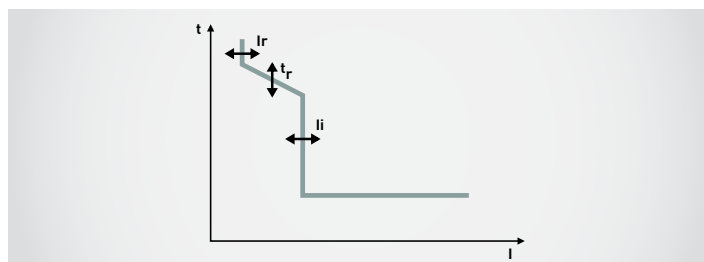




MP4 Li electronic protection unit cat. n° 288 00

The following settings are adjusted using rotary selector switches:

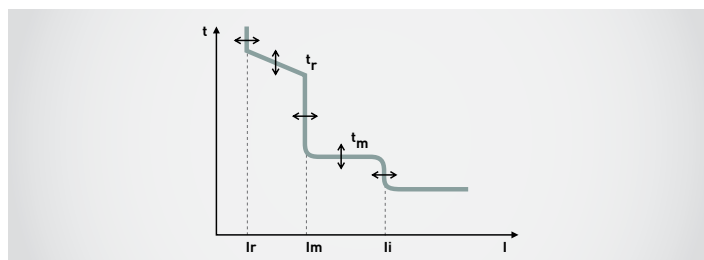
- Long time delay protection against overloads: I_r
- Long delay protection operation time: t_r
- Instantaneous protection against very high short circuits: I_i
- Neutral protection: IN



MP4 Lsi electronic protection unit cat. n° 288 01

The following settings are adjusted using rotary selector switches:

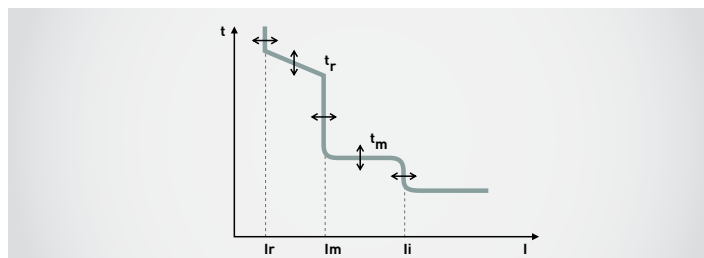
- Long time delay protection against overloads: I_r
- Long delay protection operation time: t_r
- Short time delay protection against short circuits: I_m
- Short time delay protection operation time: t_m
- Instantaneous protection against very high short circuits: I_i
- Neutral protection: IN



MP4 Lsig electronic protection unit cat. n° 288 02

The following settings are adjusted using rotary selector switches:

- Long time delay protection against overloads: I_r
- Long delay protection operation time: t_r
- Short time delay protection against short circuits: I_m
- Short time delay protection operation time: t_m
- Instantaneous protection against very high short circuits: I_i
- Earth fault current: I_g
- Time delay on earth fault tripping: t_g
- Neutral protection: IN

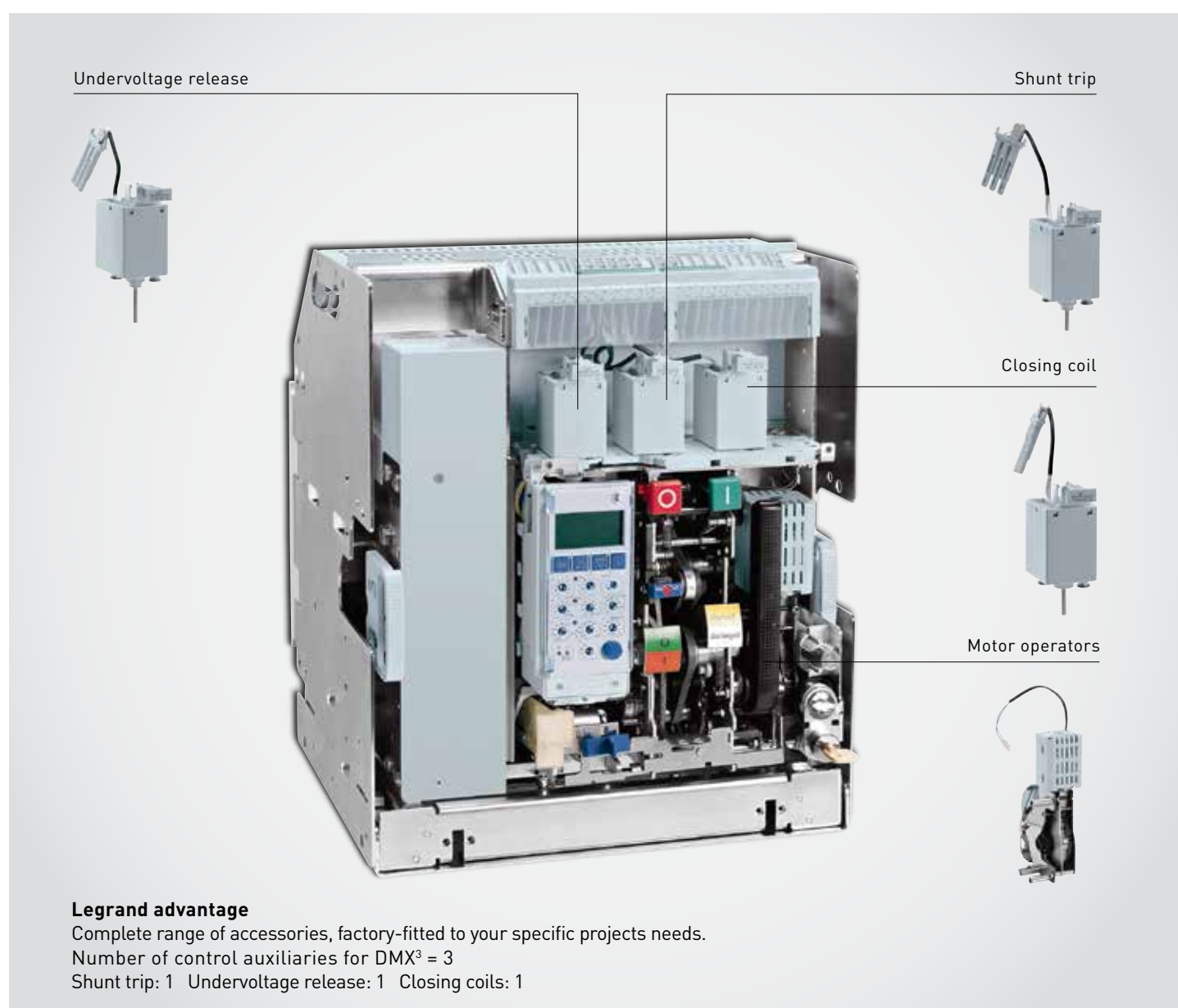


Complete range of accessories for efficient control

You can remotely control the DMX³ thanks to its range of accessories: shunt trips, undervoltage releases, motor operators and closing coils.

COMPLETE RANGE OF CONTROL ACCESSORIES

All the control accessories are factory-fitted to specifically meet your requirements. Every type of accessory is compatible with its own location, in order to avoid any possible mistake.



Undervoltage release

Shunt trip

Closing coil

Motor operators

Legrand advantage
Complete range of accessories, factory-fitted to your specific projects needs.
Number of control auxiliaries for DMX³ = 3
Shunt trip: 1 Undervoltage release: 1 Closing coils: 1



Shunt trip

Shunt trips are devices used for remote instantaneous opening of the air circuit breaker. They are generally controlled through an N/O type contact. The actual offer of shunt trips proposes different supply voltages (from 24 V to 415 V), compatible with AC and DC currents. The shunt trips are already equipped with a special fast connector, to be directly inserted into the auxiliary contacts block. An auxiliary contact is connected in a series with the coil, cutting off its power supply when the main poles are open.



Technical characteristics:

- Nominal voltage U_n : 24 V $\sim$ to 480 V $\sim$ and from 24 V $\equiv$ to 250 V $\equiv$
- Tolerance on nominal voltage: 70 to 110% V_n
- Maximum power consumption (max. power for 180 ms): 500 VA $\sim$ /500 W =
- Continuous power: 5 VA $\sim$ /5 W =
- Maximum opening time: 30 ms
- Insulation voltage: 2500 V 50 Hz for 1min
- Endurance on pulse: surge proof 4 kV 1.2/50 μ s

Undervoltage release

Undervoltage releases are devices which are generally controlled by an N/C type contact. They trigger instantaneous opening of the circuit breaker if their supply voltage drops below a certain threshold and in particular if the control contact opens. These releases are equipped with a device for limiting their consumption after the circuit has been closed.



Technical characteristics:

- Nominal voltage U_n : 24 V $\sim$ to 480 V $\sim$ and from 24 V $\equiv$ to 250 V $\equiv$
- Tolerance on nominal voltage: 85 to 110% V_n
- Maximum power consumption (max. power for 180 ms): 500 VA $\sim$ /500 W =
- Continuous power: 5 VA $\sim$ /5 W =
- Opening time: 60 ms
- Insulation voltage: 2500 V 50 Hz for 1min
- Endurance on pulse: surge proof 4 kV 1.2/50 μ s

Closing coils

These coils are used for remotely controlling the closing of the power contacts of the circuit breaker. The springs of the circuit breaker are to be loaded prior to the action of the closing coils. They are controlled by an N/O type contact.



Technical characteristics:

- Nominal voltage U_n : 24 V $\sim$ to 480 V $\sim$ and from 24 V $\equiv$ to 250 V $\equiv$
- Tolerance on nominal voltage: 70 to 110% V_n
- Maximum power consumption (max. power for 180 ms): 500 VA $\sim$ /500 W =
- Continuous power: 5 VA $\sim$ /5 W =
- Maximum closing time: 50 ms
- Insulation voltage: 2500 V 50 Hz for 1min
- Endurance on pulse: surge proof 4 kV 1.2/50 μ s

Easy installation of control accessories

“Click and Twist”. Electrical auxiliaries are easily connected on DMX³ through dedicated terminal blocks. Thanks to small windows on the front panel, installers and end-users can identify at a glance which auxiliaries are fitted on the breakers.

EASY IDENTIFICATION OF CONTROL ACCESSORIES

Motor operators

Motor operators, are used for remotely reloading the springs of the circuit breaker mechanism immediately after the device closes. The device can thus be re-closed almost immediately after an opening operation.

To motorise a DMX³ it is necessary to add a release coil (undervoltage release or shunt trip) and a closing coil.

If the supply voltage of the controls fails, it is still possible to reload the springs manually. Motor-driven controls have “limit switch” contacts which cut off the power supply of their motor after the springs have been reloaded. Motor operators are easy to mount, with only three screws.



Technical characteristics:

- Nominal voltage U_n : from 24 V $\sim$ to 480 V $\sim$ and from 24 V $\equiv$ to 250 V $\equiv$
- Tolerance on nominal voltage: 85 to 110% V_n
- Spring reloading time: 7s
- Maximum power consumption: 240 VA $\sim$ /240 W =
- Starting current: 2 up to 3 x I_n for about 80 ms
- Maximum cycle: 1/min

Safety and padlocking accessories for an increased security

The DMX³ circuit breakers draw-out types are delivered as standard with safety padlocking shutters preventing access to live terminals. They have a number of other safety devices, such as:

- Key-operated locks: Main contacts open Circuit breaker in draw-out position
- Padlocks for: Main contacts open Contact shutters closed (for draw-out position)
- Door locking in order to prevent the opening of the electrical switchboard door when the contacts of the ACB are closed.

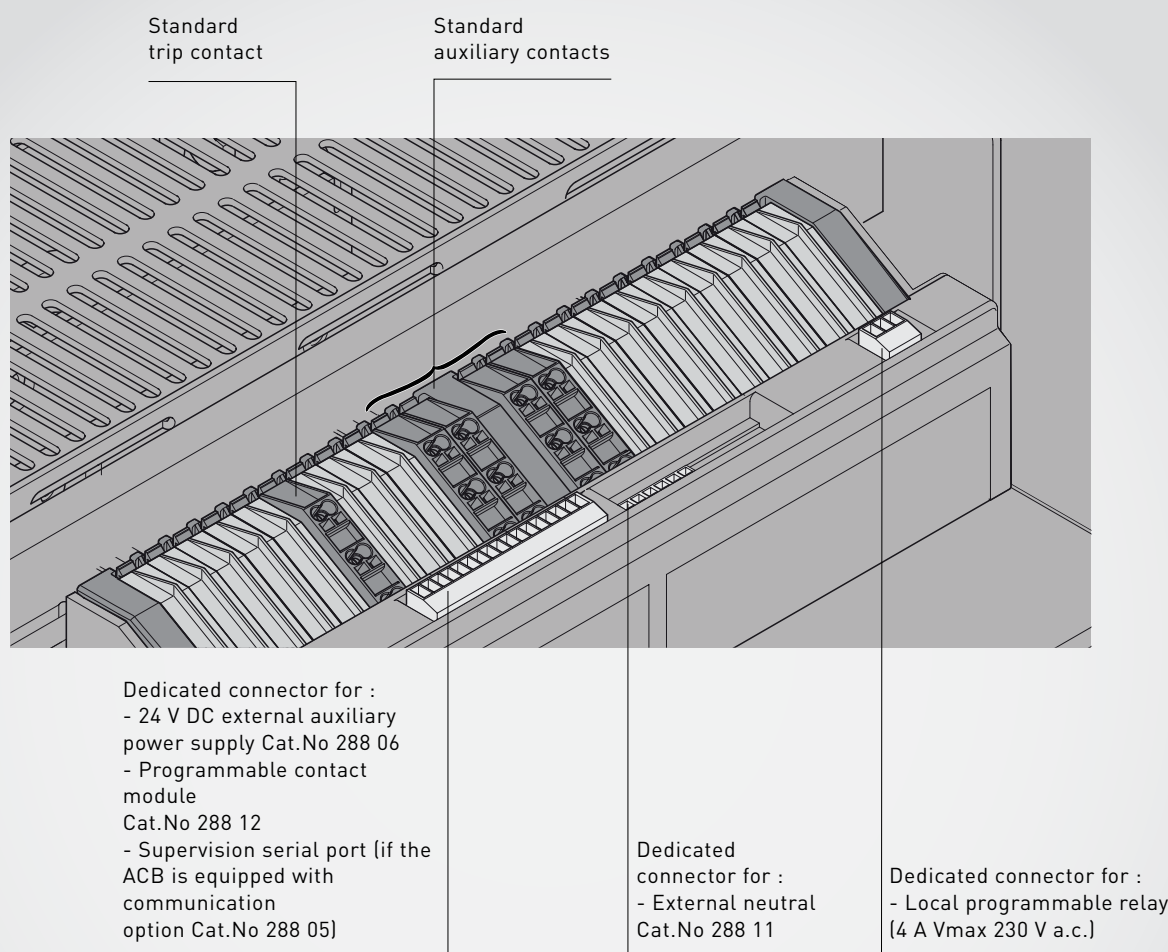


►►► Fixed version equipped with padlocking system ►►► Draw-out version equipped with key-operated locks



Front panel connection terminal block

The terminal block of DMX³ ACBs offers the possibility to connect a trip contact, up to 10 auxiliary contacts and other different control and singalling functions



NUMBER OF AUXILIARY CONTACTS FOR DMX3 = 10

4 auxiliary contacts as standard (NO/NC)

6 additional auxiliary contacts (NO/NC)

Clever busbar connection (Fixed version)

The fixed version of DMX³ is equipped with rear terminals for horizontal connection with bars. You can change the connection type according to your needs.

CONNECTION: MAXIMUM ADAPTABILITY

Fixed version ACBs: 3 options to connect busbars

The type of rear terminals can be easily changed according to your needs.



►►► The breaker is supplied with rear terminals for horizontal flat connection

Vertical busbar configuration can be achieved using rear vertical terminals. Horizontal busbar configuration requires both rear vertical and horizontal terminals

Frame 1: 3P: Cat. N°. 288 84
4P: Cat. N°. 288 85

Frame 2: 3P: Cat. N°. 288 92
4P: Cat. N°. 288 93

Frame 1: 3P: Cat. N°. 288 84 + 288 82
4P: Cat. N°. 288 85 + 288 83

Frame 2: 3P: Cat. N°. 288 92 + 288 94
4P: Cat. N°. 288 93 + 288 95



►►► Rear vertical terminals



►►► Rear vertical and horizontal terminals



►►► Spreaders

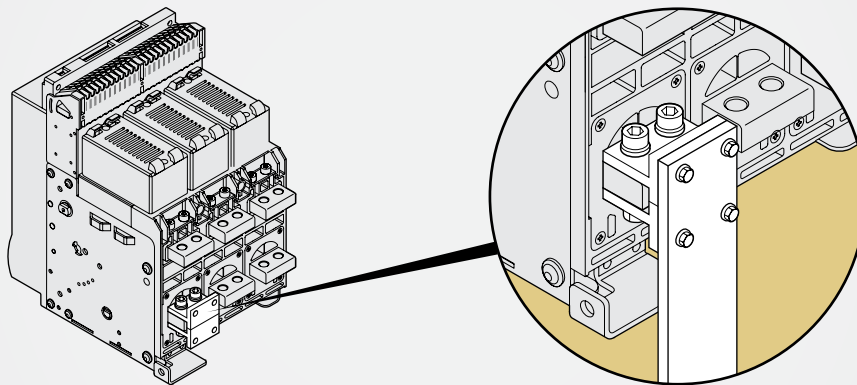
Wherever extra spacing between busbars is required, rear terminals with spreader can be used (i.e. aluminium bus bars).

Frame 1: 3 types of accessories

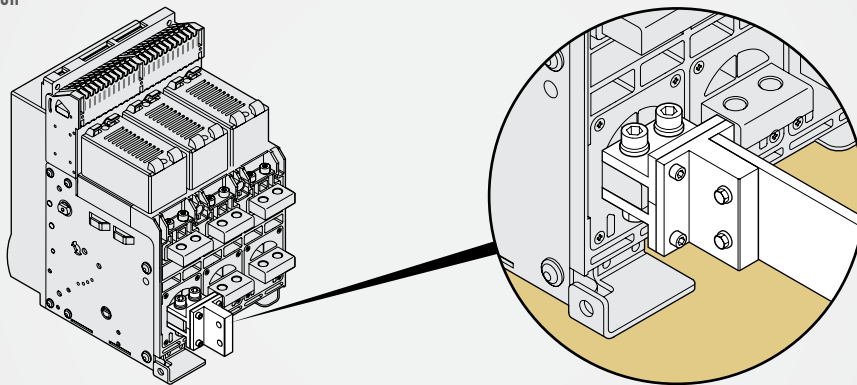
- **For flat connection**
3P: Cat. N°. 288 86
4P: Cat. N°. 288 87
- **For vertical connection**
3P: Cat. N°. 288 88
4P: Cat. N°. 288 89
- **For horizontal connection**
3P: Cat. N°. 288 90
4P: Cat. N°. 288 91



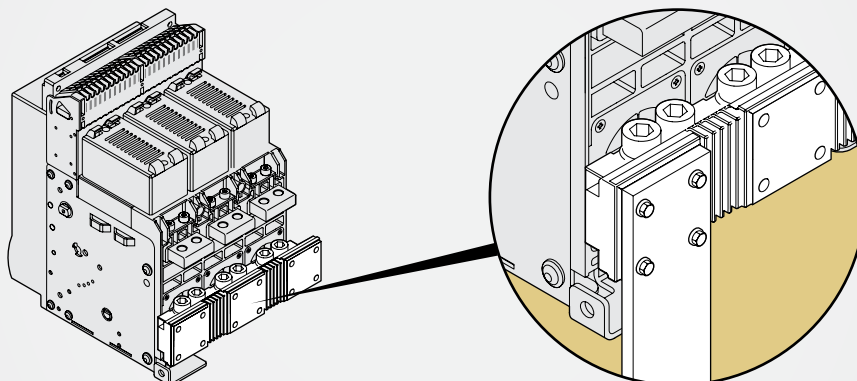
Vertical busbar connection



Horizontal busbar connection



Vertical busbar connection
with spreaders



Clever busbar connection (Draw-out version)

Draw-out DMX³ ACBs come pre-fitted with rear terminals for vertical busbar connection.

CONNECTION: MAXIMUM ADAPTABILITY (CONTINUED)

Draw-out version - choose your connection accessories

Draw-out version of the DMX³ breakers is supplied with rear terminals for vertical connection of busbars. By adding extra rear terminals, horizontal busbar connection can be achieved, as well as vertical connection (by rotating rear terminal 90°).



2 types of fixing

Reversible connector for vertical or horizontal connection.

Frame 1: 3P: Cat. N° 288 96
4P: Cat. N° 288 97

Frame 2: 3P: Cat. N° 288 94
4P: Cat. N° 288 95



►►► The breaker is supplied with rear terminals for flat vertical connection

Connections: a few recommendations!

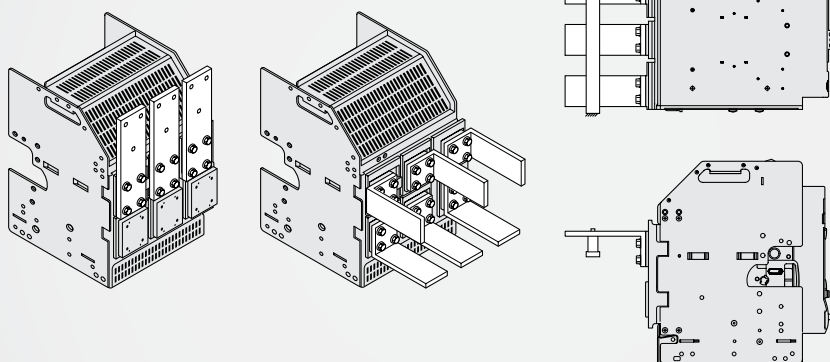
- Connections provide the electrical connection of equipment and are also responsible for a considerable proportion of their heat dissipation.
- Connections must never be under-sized.
- Plates or terminals must be used over a maximum area.
- Heat dissipation is encouraged by arranging the bars vertically. If an uneven number of bars is connected, place the higher number of bars on the upper part of the terminal.
- Avoid bars running side by side: this causes poor heat dissipation and vibration.
- Place spacers between the bars to maintain a distance between them which is at least equivalent to their thickness.



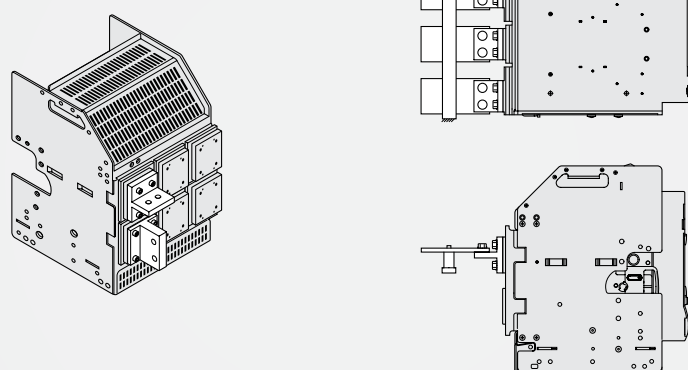
Draw-out version: examples of connections

Draw-out version of the DMX³ breakers is supplied with rear terminals for flat connection with bars. You can easily transform those terminals into vertical or horizontal type by using the unique reversible connector.

►►► Draw-out DMX3 ACBs are supplied with rear terminals for flat connection



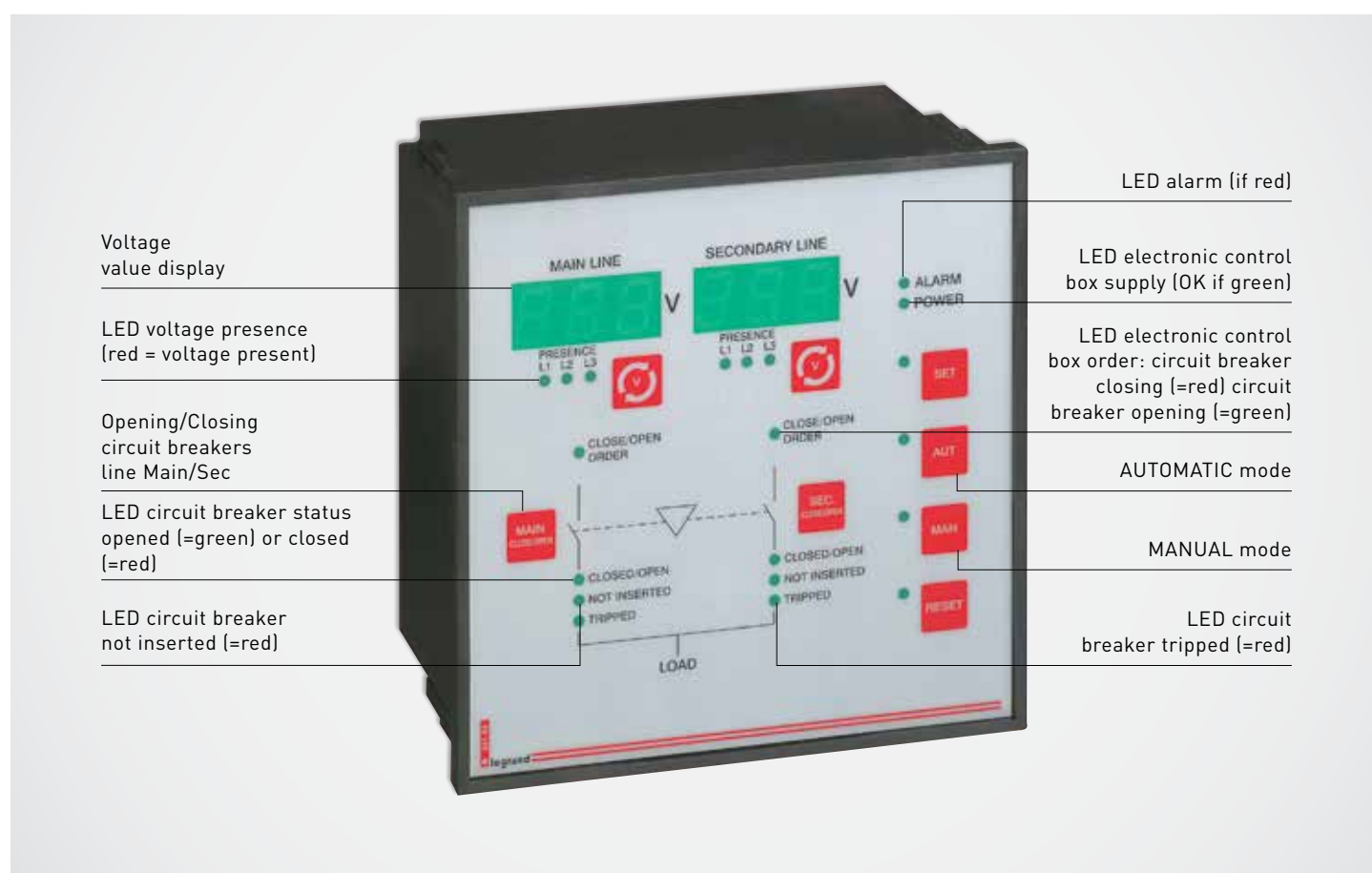
►►► Extra rear terminals allow horizontal or vertical connection



Automatic transfer switch for critical applications

Transfer switches answer the double need of continuity of service and greater safety. Traditionally used in hospitals, public buildings, industries with continuous manufacturing processes, airports and military applications, transfer switches become increasingly necessary for new applications such as telecommunications and computing treatment or in the management of energy sources, notably “renewable energies”.

CONTINUITY OF SERVICE AND INCREASED SAFETY





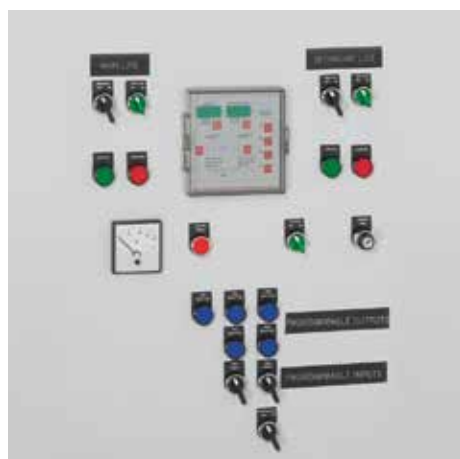
Automatic transfer switch

All DMX³ air circuit breakers (fixed and draw-out version) can be fitted with an interlocking system which guarantees “mechanical safety” in the event of supply switching. Interlocking is achieved using a cable system and interlocking units mounted on each circuit breaker. Every circuit breaker composing of the transfer switch must be equipped with one interlocking unit.

This system allows devices of different sizes and types (3P, 4P, fixed, draw-out) to be interlocked. DMX³ devices can be installed in different configurations inside the enclosure.

This mechanical interlocking system can be supplemented by motorised operators and an automation control unit making the transfer switch fully automatic.

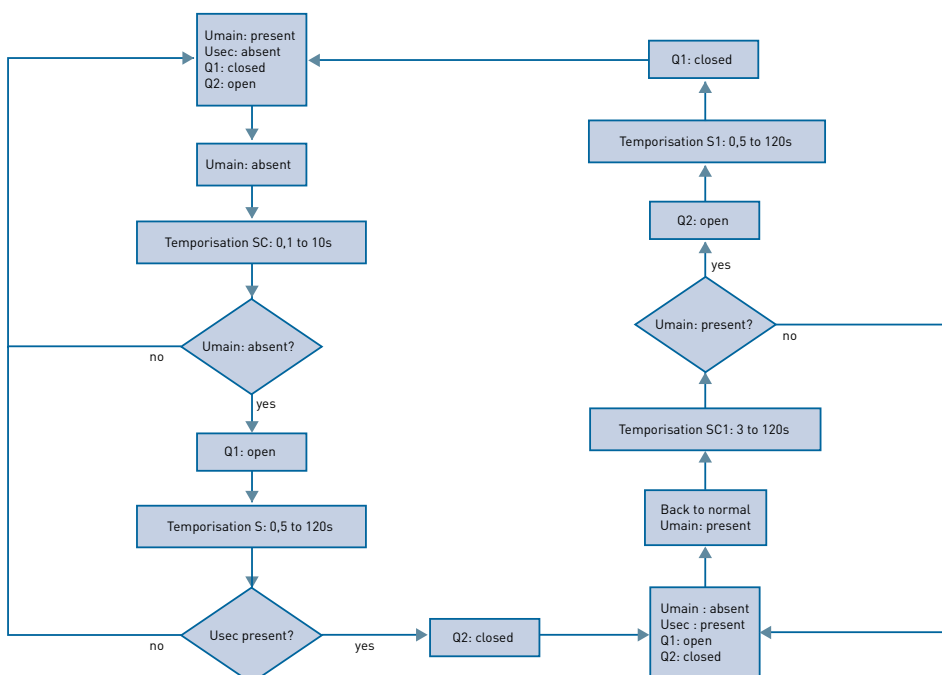
The Legrand automatic control unit Cat.No. 261 93 allows easy management of the automatic switching of two sources. Controlled by a microprocessor, the unit is fully programmable. All the parameters are adjustable: values of the thresholds of tension, delay between switching, starting up of a generator...



►►► Control panel of a transfer switch with automation control unit Cat. No. 261 93

Legrand advantage

Thanks to its digital displays and LED indicators it is possible to permanently watch the state of the transfer switch, as well as the presence and the value of the voltage on each power supply.



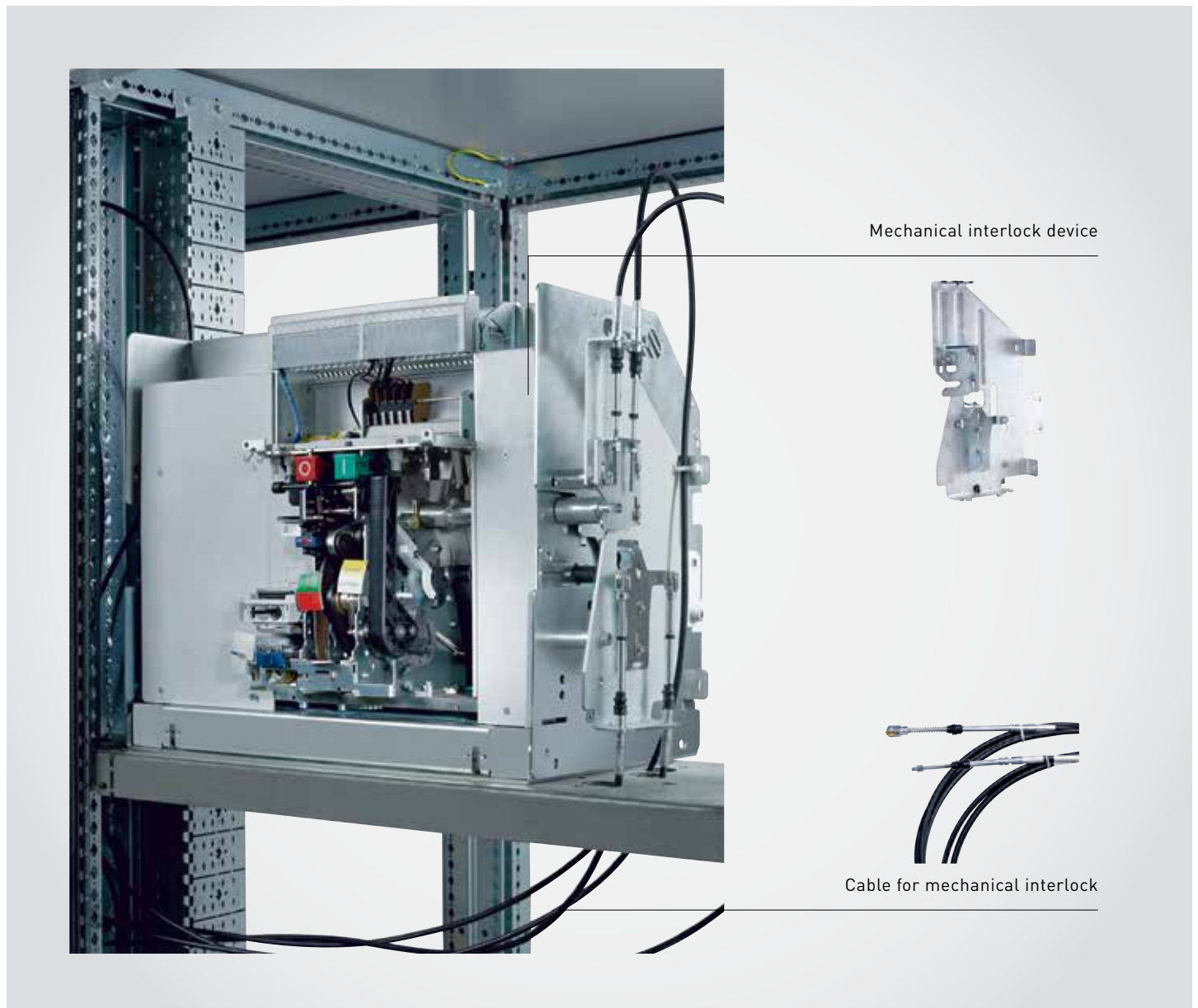
►►► Example of algorithm for the functioning of an automatic transfer switch

Easy to install basic transfer switch

Mechanical interlock is set up using cables and a mechanical interlock device which can interlock 2 or 3 devices. These may be different types in a vertical or horizontal configuration.

EASY TO INSTALL MECHANICAL INTERLOCK SYSTEM

The interlock device is mounted on the right-hand side of the air circuit breaker. This accessory can be factory-assembled for easier onsite installation.

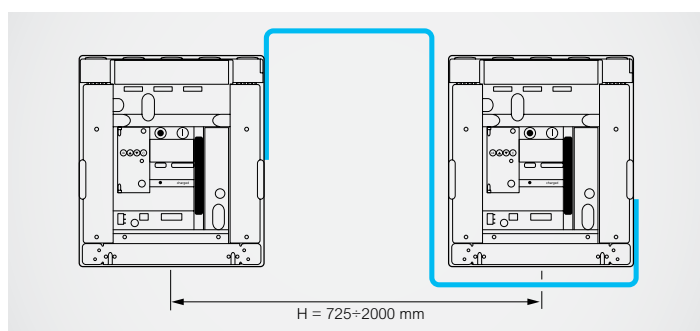




Cable length selection table

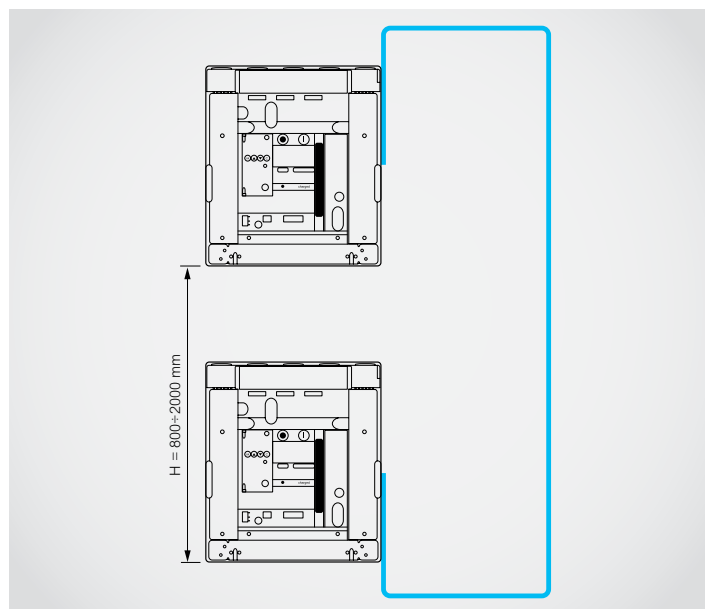
Length (mm)	Type	Cat. N°
2 600	1	289 20
3 000	2	289 21
3 600	3	289 22
4 000	4	289 23
4 600	5	289 24
5 600	6	289 25

2 DMX³ – Horizontal configuration



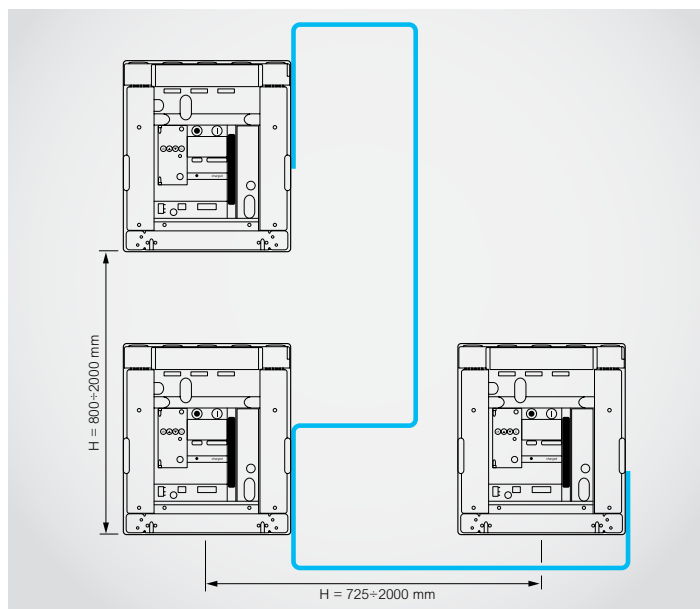
►►► Required cable length: $L = 1430 + H$

2 DMX³ - Vertical configuration



►►► Required cable length: $L = 1570 + V$

3 DMX³ - Vertical + Horizontal configuration



►►► Required cable length: $L = 1430 + V + H$

Examples for 3 air circuit breakers

Distance between air circuit breakers (mm)		Horizontal			
		725 mm	1 000 mm	1 450 mm	2 000 mm
Vertical	800 mm	Type 2	Type 3	Type 4	Type 5
	1 000 mm	Type 3	Type 3	Type 4	Type 5
	1 600 mm	Type 4	Type 5	Type 5	Type 6
	2 000 mm	Type 5	Type 5	Type 6	Type 6

Air circuit breakers DMX³ 2500 and 4000

from 800 to 4000 A



286 56 + 288 02 (p. 51)



286 74 + 288 02 (p. 51)



287 56 + 288 02 (p. 51)



Dimensions p. 54-57
Electrical characteristics p. 60

Air circuit breakers supplied with factory-assembled electronic protection unit, to be ordered separately (see next page).

Please ask for DMX³ order form

Pack	Cat. No.		Fixed version
			Supplied with: - 4 auxiliary contacts: NO/NC - rear terminals for horizontal connection with bars - door sealing
			DMX³ - N 2500 Breaking capacity Icu 50 kA (415 V~)
	Frame 1		In (A)
	3P	4P	
1	286 21	286 31	800
1	286 22	286 32	1000
1	286 23	286 33	1250
1	286 24	286 34	1600
1	286 25	286 35	2000
1	286 26	286 36	2500
	Frame 1		DMX³ - H 2500 Breaking capacity Icu 65 kA (415 V~)
	3P	4P	In (A)
1	286 41	286 51	800
1	286 42	286 52	1000
1	286 43	286 53	1250
1	286 44	286 54	1600
1	286 45	286 55	2000
1	286 46	286 56	2500
	Frame 2		DMX³ - L 2500 Breaking capacity Icu 100 kA (415 V~)
	3P	4P	In (A)
1	286 61	286 71	800
1	286 62	286 72	1000
1	286 63	286 73	1250
1	286 64	286 74	1600
1	286 65	286 75	2000
1	286 66	286 76	2500
	Frame 2		DMX³ - N 4000 Breaking capacity Icu 50 kA (415 V~)
	3P	4P	In (A)
1	286 27	286 37	3200
1	286 28	286 38	4000
	Frame 2		DMX³ - H 4000 Breaking capacity Icu 65 kA (415 V~)
	3P	4P	In (A)
1	286 47	286 57	3200
1	286 48	286 58	4000
	Frame 2		DMX³ - L 4000 Breaking capacity Icu 100 kA (415 V~)
	3P	4P	In (A)
1	286 67	286 77	3200
1	286 68	286 78	4000

Pack	Cat. No.		Draw-out version
			Supplied with: - 4 auxiliary contacts: NO/NC - draw-out base and kit - flat rear terminals for connection with bars - door sealing
			DMX³ - N 2500 Breaking capacity Icu 50 kA (415 V~)
	Frame 1		In (A)
	3P	4P	
1	287 21	287 31	800
1	287 22	287 32	1000
1	287 23	287 33	1250
1	287 24	287 34	1600
1	287 25	287 35	2000
1	287 26	287 36	2500
	Frame 1		DMX³ - H 2500 Breaking capacity Icu 65 kA (415 V~)
	3P	4P	In (A)
1	287 41	287 51	800
1	287 42	287 52	1000
1	287 43	287 53	1250
1	287 44	287 54	1600
1	287 45	287 55	2000
1	287 46	287 56	2500
	Frame 2		DMX³ - L 2500 Breaking capacity Icu 100 kA (415 V~)
	3P	4P	In (A)
1	287 61	287 71	800
1	287 62	287 72	1000
1	287 63	287 73	1250
1	287 64	287 74	1600
1	287 65	287 75	2000
1	287 66	287 76	2500
	Frame 2		DMX³ - N 4000 Breaking capacity Icu 50 kA (415 V~)
	3P	4P	In (A)
1	287 27	287 37	3200
1	287 28	287 38	4000
	Frame 2		DMX³ - H 4000 Breaking capacity Icu 65 kA (415 V~)
	3P	4P	In (A)
1	287 47	287 57	3200
1	287 48	287 58	4000
	Frame 2		DMX³ - L 4000 Breaking capacity Icu 100 kA (415 V~)
	3P	4P	In (A)
1	287 67	287 77	3200
1	287 68	287 78	4000

Electronic protection units for DMX³



288 02

Trip free switches DMX³-I from 1250 to 4000 A



286 96



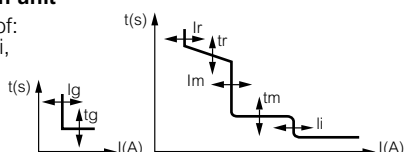
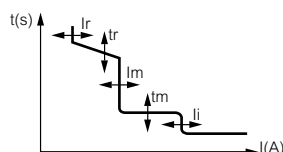
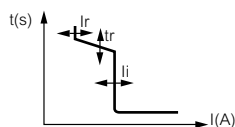
287 96



Settings and curves **p. 58-59**

DMX³ circuit breakers must be equipped with electronic protection units (to be ordered together for factory assembly) enabling very precise adjustments of the protection conditions, while maintaining total discrimination with downstream devices
All protection units are equipped with batteries for powering in case of mains fault or when the breaker is open or not connected

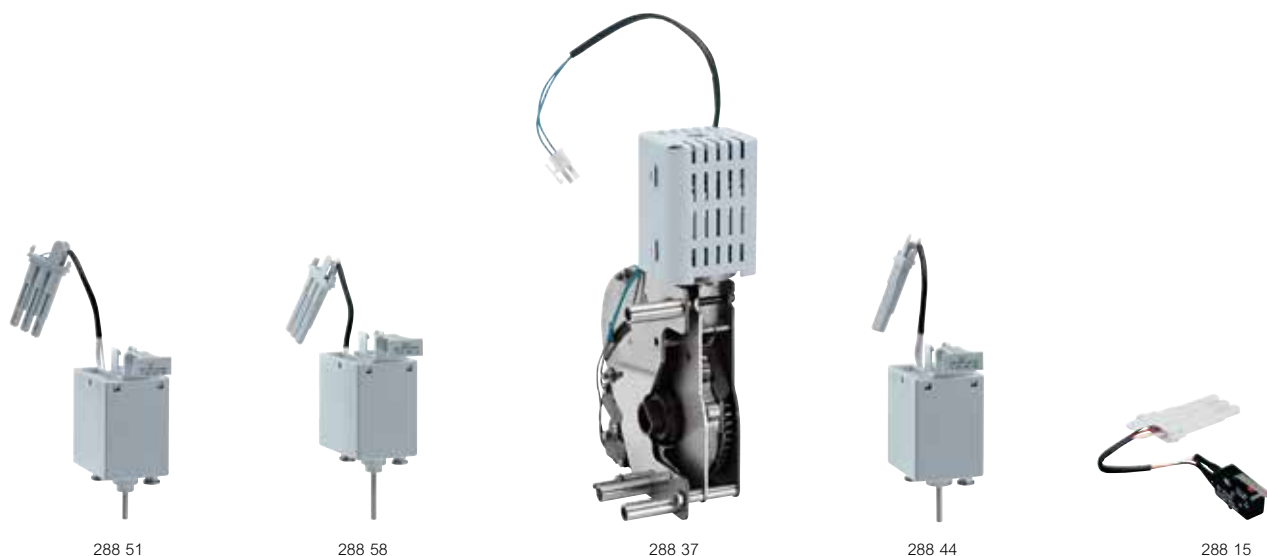
Pack	Cat. No.	MP4 protection units with LCD screen
1	288 00	Integrated LCD screen for displaying electrical values, settings and log Adjustment via selector switches LI protection unit Adjustment of: Ii, Ir, tr
1	288 01	LSI protection unit Adjustment of: Im, tm, Ir, tr and Ii
1	288 02	LSI protection unit Adjustment of: Im, tm, Ir, tr, Ii, Ig and tg
1	288 05	Accessories for electronic protection units Communication option for DMX ³ electronic protection units
1	288 06	24 V= external auxiliary power supply
1	288 11	External neutral for DMX ³ 2500 and 4000
1	288 12	Module programmable output



Dimensions **p. 54-57**

Pack	Cat. No.	Fixed version
		Supplied with: - 4 auxiliary contacts: NO/NC - flat rear terminals for connection with bars - door sealing
		DMX³ - I 2500
		In (A)
		1250
		1600
		2000
		2500
		DMX³ - I 4000
		In (A)
		3200
		4000
		Draw-out version
		Supplied with: - 4 auxiliary contacts: NO/NC - draw-out base and kit - flat rear terminals for connection with bars - door sealing
		DMX³ - I 2500
		In (A)
		1250
		1600
		2000
		2500
		DMX³ - I 4000
		In (A)
		3200
		4000

Auxiliaries and accessories for DMX³



Pack	Cat. No.	Control and signalling auxiliaries
		Shunt trip
		When energised the circuit breaker will be tripped
1	288 48	24 V~/=
1	288 49	48 V~/=
1	288 50	110 - 130 V~/=
1	288 51	220 - 250 V~/=
1	288 52	415 - 480 V~
		Undervoltage releases
		When the coil is de-energised, the circuit breaker will be tripped
1	288 55	24 V~/=
1	288 56	48 V~/=
1	288 57	110 - 130 V~/=
1	288 58	220 - 250 V~/=
1	288 59	415 - 480 V~
		Module for delayed tripping
		To be used with above undervoltage releases
1	288 62	110 V~/=
1	288 63	230 V~/=
		Motor operators
		To motorize a DMX, it is possible to attach, to the motor operators, a release coil (undervoltage or trip on energising) and a closing coil
1	288 34	24 V~/=
1	288 35	48 V~/=
1	288 36	110 - 130 V~/=
1	288 37	220 - 250 V~/=
1	288 38	415 - 440 V~
1	288 40	480 V~/=
		Closing coils
		Enables remote closing of the circuit breaker if the closing spring is charged
1	288 41	24 V~/=
1	288 42	48 V~/=
1	288 43	110 - 130 V~/=
1	288 44	220 - 250 V~/=
1	288 45	415 - 480 V~
		Signalling contact for auxiliaries
1	288 16	Signalling contact for shunt trips, undervoltage releases and closing coils
		Signalling contact for draw-out version
		Inserted / test / draw-out signalling contact
1	288 13	3 changeover contacts per position

Pack	Cat. No.	Locking
		Key locking in "open" position
1	288 30	Profalux lock (key included) - to be fitted on the frame Cat.No 0 288 28
1	288 31	Ronis lock (key included) - to be fitted on the frame Cat.No 0 288 28
1	288 28	2 hole support frame for Ronis or Profalux locks Cat.Nos 0 288 30/31
1	288 29	Set of 5 Ronis key barrels
		Key locking in the draw-out position
		Mounting of the lock on the base
1	288 32	Profalux lock (key included)
1	288 33	Ronis lock (key included)
		Door locking
		Prevents opening of the door with the circuit breaker closed
1	288 20	Left-hand and right-hand side mounting
		Padlocks in "open" position
1	288 21	Padlocking system for ACB (padlock not supplied)
1	288 24	Padlock for buttons
1	288 26	Padlocking system for shutters (padlock not supplied)
		Equipment for conversion of a fixed device into draw-out device
		Bases for draw-out device
		For DMX ³ /DMX ³ - I frame 1
		For DMX ³ /DMX ³ - I frame 2
		Transformation kit for draw-out version
		For DMX ³ /DMX ³ - I frame 1
		For DMX ³ /DMX ³ - I frame 2
		Accessories
1	288 25	Rating mis-insertion device Prevents the insertion of a draw-out circuit breaker in an incompatible base
1	288 23	Operations counter Counts total number of operation cycles of the device
1	288 14	Contact "ready to close" with charged springs
1	288 15	Additional signalling contact
1	288 79	Lifting plate

Transfer switch equipment for DMX³



261 93



288 64



Electrical characteristics p. 57

Pack	Cat. No.	ATS controller
		For setting the conditions for supply switching, generator on/off, status acquisition for DMX and DPX circuit-breakers, open/closed Power supply: 230 V~ and 12-24-48 V= Connection by plug-in terminals
1	261 93	Standard unit
1	261 94	Communicating unit, enabling data transmission (RS 485 port)
		Mechanical interlock plate
		The mechanical interlock is set up using cables and can interlock 2 or 3 devices, which may be different type in a vertical or horizontal configuration The interlock unit is mounted on the right-hand side of the device Cable interlock to be ordered separately (cable length to be specified according to every configuration - see below)
1	288 64	Interlock for DMX ³ frame 1
1	288 65	Interlock for DMX ³ frame 2
		Cable interlock
1	289 20	Type 1 (2600 mm)
1	289 21	Type 2 (3000 mm)
1	289 22	Type 3 (3600 mm)
1	289 23	Type 4 (4000 mm)
1	289 24	Type 5 (4600 mm)
1	289 25	Type 6 (5600 mm)

Rear terminals for DMX³



288 84



288 82



288 96



288 94



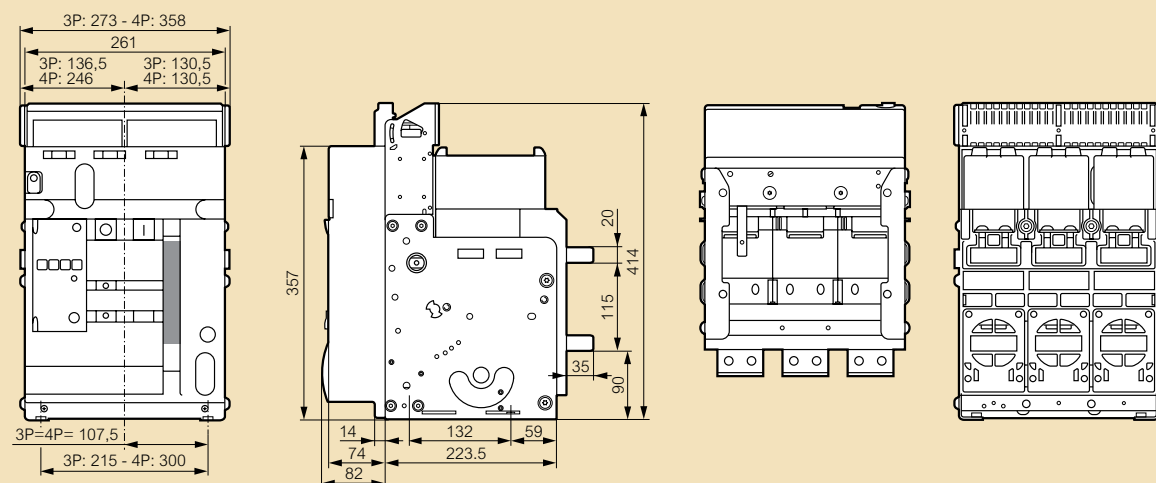
288 91

Pack	Cat. No.		Rear terminals
	3P	4P	For DMX³ frame 1 fixed version
1	288 84	288 85	For flat connection with bars To be fixed onto horizontal rear terminals of the circuit breaker
1	288 82	288 83	For vertical connection with bars Those terminals are used in order to transform a flat connection into a vertical one To be fixed onto Cat. Nos. 0 288 84/85 according to the number of poles
			For DMX³ frame 1 draw-out version
1	288 96	288 97	For vertical or horizontal connection with bars To be fixed onto plate rear terminals of the circuit breaker
			For DMX³ frame 2 fixed version
1	288 92	288 93	For flat connection with bars To be fixed onto horizontal rear terminals of the circuit breaker
			For DMX³ frame 2 fixed or draw-out version
1	288 94	288 95	On DMX ³ fixed version: - For vertical connection with bars - To be fixed onto Cat. Nos. 0 288 92/93 according to the number of poles On DMX ³ draw-out version: - For vertical or horizontal connection with bars - To be fixed directly onto plate rear terminals of the circuit breaker
			Spreaders for DMX³ frame 1 fixed version
	3P	4P	To be fixed onto horizontal rear terminals of the circuit breaker
1	288 86	288 87	For flat connection with bars
1	288 88	288 89	For vertical connection with bars
1	288 90	288 91	For horizontal connection with bars

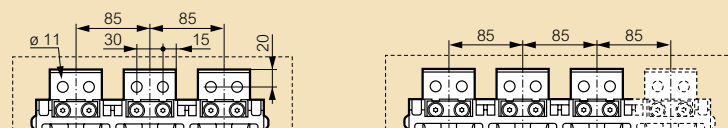
DMX³ 2500 and DMX³-I 2500 - frame 1

Dimensions

■ Fixed version - frame 1

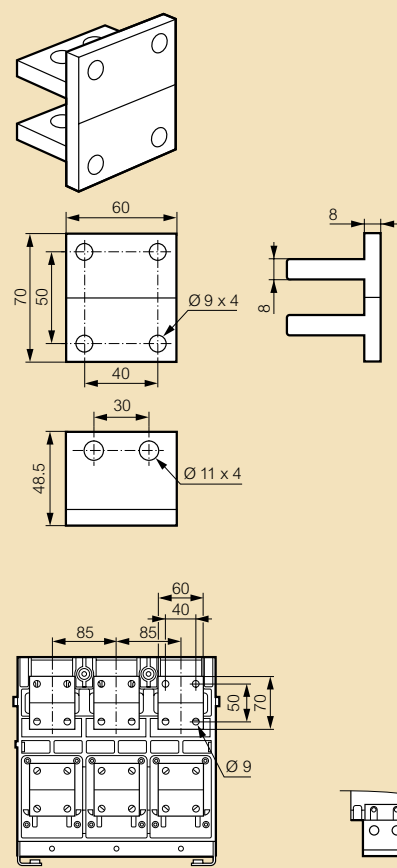


Rear terminals fixed version 800 - 2500 A



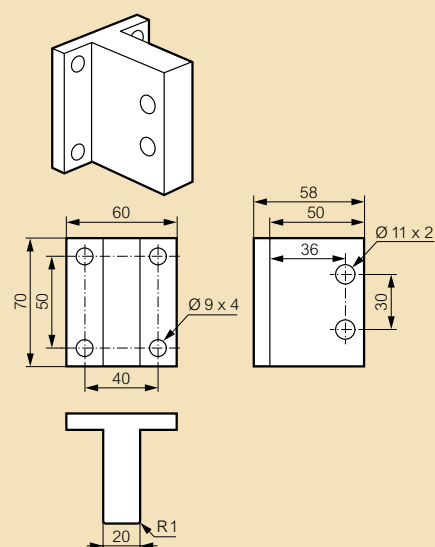
Rear terminals for flat connection with bars

Cat. No. 288 84/85



Rear terminals for vertical connection with bars

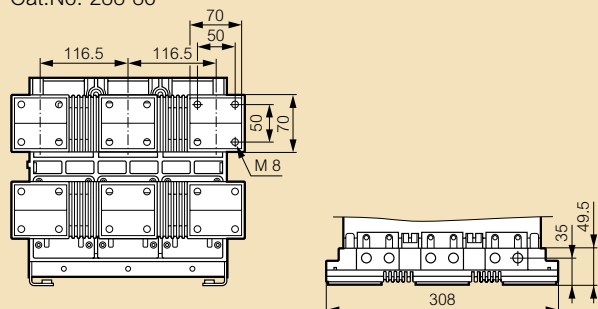
Cat. No. 288 82/83



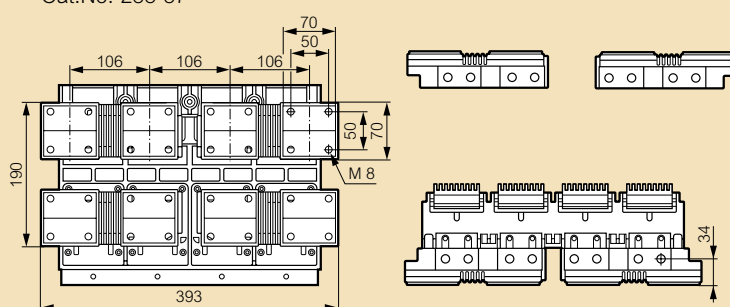
■ Fixed version - frame 1 (continued)

Spreaders for flat connection with bars

Cat.No. 288 86

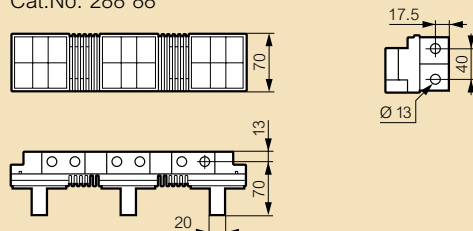


Cat.No. 288 87

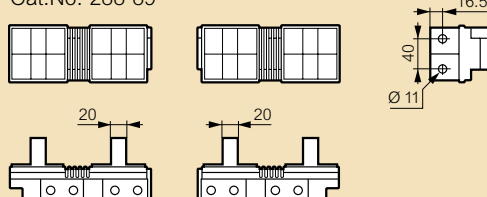


Spreaders for vertical connection with bars

Cat.No. 288 88

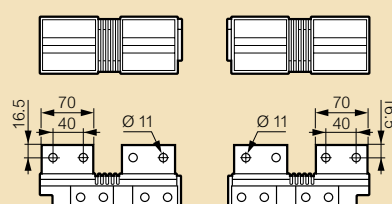
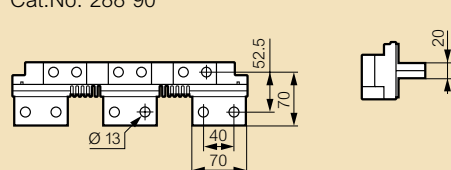


Cat.No. 288 89

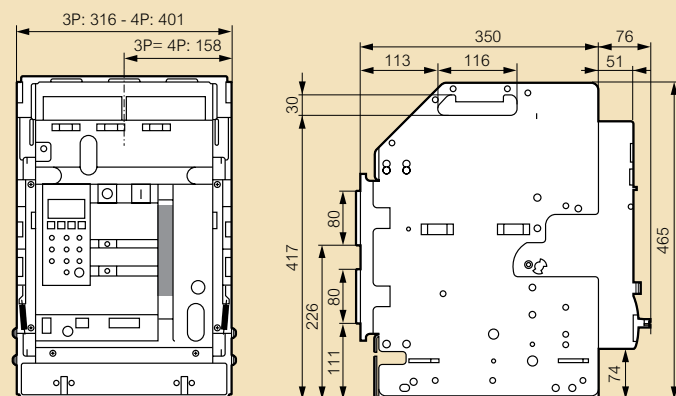


Spreaders for horizontal connection with bars

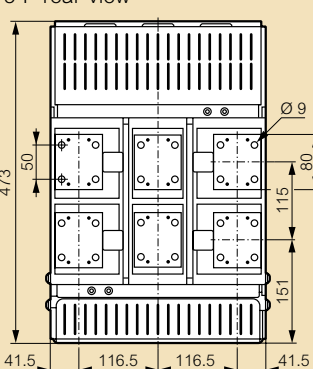
Cat.No. 288 90



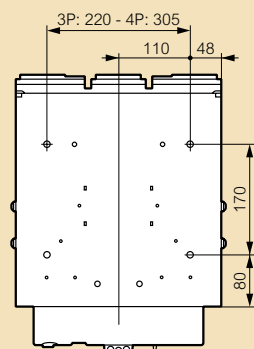
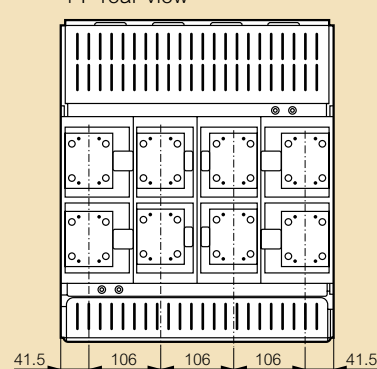
■ Draw-out version - frame 1



3 P rear view

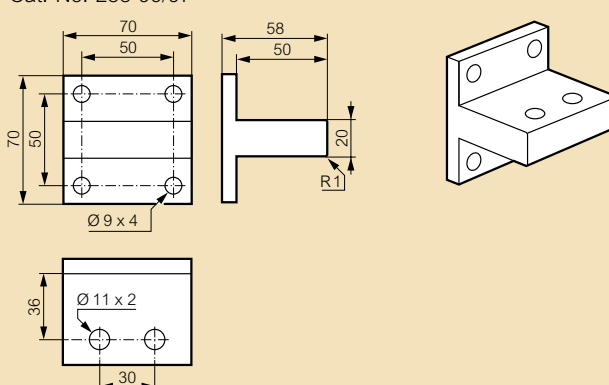


4 P rear view



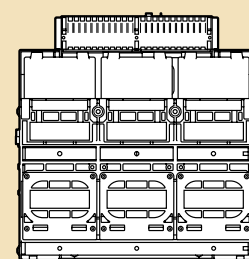
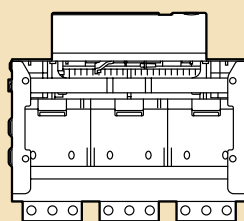
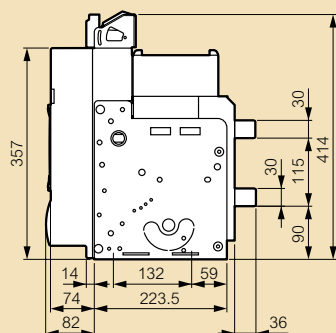
Rear terminals for vertical or horizontal connection with bars

Cat. No. 288 96/97

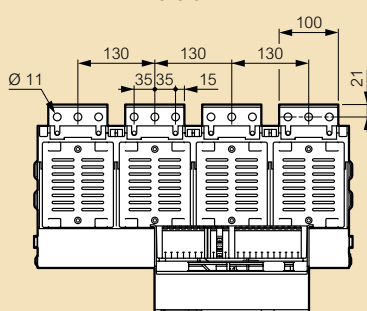
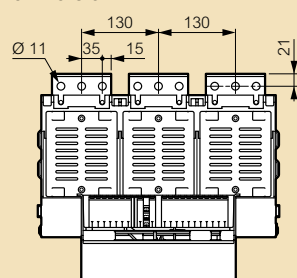


Technical drawing of a 19-inch rackmount server chassis. The drawing shows the internal layout of the chassis, including the power supply, cooling fans, and drive bays. Dimensions are provided for the chassis width and depth:

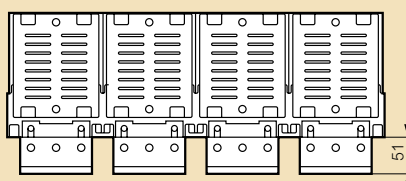
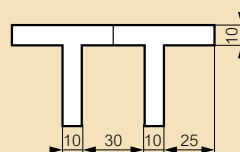
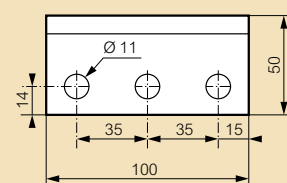
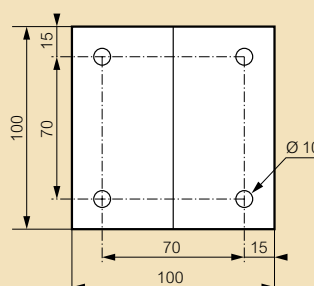
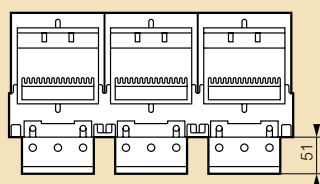
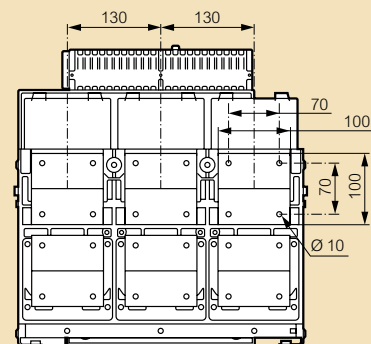
- Chassis width: 3P=350 / 4P=480
- Chassis depth: 3P=396 / 4P=526
- Internal component dimensions:
 - 3P=4P=198
 - 3P=4P=175



4P version



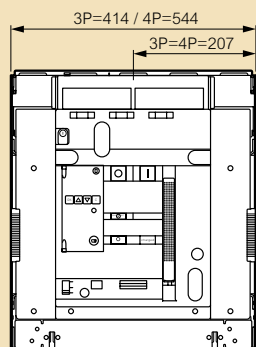
Cat. No. 288 92/93



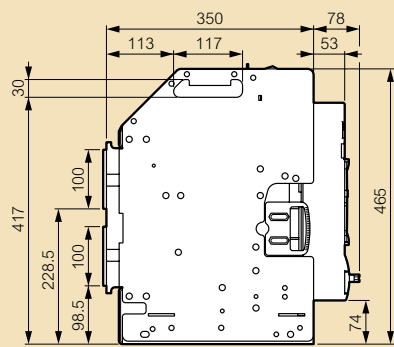
DMX³ 2500 and 4000

Automation control units for transfer switches

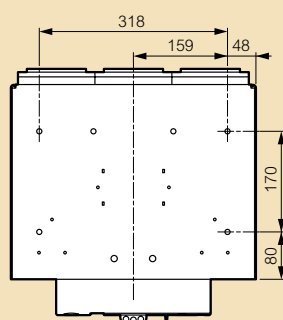
■ Draw-out version - frame 2



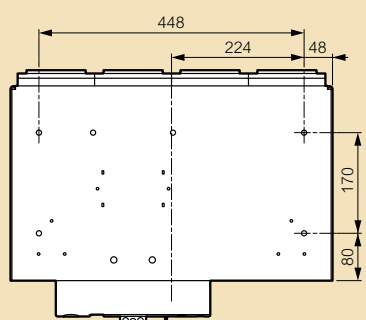
3P version



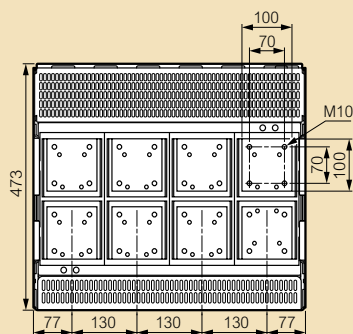
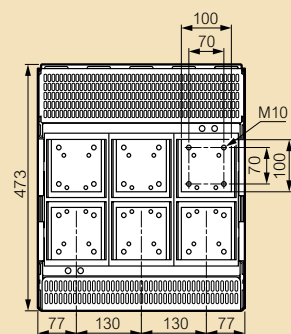
4P version



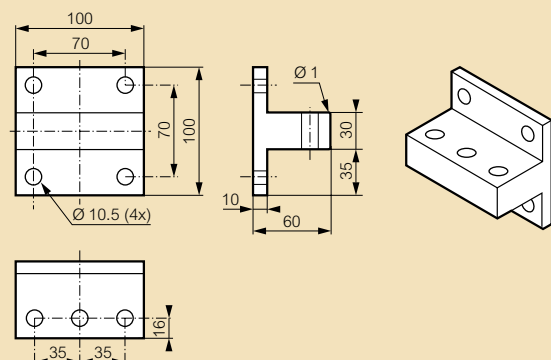
3 P rear view



4 P rear view



Rear terminals for vertical or horizontal connection with bars Cat. No. 288 94/95



■ Functions

Standard unit Cat.No. 261 93

Used to adjust and manage supply switching operating conditions (DMX³):

- Remote control (opening/closing) of MCBs
- Microprocessor output from unit (positive safety)
- Programmable I/O
- Voltage reading: 3-phase
 - phase-neutral
 - phase-phase
- Control (on/off) of generator set
- Indication of the state of the MCBs (open/closed/tripped)
- Transfer switch blocked in the event of:
 - Tripping of 1 or 2 devices
 - If a draw-out ACB is not inserted in its base, as the open/close command of the unit is inoperative

Communicating unit Cat.No. 261 94

All the standard functions, plus:

- Maximum voltage reading
- Reading of phase rotation direction
- Frequency reading
- Communication: data transmission via the RS 485 port (Modbus protocol)

■ Technical characteristics

Power supply: 187 to 264 V~

9 to 65 V=

Frequency: 45 to 65 Hz

Un: 80 to 690 V~

Control relay (1 and 4): 1 NO - 12 A - 250 V~

1 NO - 5 A - 250 V~

1 NO/NC - 5 A - 250 V~

Cable cross-section: 0.2 to 2.5 mm²

Dimensions (width x height x depth): 144 x 144 x 90 mm

Protection: IP 20 at the rear

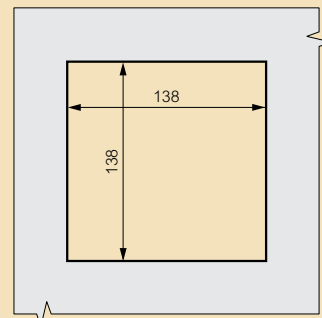
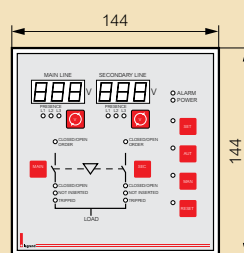
IP 41 at the front

IP 54 at the front with protective screen

Operating temperature: - 20 °C to + 60 °C

	Operating ranges
Main/secondary minimum voltage range	70-98 % Un
Main/secondary voltage absence range	60-85 % Un
Main/secondary minimum voltage delay	0.1-900 s
Main/secondary voltage absence delay	0.1-30 s
Generator operating delay	0-900 s
Main to secondary switching delay	0.1-90 s
Main line presence delay	1-3600 s
Secondary to main switching delay	0.1-90 s
Generator set stopping delay	1-3600 s

Dimensions and panel board faceplate cut-out



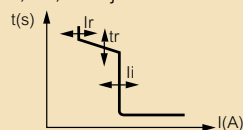
DMX³ 2500 and DMX³ 4000

Electronic protection units

■ Settings of the electronic protection units

MP4 LI

I_r, I_m, t_r adjustment on front panel



• Long time delay protection against overloads

I_r from 0.4 to 1 x I_n (6 + 6 steps) on two selectors (0.4 ÷ 0.9, by steps of 0.1 and 0.0 ÷ 0.1, by steps of 0.02)

• Long delay protection operation time

t_r - at 6 x I_r (4 + 4 steps)
t_r = 5-10-20-30 s (MEM ON) 30-20-10-5 s (MEM OFF)

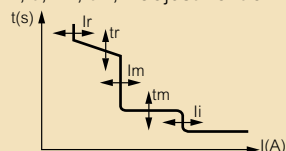
• Short time delay protection against short circuits

I_m from 1.5 to 10 I_r (9 steps) I_m = 1.5-2-2.5-3-4-5-6-8-10 x I_r

• Neutral protection: IN = I-II-III-IV x I_r (0-50-100-100 %)

MP4 LSI

I_r, t_r, I_m, t_m, I_i adjustment on front panel



• Long time delay protection against overloads

I_r from 0.4 to 1 x I_n (6 + 6 steps) on two selectors (0.4 ÷ 0.9, by steps of 0.1 and 0.0 ÷ 0.1, by steps of 0.02)

• Long delay protection operation time

t_r - at 6 x I_r (4 + 4 steps) t_r = 5-10-20-30 s (MEM ON) 30-20-10-5 s (MEM OFF)

• Short time delay protection against short circuits

I_m from 1.5 to 10 x I_r (9 steps) I_m = 1.5-2-2.5-3-4-5-6-8-10 x I_r

• Short time delay protection operation time

t_m from 0 to 0.3 s (4 + 4 steps) t_m = 0-0.1-0.2-0.3 s (t=cost), 0.3-0.2-0.1-0.01 s (I₂t=cost)

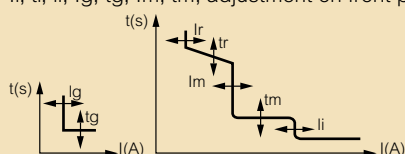
• Instantaneous protection against very high short circuits

I_i from 2 to I_{cw} x I_n (9 steps) I_i = 2-3-4-6-8-10-12-15-I_{cw} x I_n

• Neutral protection: IN = I-II-III-IV x I_r (0-50-100-100 %)

MP4 LSIg

I_r, t_r, I_i, I_g, t_g, I_m, t_m, adjustment on front panel



• Long time delay protection against overloads

I_r from 0.4 to 1 x I_n (6 + 6 steps) on two selectors (0.4 ÷ 0.9, by steps of 0.1 and 0.0 ÷ 0.1, by steps of 0.02)

• Long delay protection operation time

t_r - at 6 x I_r (4 + 4 steps) t_r = 5-10-20-30 s (MEM ON) 30-20-10-5 s (MEM OFF)

• Short time delay protection against short circuits

I_m from 1.5 to 10 x I_r (9 steps) I_m = 1.5-2-2.5-3-4-5-6-8-10 x I_r

• Short time delay protection operation time

t_m from 0 to 0.3 s (4 + 4 steps) t_m = 0-0.1-0.2-0.3 s (t=constant), 0.3-0.2-0.1-0.01 s (I₂t=constant)

• Instantaneous protection against very high short circuits

I_i from 2 to I_{cw} x I_n (9 steps) I_i = 2-3-4-6-8-10-12-15-I_{cw} x I_n

• Earth fault current

I_g from 0.2 to 1 x I_n (9 steps)

• Time delay on earth fault tripping

t_g from 0.1 to 1 x I_n (4 steps)

• Neutral protection: IN = I-II-III-IV x I_r (0-50-100-100 %)

■ Selectivity in three-phase network 400 V~

DMX³/DPX-DPX³

Downstream \ Upstream	DMX ³ 2500						DMX ³ 4000	
	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A
DPX ³ 160 ⁽¹⁾	T	T	T	T	T	T	T	T
DPX ³ 250 ⁽¹⁾ TM and elec.	T	T	T	T	T	T	T	T
DPX 630 ⁽¹⁾ TM and elec.	T	T	T	T	T	T	T	T
DPX 1600 ⁽¹⁾ thermal magnetic	630 A	T	T	T	T	T	T	T
	800 A		T	T	T	T	T	T
	1000 A			T	T	T	T	T
	1250 A				T	T	T	T
DPX 1600 ⁽¹⁾ electronic	630 A			T	T	T	T	T
	800 A			T	T	T	T	T
	1000 A				T	T	T	T
	1250 A				T	T	T	T
	1600 A					T	T	T

(1) All breaking capacity

T: total selectivity, up to downstream circuit breaker breaking capacity according to IEC 60947-2

DMX³/DMX³

Downstream \ Upstream	DMX ³							
	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A
DMX ³	800 A		T	T	T	T	T	T
	1000 A			T	T	T	T	T
	1250 A				T	T	T	T
	1600 A					T	T	T
	2000 A						T	T
	2500 A							T
	3200 A							T
	4000 A							

T: total selectivity, up to downstream circuit breaker breaking capacity according to IEC 60947-2
I_{cu} of downstream circuit breaker ≤ I_{cu} of upstream circuit breaker

DMX³/DX³

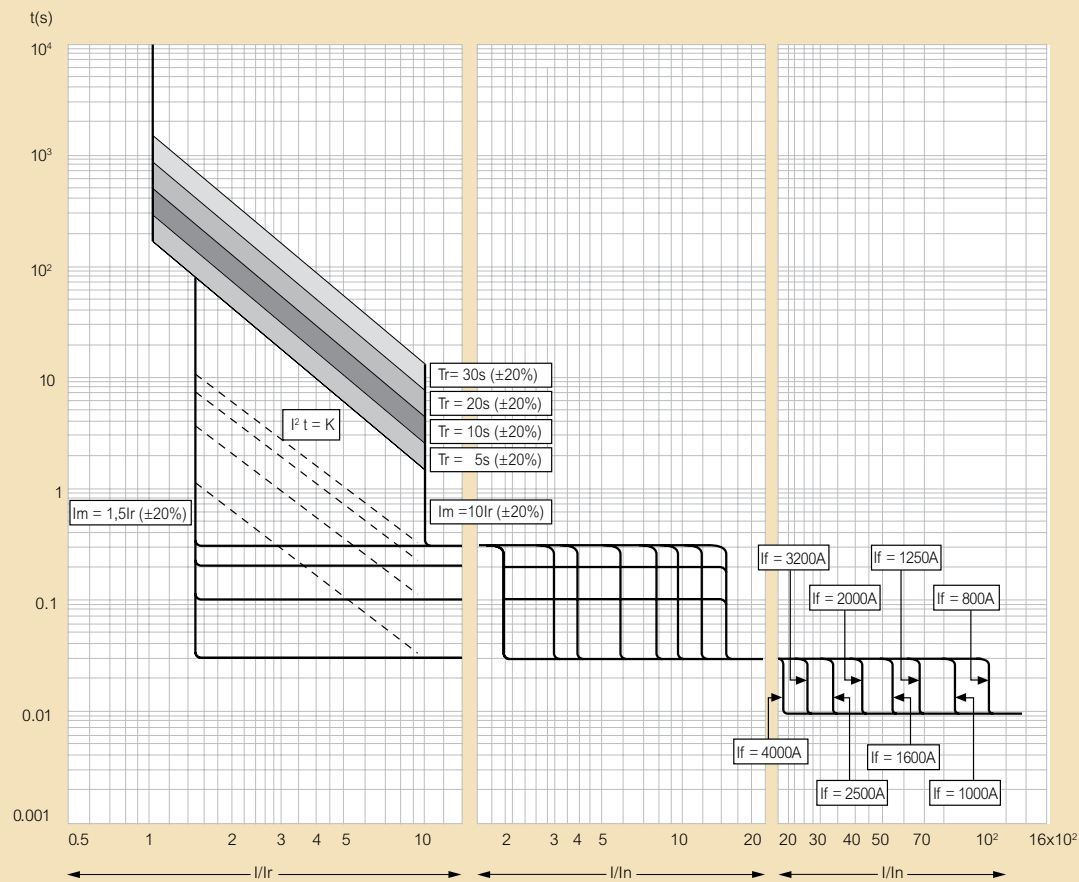
	DMX ³							
	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A
DX ³	T	T	T	T	T	T	T	T
DX ³ -HP	T	T	T	T	T	T	T	T

T: total selectivity, up to downstream circuit breaker breaking capacity according to IEC 60947-2

DMX³ 2500 and 4000

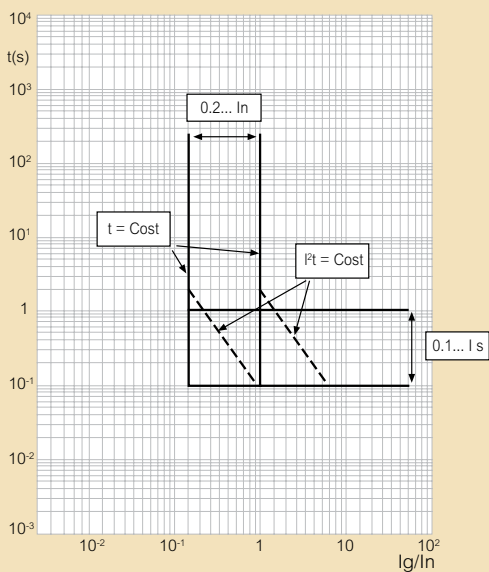
Tripping curves

Tripping curves for MP4 protection units

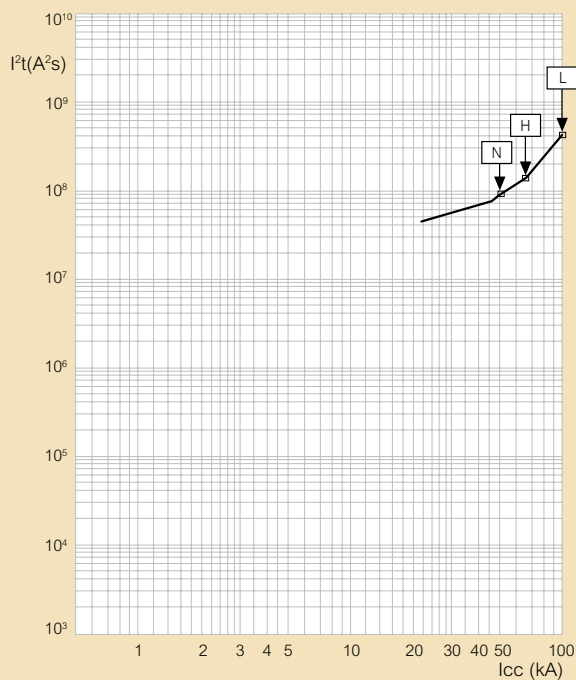


I_r = long time setting current
 T_r = long time delay
 I_m = short time setting current
 T_m = short time delay
 I_f = instantaneous intervention current

Ground fault tripping curve for MP4 LSIG protection unit



Let-through specific energy characteristic



DMX³ 2500 and 4000

Technical characteristics

■ Technical characteristics

DMX³ 2500

DMX ³ according to IEC 60947-2		DMX ³ 2500																	
		800			1000			1250			1600			2000			2500		
		N	H	L	N	H	L	N	H	L	N	H	L	N	H	L	N	H	L
Number of poles		3P - 4P			3P - 4P			3P - 4P			3P - 4P			3P - 4P			3P - 4P		
Rating In (A)		800			1000			1250			1600			2000			2500		
Rated insulation voltage Ui (V)		1000			1000			1000			1000			1000			1000		
Rated impulse withstand voltage Uimp (kV)		12			12			12			12			12			12		
Rated operational voltage (50/60Hz) Ue (V)		690			690			690			690			690			690		
Frame		1		2	1		2	1		2	1		2	1		2	1		2
Ultimate breaking capacity Icu (kA)	230 V~	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100
	415 V~	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100
	500 V~	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100	50	65	100
	600 V~	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65
Service breaking capacity Ics (% Icu)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Short-circuit making capacity Icm (kA)	230 V~	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220
	415 V~	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220
	500 V~	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220	105	143	220
	600 V~	105	132	165	105	132	165	105	132	165	105	132	165	105	132	165	105	132	165
	690 V~	105	121	143	105	121	143	105	121	143	105	121	143	105	121	143	105	121	143
Short time withstand current Icw (kA) for t = 1s	230 V~	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85
	415 V~	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85
	500 V~	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85	50	65	85
	600 V~	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65	50	55	65
Category of use		B			B			B			B			B			B		
Isolation behavior		YES			YES			YES			YES			YES			YES		
Endurance (cycles)	mechanical	10000			10000			10000			10000			10000			10000		
	electrical	5000			5000			5000			5000			5000			5000		

DMX³ 4000

DMX ³ according to IEC 60947-2		DMX ³ 4000					
		3200			4000		
		N	H	L	N	H	L
Number of poles		3P - 4P			3P - 4P		
Rating In (A)		3200			4000		
Rated insulation voltage Ui (V)		1000			1000		
Rated impulse withstand voltage Uimp (kV)		12			12		
Rated operational voltage (50/60Hz) Ue (V)		690			690		
Frame		2			2		
Ultimate breaking capacity Icu (kA)	230 V~	50	65	100	50	65	100
	415 V~	50	65	100	50	65	100
	500 V~	50	65	100	50	65	100
	600 V~	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65
Service breaking capacity Ics (% Icu)		100	100	100	100	100	100
Short-circuit making capacity Icm (kA)	230 V~	105	143	220	105	143	220
	415 V~	105	143	220	105	143	220
	500 V~	105	143	220	105	143	220
	600 V~	105	132	165	105	132	165
	690 V~	105	121	143	105	121	143
Short time withstand current Icw (kA) for t = 1s	230 V~	50	65	85	50	65	85
	415 V~	50	65	85	50	65	85
	500 V~	50	65	85	50	65	85
	600 V~	50	60	75	50	60	75
	690 V~	50	55	65	50	55	65
Category of use		B			B		
Isolation behavior		YES			YES		
Endurance (cycles)	mechanical	10000			10000		
	electrical	5000			5000		

DMX³ - I 2500 and 4000

DMX ³ - I according to IEC 60947-3		DMX ³ -I 2500				DMX ³ -I 4000	
		1250	1600	2000	2500	3200	4000
Number of poles		3P - 4P	3P - 4P	3P - 4P	3P - 4P	3P - 4P	3P - 4P
Rating In (A)		1250	1600	2000	2500	3200	4000
Rated insulation voltage Ui (V)		1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage Uimp (kV)		12	12	12	12	12	12
Rated operational voltage (50/60Hz) Ue (V)		690	690	690	690	690	690
Frame		1	1	1	1	2	2
Short-circuit making capacity Icm (kA)	230 V~	105	105	105	105	105	105
	415 V~	105	105	105	105	105	105
	500 V~	105	105	105	105	105	105
	600 V~	88	88	88	88	88	88
	690 V~	63	63	63	63	63	63
Short time withstand current Icw (kA) for t = 1s	230 V~	50	50	50	50	50	50
	415 V~	50	50	50	50	50	50
	500 V~	50	50	50	50	50	50
	600 V~	42	42	42	42	42	42
	690 V~	36	36	36	36	36	36
Isolation behavior		YES	YES	YES	YES	YES	YES
Endurance (cycles)	mechanical	10000	10000	10000	10000	10000	10000
	electrical	5000	5000	5000	5000	5000	5000

■ Temperature derating

Fixed version

Temperature	40°C		50°C		60°C		65°C		70°C	
	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n
DMX ³ 2500	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2450	0.98	2350	0.94	2250	0.9	2150	0.86
DMX ³ 4000	3200	1	3200	1	3200	1	3136	0.98	3008	0.94
	4000	1	3920	0.98	3680	0.92	3440	0.86	3120	0.78

Draw-out version

Temperature	40°C		50°C		60°C		65°C		70°C	
	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n
DMX ³ 2500	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1875	0.94
	2500	1	2400	0.96	2250	0.9	2100	0.84	1950	0.78
DMX ³ 4000	3200	1	3200	1	3200	1	3072	0.96	2880	0.9
	4000	1	3760	0.94	3440	0.86	3200	0.8	2960	0.74

■ Derating at different altitudes

Air circuit breaker	DMX ³ 2500 and DMX ³ 4000			
Altitude H (m)	< 2000	3000	4000	5000
Rated current (at 40°C) I _n (A)	I _n	0.98 x I _n	0.94 x I _n	0.90 x I _n
Rated voltage U _e (V)	690	600	500	440
Rated insulation voltage U _i (V)	1000	900	750	600

■ Minimum recommended dimension of busbars per pole

I _n (A)	Vertical bars (mm)	Horizontal bars (mm)
630	50 x 10	60 x 10
800	60 x 10	60 x 10
1000	80 x 10	80 x 10
1250	80 x 10	2 x 60 x 10
1600	2 x 60 x 10	2 x 80 x 10
2000	2 x 80 x 10	3 x 80 x 10
2500	3 x 80 x 10	3 x 80 x 10
3200	3 x 100 x 10	3 x 100 x 10
4000	4 x 100 x 10	5 x 100 x 10

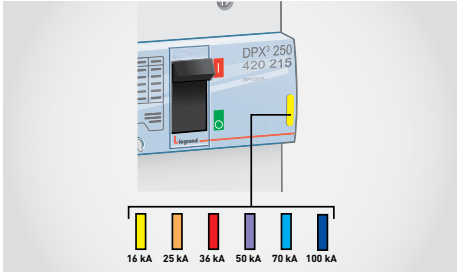
Note: The tables presenting the minimum recommended dimensions of connection plates and bars per pole should be used solely as a general guideline for selecting products, due to extensive variety of switchgear construction, shapes and conditions that can affect the behavior of the apparatus, the solution used must always be verified

Wide choice, high performance and safety

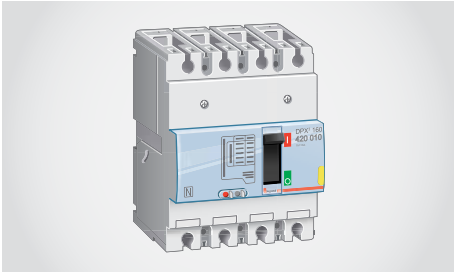
DPX³/DPX: 4 sizes of Moulded Case Circuit Breakers
Breaking capacity ranging from 16 to 70 kA.



A COMPLETE RANGE FOR ALL YOUR REQUIREMENTS FROM 16 TO 1 600 A



Easy identification of the breaking capacity: colour marking



DPX³ 160



DPX³ 250

MOUNTING		ON RAIL  OR ON PLATE				ON RAIL  OR ON PLATE			
Rated current <i>I_n</i>	Thermal magnetic release	From 16 to 160 A				From 100 to 250 A			
	Electronic release	-				From 40 to 250 A			
Breaking capacity <i>I_{cu}</i> ⁽¹⁾	380/415 V±	16 kA 	25 kA 	36 kA 	50 kA 	25 kA 	36 kA 	50 kA 	70 kA 
	220/240 V±	25 kA	35 kA	50 kA	65 kA	40 kA	60 kA	100 kA	100 kA
Standard breaking capacity <i>I_{cs}</i> (% <i>I_{cu}</i>)		100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %
Electronic earth leakage module		Without or integrated				Without or integrated			

(1) EN 60947-2 and IEC 60947-2



▶▶▶ DPX 630



▶▶▶ DPX 1250/1600

MOUNTING		ON PLATE		ON PLATE		ON PLATE	
Rated current In	Thermal magnetic release	From 320 to 630 A		From 800 to 1 250 A		-	
	Electronic release	From 250 to 630 A		-		From 800 to 1 600 A	
Breaking capacity Icu ⁽¹⁾	380/415 V±	36 kA 	70 kA 	36 kA 	70 kA 	50 kA 	70 kA 
	220/240 V±	60 kA	100 kA	80 kA	100 kA	80 kA	100 kA
Standard breaking capacity Ics (% Icu)		100 %	75 %	100 %	75 %	100 %	75 %
Electronic earth leakage module		Without or downstream		Without or residual current relay and coils			

Wide choice, integrated earth leakage protection or metering options

The same depth for all circuit breakers from 16 to 250 A. With 2 new ratings (80 and 200 A), a wide range of versions, characteristics and innovative functions, Legrand has an even more comprehensive range with just two sizes of circuit breakers.



DPX³, AN OPTIMISED RANGE



▶▶▶ Thermal-magnetic DPX³ 160



▶▶▶ Thermal-magnetic DPX³ 250



▶▶▶ Electronic DPX³ 250



▶▶▶ Thermal-magnetic DPX³ 160 with residual current protection



▶▶▶ Thermal-magnetic DPX³ 250 with residual current protection



▶▶▶ Electronic DPX³ 250 with residual current protection

The same depth for all ratings

Optimised integration: devices with different ratings can be used together on the same row.



▶▶▶ Interlocking of 2 MCCBs of different ratings



A complete range to satisfy your requirements



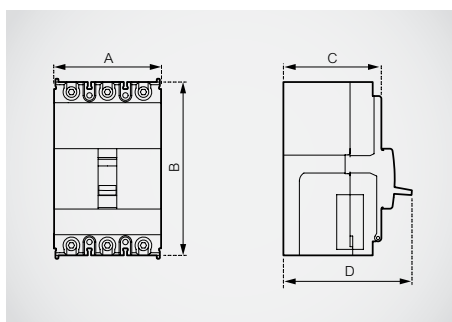
►►► Electronic DPX³ 250
with integrated metering units



►►► Electronic DPX³ 250
with residual current protection and
integrated metering units

		DPX³ 160								DPX³ 250				
Nominal current In (A)		16	25	40	63	80	100	125	160	40	100	160	200	250
Number of poles	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Versions	Fixed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Plug-in	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Release	Thermal-magnetic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
	Electronic									✓	✓	✓		✓
Options	Residual current protection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Metering									✓	✓	✓		✓
	Earth protection									✓	✓	✓		✓
Breaking capacity Icu (kA)	16	✓	✓	✓	✓	✓	✓	✓	✓					
	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	36	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	70									✓	✓	✓	✓	✓

Optimised dimensions



DIMENSIONS (mm)		DPX³ 160	DPX³ 250
A	3P	81	105
	4P	108	140
B	Without RCD	130	165
	With RCD	160	195
C		74	
D		100	

Thermal-magnetic or electronic versions to meet all requirements

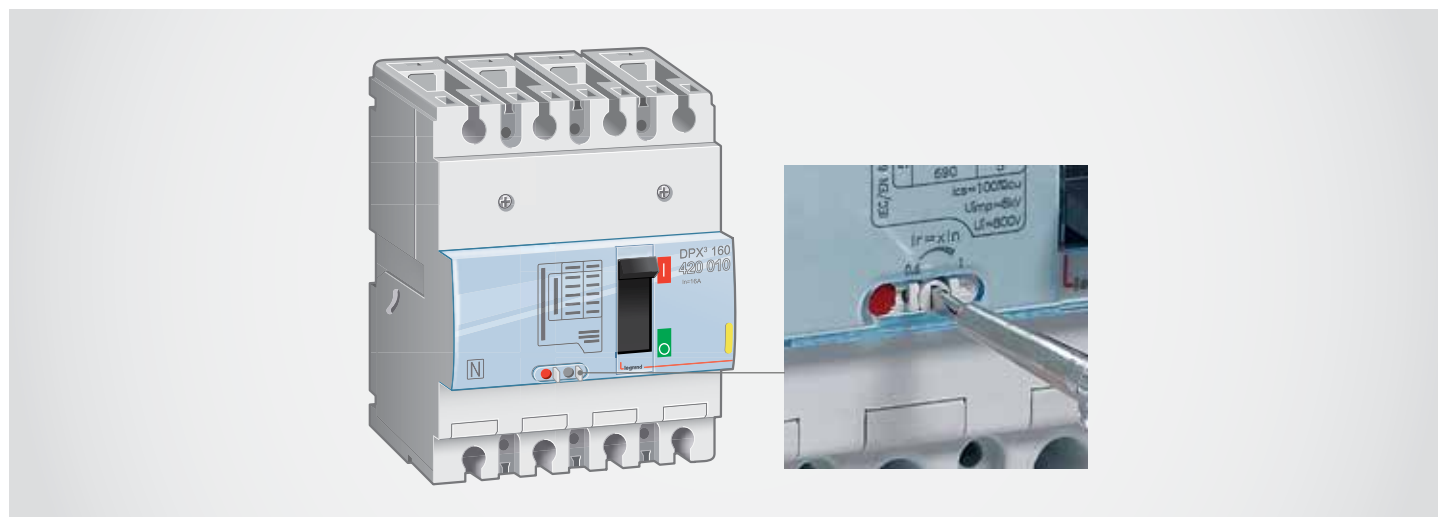
To comply with all requirements for the protection of people and property, the new DPX³ MCCBs and DPX³ RCBs are available in thermal-magnetic versions from 16 to 250 A and electronic versions from 40 to 250 A.



RELIABLE AND PRECISE PROTECTION

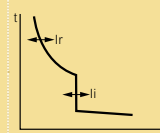
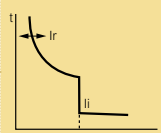
Thermal-magnetic MCCBs DPX³ 160 and DPX³ 250

The thermal trip threshold I_r on all these devices can be adjusted to provide the best protection against overloads. On the DPX³ 250 the magnetic trip threshold I_i can also be adjusted, for precise protection against short-circuits. This threshold is fixed on the DPX³ 160.



►►► Thermal-magnetic MCCBs are adjusted on the front panel using a screwdriver

THERMAL-MAGNETIC RELEASES		DPX ³ 160	DPX ³ 250
Thermal protection against overloads I_r (A)		Adjustable: 0.8 to 1 x I_n	Adjustable: 0.8 to 1 x I_n
Magnetic protection against short circuits I_i (A)		Fixed 16 A: 400 A 25 A: 400 A 40 to 160A: 10 x I_n	Adjustable: 5 to 10 x I_n



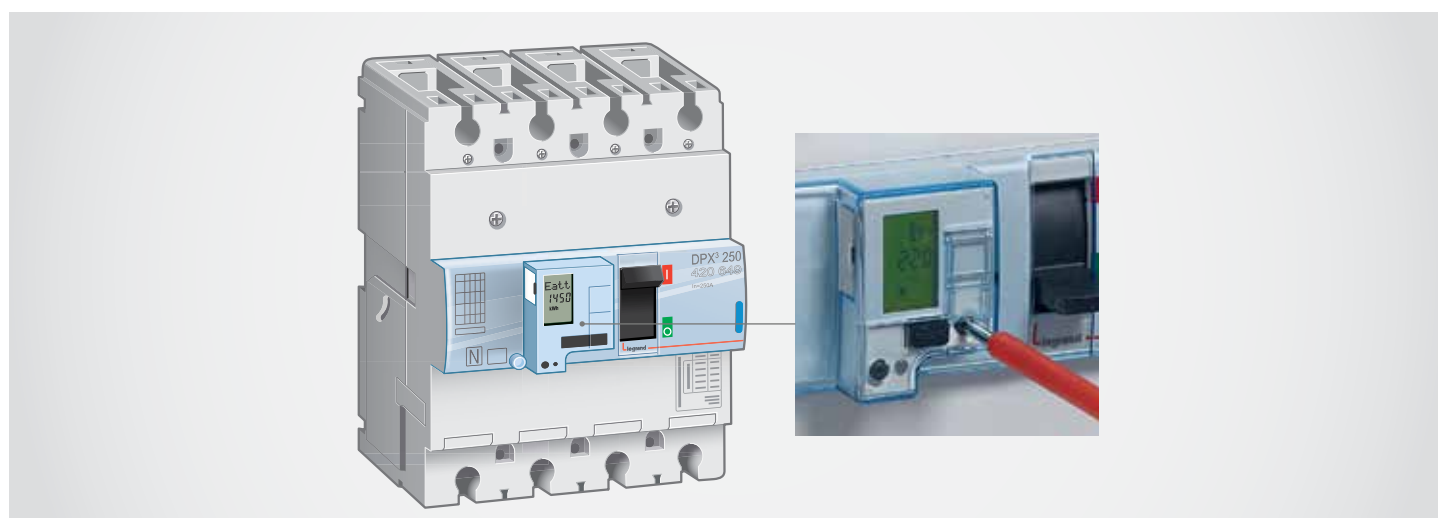
RCBOs DPX³ 160 and DPX³ 250

Precise protection of people is provided on all RCDs (thermal-magnetic and electronic) by an integrated electronic unit. Adjustments are made via an LCD screen.



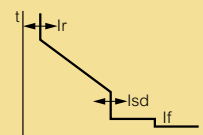
Electronic MCCBs DPX³ 250

Electronic releases provide very precise adjustment of the trip thresholds I_r and I_{sd} and the response times T_r and T_{sd} . On MCCBs with protection against earth faults I_{sg} and T_{sg} can be adjusted.



►► Adjustments are made using the selector switch and are displayed on the LCD screen

ELECTRONIC RELEASES		DPX³ 250	
Long delay protection against overloads	Threshold I_r (A)	Adjustable	0.4 to 1 x I_n
	Response time T_r (s)		3 to 16 s
Short delay protection against short circuits	Threshold I_{sd} (A)	Adjustable	1.5 to 10 x I_r
	Response time T_{sd} (s)		0 to 0.5 s
Protection against earth faults	Threshold I_g (A)	Adjustable	0.2 to 7 x I_n
	Response time T_g (s)		0.1 to 1 s



RESIDUAL CURRENT PROTECTION	DPX³ 160/250
Trip threshold $I_{\Delta n}$ (A)	0.03 - 0.3 - 1 - 3
Response time Δt (s)	0 - 0.3 - 1 - 3

Advantages of the electronic release:

- RS485 communication function
- Self-diagnostic function
- More precise adjustments
- Event log
- Optional metering unit.

Precise selectivity for enhanced continuity of service

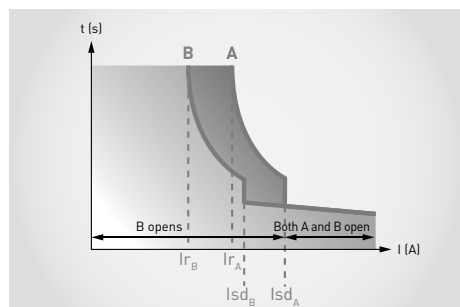
Selectivity consists of coordinating the protection in such a way that a fault on one circuit only trips the protection placed directly upstream of the fault, thus avoiding the rest of the installation being put out of service. Legrand circuit breakers are the ideal answer for total selectivity, providing 4 types of coordination: current sensing, time, dynamic and logical.

CONTINUITY OF SERVICE

Selectivity of DMX³, DPX³ and DPX MCCBs

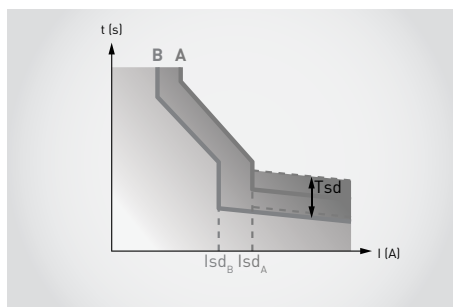
Current sensing selectivity

Choice of the correct rating to ensure selectivity



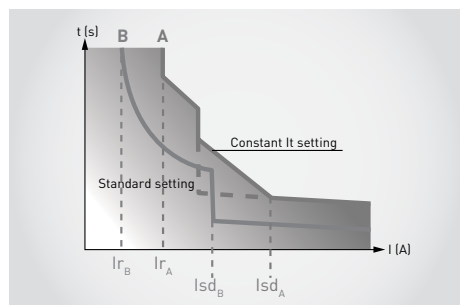
Time selectivity

Choice of the correct setting on a circuit breaker to space out the trips over time



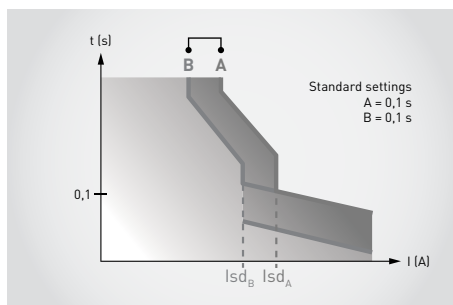
Dynamic selectivity

High and low electronic adjustment of the upstream and downstream circuit breakers



Logical selectivity

Communication between the circuit breakers to adjust the tripping to the actual operating requirements



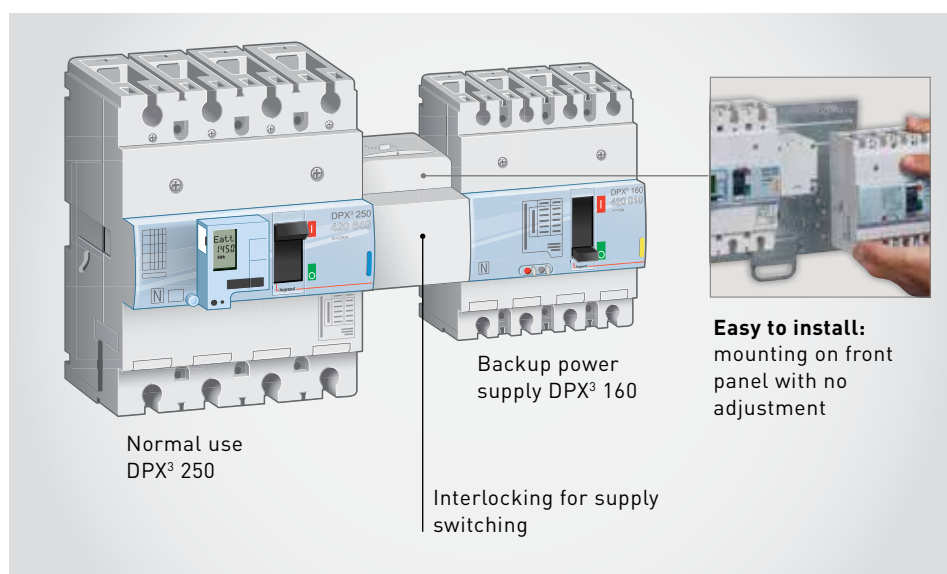


DPX³ 160 and 250 Basic Transfer Switches

Transfer switches move the power supply of the installation to a backup supply when there is a fault on the main supply.

The DPX³ interlocking device greatly simplifies the installation of the transfer switches:

- Front mounting
- Compact size
- No adjustments required
- Ability to use a DPX³ 160 and a DPX³ 250 together
- Fixed version rail mounted, enabling installation in small cabinets
- Just 2 catalogue numbers covering all DPX³, whatever the size: one for fixed versions, one for plug-in versions.



DPX³ 160 and 250 automatic transfer switches:

Combined with an automated control unit, supply switching can be controlled locally or even remotely by supervision.



Refer to dedicated ATS page p102

Integrated metering for better energy management

The new DPX³ 250 electronic MCCBs with integrated metering functions provide access to the parameters of the installation in a compact unit.

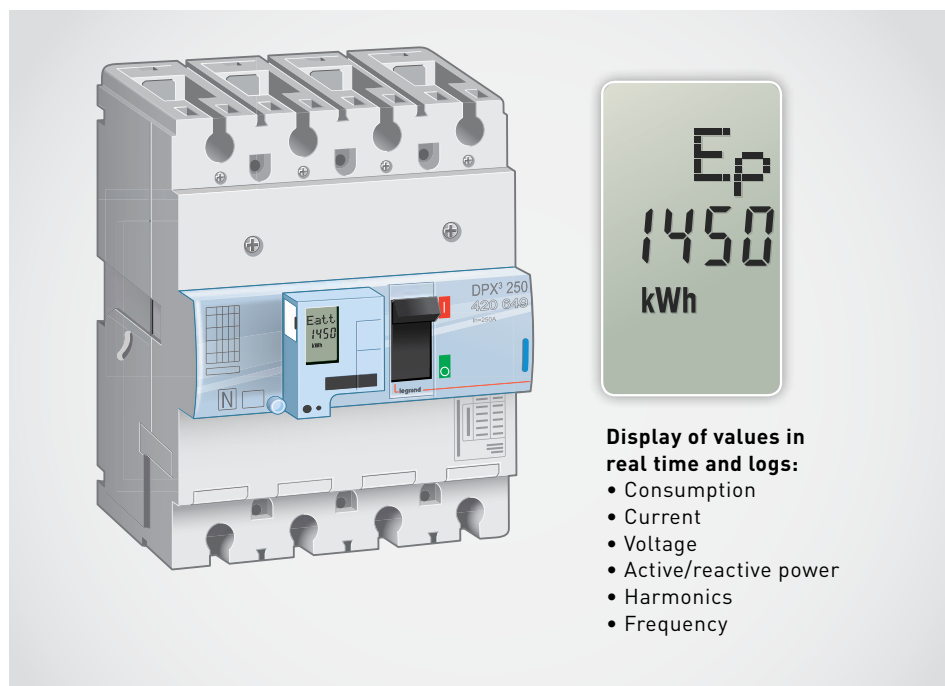


EASY OPERATION AND MAINTENANCE

Integrated metering units on electronic DPX³ 250

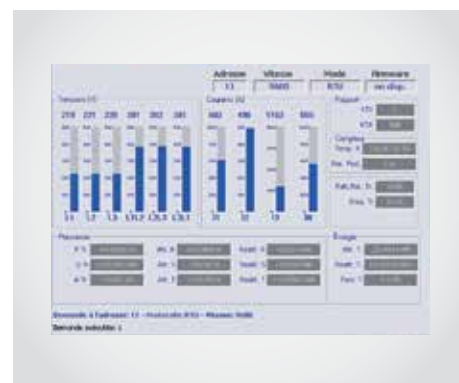
The measured values can be viewed:

- Directly on the electrical panel, on the LCD screen on the front panel of the device
- Remotely using a PC or a smartphone equipped with supervision software, via the RS485 communication interface and the Modbus protocol.



Display, measure, control

Display of measured values on a PC equipped with supervision software. Combined with an automated control unit, supply switching can be controlled locally or even remotely by supervision.





Plug-in DPX³ 160 and DPX³ 250

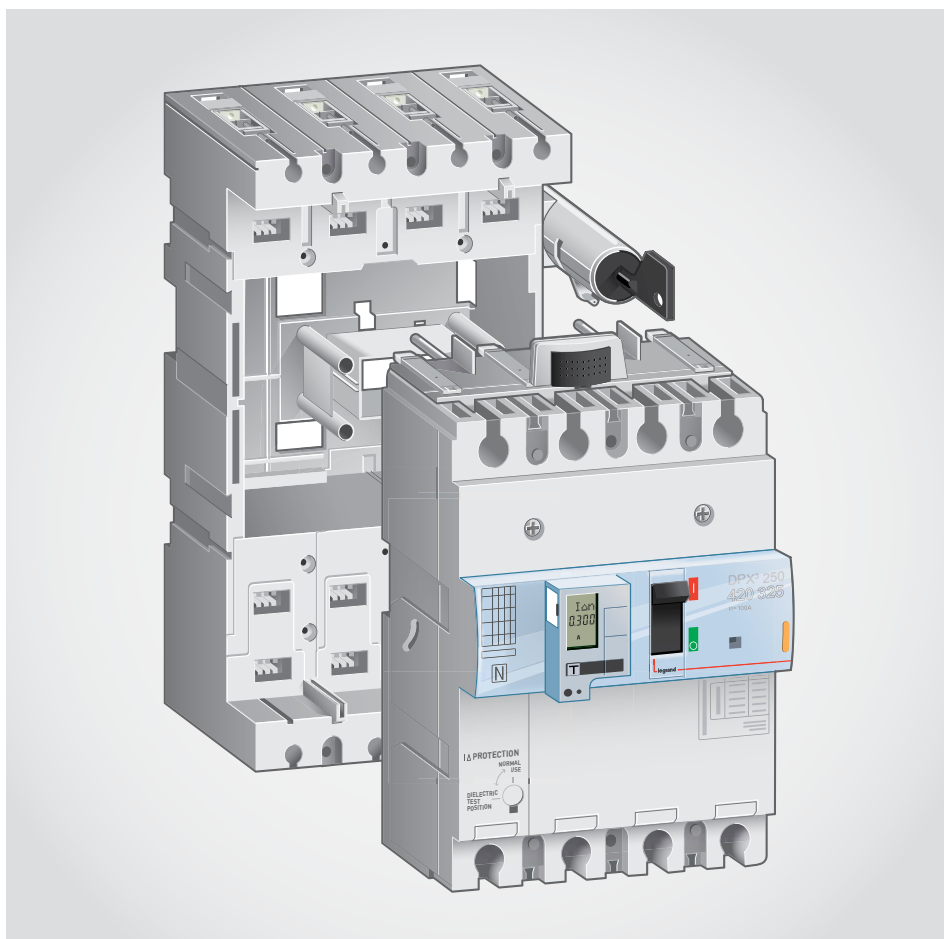
Replacing a plug-in device only takes a few minutes and can be done without switching off the power supply to the other circuits.

All the devices in the DPX³ range can be converted to plug-in versions. The bases are supplied with all the necessary components to convert the devices. They are mounted on plates and can be connected via front or rear terminals.

Specific accessories are available as options to ensure the safety of testing and maintenance operations.



▶▶▶ With the optional connector the power can be disconnected while the auxiliaries are kept operational for tests



▶▶▶ The top and bottom handles enable the device to be extracted easily



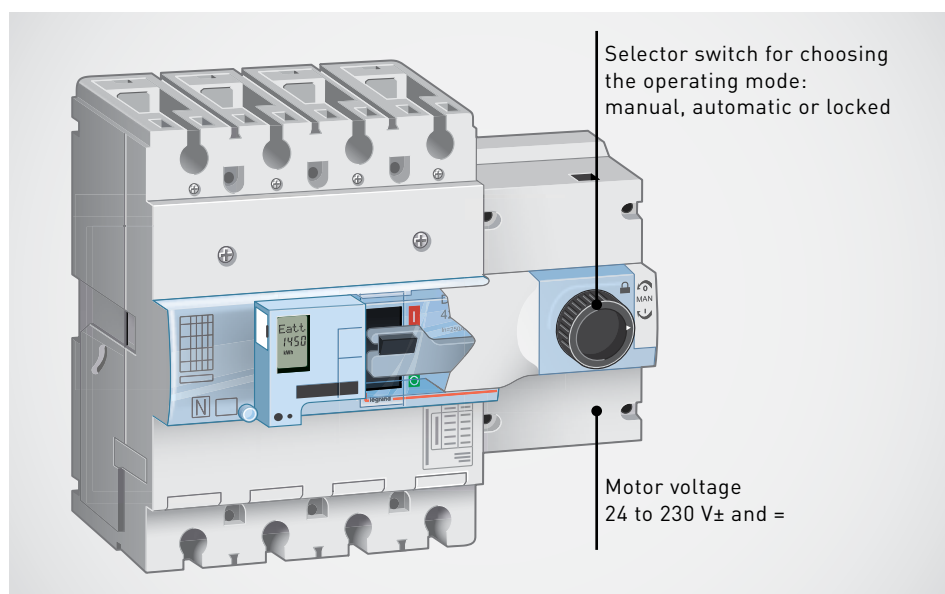
▶▶▶ Locking via key or padlock prevents the device being switched on, on its base, during maintenance operations

Easy to operate motor control

Motorised controls for the DPX³ 160 and 250 enable devices to be tripped and reset remotely to provide a simple answer to operating requirements. They are available in just 2 catalogue numbers for all the DPX³, one with a side control and one with a front control. They take a wide range of DC and AC supply voltages.

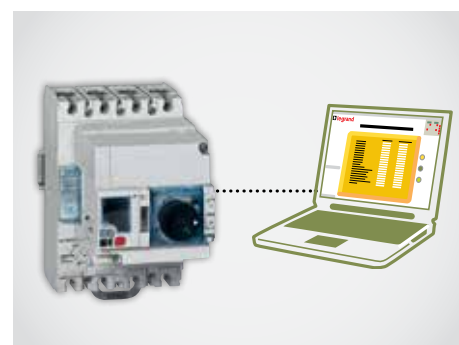
A COMPLETE RANGE OF ACCESSORIES

Motorised control for DPX³ 160 and 250



Remote tripping for simplified operation:

Remote control from a PC equipped with supervision software for load shedding and restoration.



►►► The operating key is always available for periodic tests or for manual control

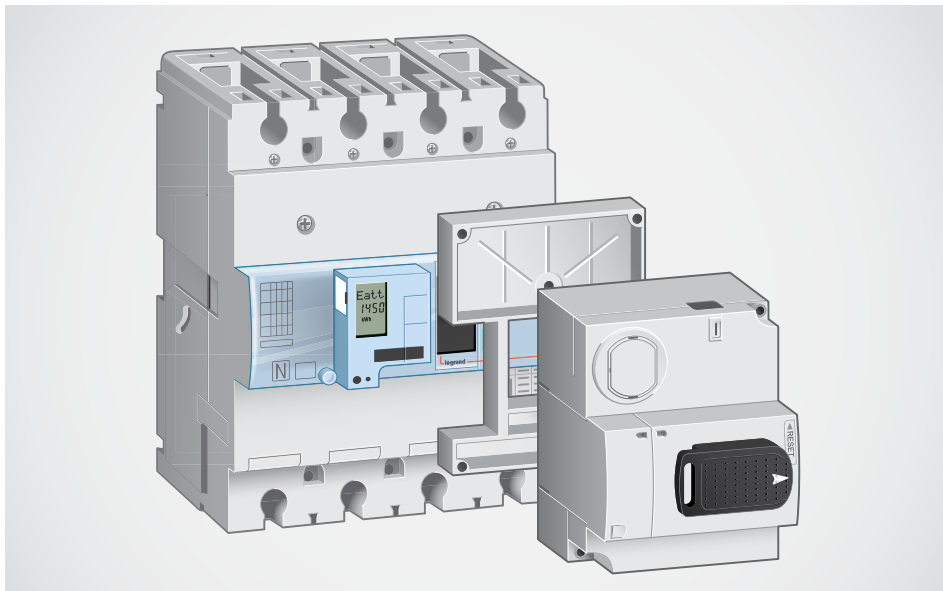


►►► The front motorised control leaves access to the connections and adjustment



►►► The side motorised control is mounted on the rail beside the DPX³

Direct or remote rotary controls provide the utmost convenience. They can be locked using padlocks or keys to ensure the safety of maintenance operations.



▶▶▶ The remote rotary control enables the control handle to be installed on the door

73

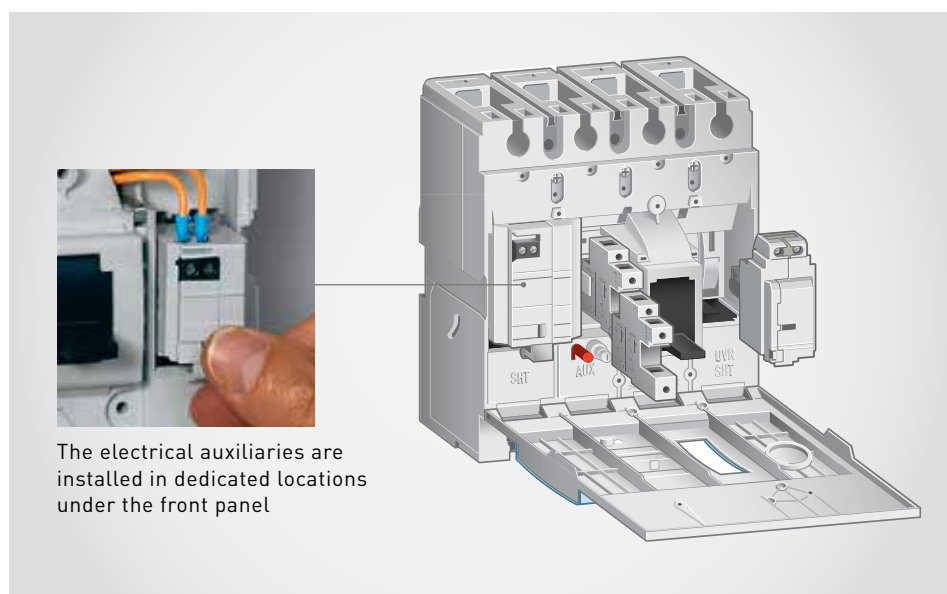
Complete range of accessories and connections

The trip coils enable the opening of the circuit breaker to be controlled via a control circuit (emergency break, electronic control box, remote control). Auxiliary and fault signal contacts are used to control an auxiliary circuit or to feed back the status of the circuit breaker remotely.



INSTALLATION OF AUXILIARIES AND CONNECTION

Control and signalling auxiliaries for DPX³ 160 and 250



Auxiliaries common to the DPX³ 160 and 250:

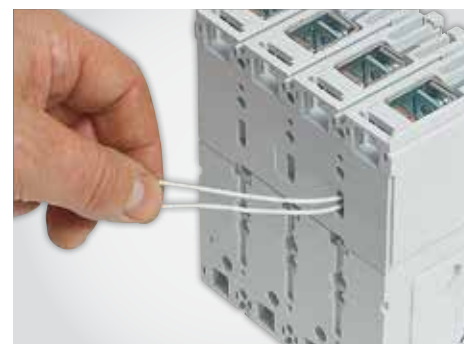
- Auxiliary or fault signal contact
- Current shunt trips
- Undervoltage releases



▶▶▶ DPX³ have three options for the outgoing connection wires:
via the front panel,



▶▶▶ ...via the side,



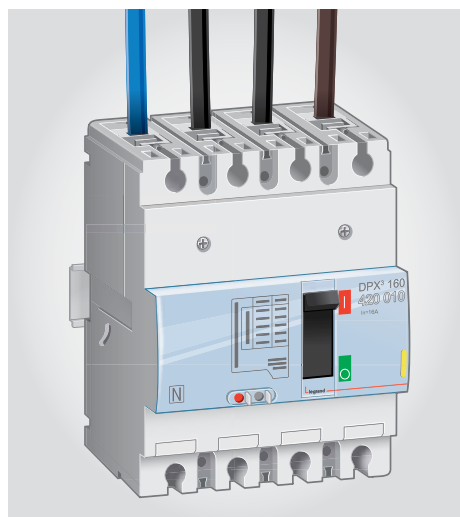
▶▶▶ ...or via the back



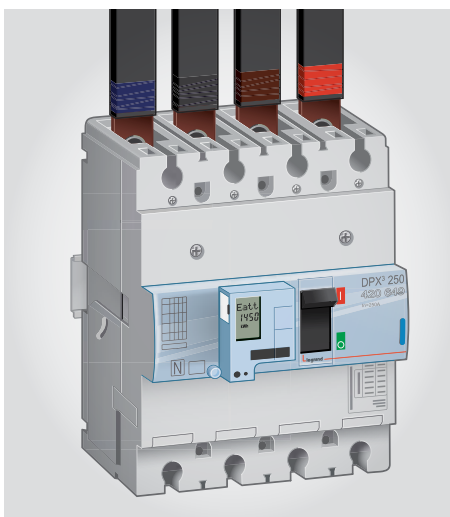
Connecting DPX³ 160 and 250

DPX³ 160 have cage terminals as standard for direct connection via cable or bars. DPX³ 250 are supplied with plain connection plates for connection via bars or lugs. They can have cage terminals as an option.

A complete range of connection accessories is also available for all installation configurations.



▶▶▶ Connecting a DPX³ 160 via cables on integrated cage terminals



▶▶▶ Connecting a DPX³ 250 via flexible bars screwed onto plates

Large capacity cage terminals

Large capacity cage terminals enable connection via cable up to 150 mm² (see catalogue pages for more details)



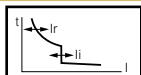
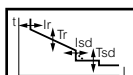
▶▶▶ The spreaders enable connection via large cross-section cables



▶▶▶ The flat rear terminals are adjustable



▶▶▶ The terminal shields provide IP 2X protection for the connections

DPX ³ /DPX™ Electrical characteristics																			
																			
DEVICES		DPX ³ 160 thermal magnetic (p. 78 - 79)								DPX ³ 250 thermal magnetic (p. 80)				DPX ³ 250 electronic release (p. 81 - 83)					
Mounting		On rail  or on plate								On rail  or on plate				On rail  or on plate					
Breaking capacity (kA) (EN 60947-2 and IEC 60947-2)		16 kA	25 kA	36 kA	50 kA	25 kA	36 kA	50 kA	70 kA	25 kA	36 kA	50 kA	70 kA	25 kA	36 kA	50 kA	70 kA		
380/415 V~		16	25	36	50	25	36	50	70	25	36	50	70	25	36	50	70		
220/240 V~		25	35	50	65	40	60	100	100	40	60	100	100	40	60	100	100		
Breaking capacity (% Icu)		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Characteristic of use																			
Nominal frequency		50/60 Hz																	
Maximum rated operating voltage Ue		690 V (500 V with integrated e.l.c.bs)					690 V (500 V with integrated e.l.c.bs)					690 V (500 V with integrated e.l.c.bs)							
Category of use		A					A					A							
Thermal magnetic adjustment																			
	Thermal	0,8 to 1 In					0,8 to 1 In					-							
	Magnetic	10 In (400 A for 16 A and 25 A sizes)					5 to 10 In					-							
Electronic protection adjustment																			
		-					-					Ir : 0,4 to 1 In I _{sd} : 1,5 to 10 Ir							
Maximum cable cross-section																			
Rigid cable		120 mm²					185 mm²					185 mm²							
Flexible cable		95 mm²					150 mm²					150 mm²							
Copper bar and lug width		18 mm					25 mm ⁽¹⁾					25 mm ⁽¹⁾							
Tightening torque		8 Nm					10 Nm					10 Nm							
Nominal current (In) at 40 °C (A)																			
In (A)		16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250		
Phase		16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250		
N		16	25	40	63	80	100	125	160	100	160	200	250	40	100	160	250		
N/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Magnetic threshold (Im) (A) ⁽²⁾ of DPX thermal magnetic		Fixed								Adjustable									
In (A)		16	25	40	63	80	100	125	160	100	160	200	250	-					
Phase		400	400	400	630	800	1000	1250	1600	125-250	200-400	315-630	500-1000	-					
N		400	400	400	630	800	1000	1250	1600	125-250	200-400	315-630	500-1000	-					
N/2		-	-	-	-	-	-	-	-	-	-	-	-	-					
Endurance (cycles)																			
Electrical		8000					8000					8000							
Mechanical		25000					20000					20000							
Electronic earth leakage module																			
Type		without or integrated					without or integrated					without or integrated							

(1) Copper bars only

(2) Trip current for 50/60 Hz. For direct current, multiply by 1.5

																			
DPX 630 thermal magnetic (p. 86)					DPX 630 electronic release (p. 86 - 87)					DPX 1250 thermal magnetic (p. 89)					DPX 1600 electronic release (p. 89)				
On plate					On plate					On plate					On plate				
36 kA		70 kA ⁽³⁾			36 kA		70 kA ⁽³⁾			36 kA		70 kA ⁽³⁾			50 kA		70 kA ⁽¹⁾⁽³⁾		
36		70			36		70			50		70			50		70		
60		100			60		100			80		100			80		100		
100		75			100		75			100		75			100		75		
690 V~ - 250 V=					690 V~					690 V~					690 V~				
A					A: In 630 A B: In 200 to 400 A					A					B				
0.8 to 1 In					-					0.8 to 1 In					-				
5 to 10 In					-					5 to 10 In					-				
-					Ir: 0.4 to 1 In Tr: 5 to 30 s I _{sd} : 1.5 to 10 Ir T _{sd} : 0 to 0.3 s I ² t = K T _{sd} : 0.01 to 0.3 s					-					Ir: 0.4 to 1 In Tr: 5 to 30 s I _{sd} : 1.5 to 10 Ir T _{sd} : 0 to 0.3 s I ² t = K T _{sd} : 0.01 to 0.3 s				
300 mm ² or 2 x 240 mm ²					300 mm ² or 2 x 240 mm ²					2 or 4 x 240 mm ²					2 or 4 x 240 mm ²				
240 mm ² or 2 x 185 mm ²					240 mm ² or 2 x 185 mm ²					2 or 4 x 185 mm ²					2 or 4 x 185 mm ²				
32 mm					32 mm					50 mm					50 mm				
15 Nm										20 Nm									
250	320	400	500	630	250	400	630	630	800	1000	1250	630	800	1250	1600				
250	320	400	500	630	250	400	630	630	800	1000	1250	630	800	1250	1600				
250	320	400	500	630	0 - 50 - 100 % of phase value			630	800	1000	1250	0 - 50 - 100 % of phase value							
-	250	250	250	320															
250	320	400	500	630	-			800	1000	1250	-								
1250- 2500	1600- 3200	2000- 4000	2500- 5000	3150- 6300	-			4000 - 8000	5000 - 10000	6250 - 12500	-								
1250- 2500	1600- 3200	2000- 4000	2500- 5000	3150- 6300	-						-								
800- 1600	1000- 2000	1250- 2500	1600- 2500	2000- 4000	-						-								
5000					5000					3000					2000				
15000					15000					10000					10000				
downstream e.l.c.bs.					downstream e.l.c.bs.					-					-				

DPX³ 160 thermal magnetic

MCCBs from 16 to 160 A



4 200 40

4 200 50

4 200 70

4 201 57



Dimensions **p. 92**

Technical characteristics and tripping curves **p. 97-99**

Can be mounted on rail 2 or on plate in XL³ cabinets and enclosures

MCCBs for switching, control isolation and protection of low voltage electrical lines

Supplied with cage terminals 70 mm² max. (flexible cable) or 95 mm² max. rigid cable with accessories

Can be fitted with accessories (p. 79, 84)

Conform to IEC 60947-2

Pack	Cat. No.		MCCBs
			Thermal adjustable from 0,8 to 1 In Magnetic fixed at 10 In (fixed at 400 A for In 16 A and 25 A)
	3P	4P	Breaking capacity Icu 25 kA (400 V~) In (A)
1	4 200 40	4 200 50	16
1	4 200 41	4 200 51	25
1	4 200 42	4 200 52	40
1	4 200 43	4 200 53	63
1	4 200 44	4 200 54	80
1	4 200 45	4 200 55	100
1	4 200 46	4 200 56	125
1	4 200 47	4 200 57	160
			Breaking capacity Icu 36 kA (400 V~)
1	4 200 80	4 200 90	16
1	4 200 81	4 200 91	25
1	4 200 82	4 200 92	40
1	4 200 83	4 200 93	63
1	4 200 84	4 200 94	80
1	4 200 85	4 200 95	100
1	4 200 86	4 200 96	125
1	4 200 87	4 200 97	160
			Breaking capacity Icu 50 kA (400 VA)
1	4 201 20	4 201 30	16
1	4 201 21	4 201 31	25
1	4 201 22	4 201 32	40
1	4 201 23	4 201 33	63
1	4 201 24	4 201 34	80
1	4 201 25	4 201 35	100
1	4 201 26	4 201 36	125
1	4 201 27	4 201 37	160

Pack	Cat. No.		MCCBs with LCD display earth leakage module
			Thermal adjustable from 0,8 to 1 In Magnetic fixed at 10 In (fixed at 400 A for In 16 A and 25 A) Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s)
		4P	Breaking capacity Icu 25 kA (400 V~) In (A)
1	4 200 70		16
1	4 200 71		25
1	4 200 72		40
1	4 200 73		63
1	4 200 74		80
1	4 200 75		100
1	4 200 76		125
1	4 200 77		160
			Breaking capacity Icu 36 kA (400 V~)
1	4 201 10		16
1	4 201 11		25
1	4 201 12		40
1	4 201 13		63
1	4 201 14		80
1	4 201 15		100
1	4 201 16		125
1	4 201 17		160
			Breaking capacity Icu 50 kA (400 V~)
1	4 201 50		16
1	4 201 51		25
1	4 201 52		40
1	4 201 53		63
1	4 201 54		80
1	4 201 55		100
1	4 201 56		125
1	4 201 57		160

DPX³ 160 equipment and mounting accessories



4 210 40



4 210 36



More accessories

p. 84

Pack	Cat. No.	Equipment for plug-in version
		A plug-in version DPX ³ is a fixed version DPX ³ mounted on a plug-in base
		Plug-in bases for DPX³ 160
		Front or rear terminal mounting base
1	4 210 40	For DPX ³ 160 - 3P
1	4 210 41	For DPX ³ 160 - 4P with or without earth leakage module
		Connectors for auxiliary contacts
1	4 210 44	Set of connectors
		Padlocks for plug-in base
1	4 210 45	Ronis locking accessory
1	4 210 46	Profalux locking accessory
1	4 210 47	Padlock accessory

		Connection accessories
		Cage terminals
		For Cu/Al cables, 1 x 95 mm ² for flexible cables and 1 x 120 mm ² for rigid cable and bars or lugs 18 mm
1	4 210 26	Set of 3 terminals
1	4 210 27	Set of 4 terminals
		Phase barriers
1	4 210 70	Set of 3 insulated shields
		Extended front terminals
		For copper bars
1	4 210 28	Set of 3 terminals
1	4 210 29	Set of 4 terminals
		Spreaders
		For incoming bars or cable lugs
1	4 210 32	Set of 3 spreaders for DPX ³ 160 3P
1	4 210 33	Set of 4 spreaders for DPX ³ 160 4P
		Rear terminals
		Flat swivel terminals
		Used to convert a fixed version with front terminals to a fixed version with rear terminals
1	4 210 36	Set of 3 rear terminals for DPX ³ 160 3P
1	4 210 37	Set of 4 rear terminals for DPX ³ 160 4P

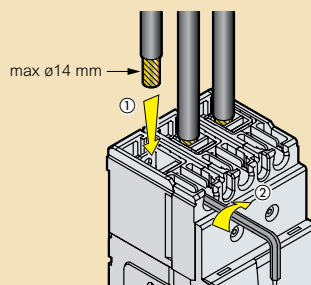
		Sealable terminal shields
		Long terminals
1	4 210 54	For DPX ³ 160 3P
1	4 210 55	For DPX ³ 160 4P
		Short terminals
1	4 210 50	For DPX ³ 160 3P
1	4 210 51	For DPX ³ 160 4P

		Fixing plates
		For fixing DPX ³ 160 on rail or on plate
1	4 210 71	For DPX ³ 160 3P/4P without earth leakage module
1	4 210 73	For DPX ³ 160 4P with earth leakage module
1	4 210 68	For DPX ³ 160 3P/4P with side mounting motor operator

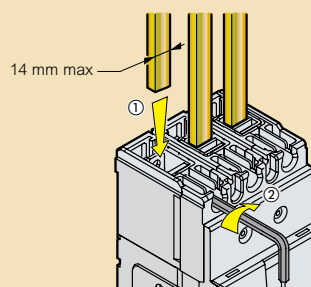
DPX³ 160 Connection

Connection types

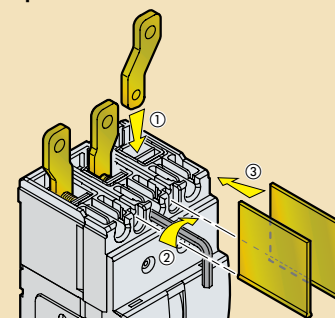
Direct connection



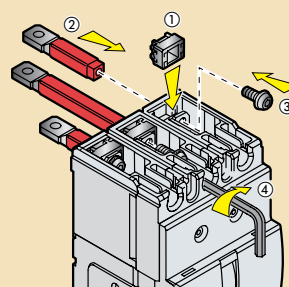
Flexible
1,5 → 70 mm ²
#16 → #2/0 AWG
or
Solid
1,5 → 95 mm ²
#16 → #4/0 AWG



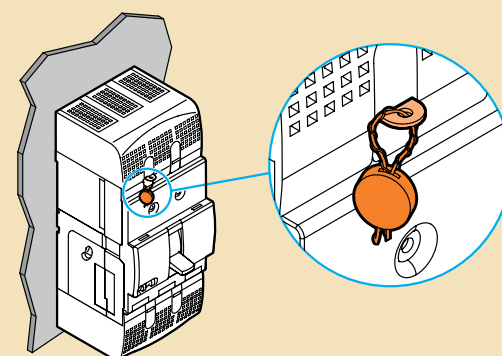
Spreaders



Rear terminals



Sealable terminal shield



DPX³ 250 thermal magnetic

MCCBs from 100 to 250 A



4 202 35



4 202 59



Dimensions **p. 93**

Technical characteristics and tripping curves **p. 97-99**

Can be mounted on rail or on plate in XL³ cabinets and enclosures

MCCBs for switching, control isolation and protection of low voltage electrical lines

Supplied with insulated shields, screw terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories

Can be fitted with accessories (p. 83, 84)

Conform to IEC 60947-2

Pack	Cat. No.		MCCBs
			Thermal adjustable from 0,8 to 1 In Magnetic adjustable from 5 to 10 In
	3P	4P	Breaking capacity Icu 36 kA (400 V~)
			In (A)
1	4 202 35	4 202 45	100
1	4 202 37	4 202 47	160
1	4 202 38	4 202 48	200
1	4 202 39	4 202 49	250
			Breaking capacity Icu 50 kA (400 V~)
1	4 202 65	4 202 75	100
1	4 202 67	4 202 77	160
1	4 202 68	4 202 78	200
1	4 202 69	4 202 79	250
			Breaking capacity Icu 70 kA (400 V~)
1	4 206 05	4 206 15	100
1	4 206 07	4 206 17	160
1	4 206 08	4 206 18	200
1	4 206 09	4 206 19	250

Pack	Cat. No.		MCCBs with LCD display earth leakage module
			Thermal adjustable from 0,8 to 1 In Magnetic adjustable from 5 to 10 In Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s)
		4P	Breaking capacity Icu 36 kA (400 V~)
			In (A)
1	4 202 55		100
1	4 202 57		160
1	4 202 58		200
1	4 202 59		250
			Breaking capacity Icu 50 kA (400 V~)
1	4 202 85		100
1	4 202 87		160
1	4 202 88		200
1	4 202 89		250
			Breaking capacity Icu 70 kA (400 V~)
1	4 206 25		100
1	4 206 27		160
1	4 206 28		200
1	4 206 29		250

DPX³ 250 electronic release

MCCBs from 40 to 250 A



4 203 77



4 203 52



Dimensions **p. 93**

Technical characteristics and tripping curves **p. 97-99**

Can be mounted on rail or on plate in XL³ cabinets and enclosures

MCCBs for switching, control isolation and protection of low voltage electrical lines

Supplied with insulated shields, screw terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories

Can be fitted with accessories and DPX³ common auxiliaires (p. 84)

Conform to IEC 60947-2

Pack	Cat. No.		MCCBs
			Protection against overloads: I _r adjustable from 0.4 to 1 x I _n T _r adjustable from 3 to 15s (p. 99) Protection against short circuits: I _{sd} adjustable from 1.5 to 10 x I _r T _{sd} adjustable from 0 to 0.5s (p. 99)
	3P	4P	Breaking capacity I_{cu} 36 kA (400 V~)
			I _n (A)
1	4 203 32	4 203 42	40
1	4 203 35	4 203 45	100
1	4 203 37	4 203 47	160
1	4 203 39	4 203 49	250
			Breaking capacity I_{cu} 50 kA (400 V~)
1	4 203 62	4 203 72	40
1	4 203 65	4 203 75	100
1	4 203 67	4 203 77	160
1	4 203 69	4 203 79	250
			Breaking capacity I_{cu} 70 kA (400 V~)
1	4 206 35	4 206 45	40
1	4 206 37	4 206 47	100
1	4 206 38	4 206 48	160
1	4 206 39	4 206 49	250

Pack	Cat. No.		MCCBs with LCD display earth leakage module
			Protection against overloads: I _r adjustable from 0.4 to 1 x I _n T _r adjustable from 3 to 15s (p. 99) Protection against short circuits: I _{sd} adjustable from 1.5 to 10 x I _r T _{sd} adjustable from 0 to 0.5s (p. 99) Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s)
		4P	Breaking capacity I_{cu} 36 kA (400 V~)
			I _n (A)
1	4 203 52		40
1	4 203 55		100
1	4 203 57		160
1	4 203 59		250
			Breaking capacity I_{cu} 50 kA (400 V~)
1	4 203 82		40
1	4 203 85		100
1	4 203 87		160
1	4 203 89		250
			Breaking capacity I_{cu} 70 kA (400 V~)
1	4 206 55		40
1	4 206 57		100
1	4 206 58		160
1	4 206 59		250

DPX³ 250 electronic release

MCCBs from 40 to 250 A (continued)



4 204 42



4 204 52



Dimensions **p. 93**

Technical characteristics and tripping curves **p. 97-99**

Can be mounted on rail 2 or on plate in XL³ cabinets and enclosures

MCCBs for switching, control isolation and protection of low voltage electrical lines

Supplied with insulated shields, screw terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories

Can be fitted with accessories and DPX³ common auxiliaires (p. 83, 84)

Conform to IEC 60947-2

Pack	Cat. No.		
			MCCBs with energy metering central unit
			Protection against overloads: I _r adjustable from 0.4 to 1 x I _n T _r adjustable from 3 to 15s (p. 99) Protection against short circuits: I _{sd} adjustable from 1.5 to 10 x I _r T _{sd} adjustable from 0 to 0.5s (p. 99) Integrated energy metering central unit with LCD screen; currents, voltage, frequency, power, energy and harmonics
			Breaking capacity I_{cu} 36 kA (400 V~)
	3P	4P	I _n (A)
1	4 204 32	4 204 42	40
1	4 204 35	4 204 45	100
1	4 204 37	4 204 47	160
1	4 204 39	4 204 49	250
			Breaking capacity I_{cu} 50 kA (400 V~)
1	4 204 62	4 204 72	40
1	4 204 65	4 204 75	100
1	4 204 67	4 204 77	160
1	4 204 69	4 204 79	250
			Breaking capacity I_{cu} 70 kA (400 V~)
1	4 206 65	4 206 75	40
1	4 206 67	4 206 77	100
1	4 206 68	4 206 78	160
1	4 206 69	4 206 79	250

Pack	Cat. No.		
			MCCBs with energy metering central unit and LCD display earth leakage module
			Protection against overloads: I _r adjustable from 0.4 to 1 x I _n T _r adjustable from 3 to 15s (p. 99) Protection against short circuits: I _{sd} adjustable from 1.5 to 10 x I _r T _{sd} adjustable from 0 to 0.5s (p. 99) Equipped with earth leakage module with LCD screen Adjustable sensitivity: 0.03 - 0.3 - 1 - 3 A Adjustable tripping: 0 - 0.3 - 1 - 3s (with 0.03 A possible only 0s) Integrated energy metering central unit with LCD screen; currents, voltage, frequency, power, energy and harmonics
			Breaking capacity I_{cu} 36 kA (400 V~)
		4P	I _n (A)
1	4 204 52		40
1	4 204 55		100
1	4 204 57		160
1	4 204 59		250
			Breaking capacity I_{cu} 50 kA (400 V~)
1	4 204 82		40
1	4 204 85		100
1	4 204 87		160
1	4 204 89		250
			Breaking capacity I_{cu} 70 kA (400 V~)
1	4 206 85		40
1	4 206 87		100
1	4 206 88		160
1	4 206 89		250

DPX³ 250 electronic release

MCCBs from 40 to 250 A (continued)



4 205 49



More accessories

p. 84

DPX³ 250 equipment and mounting accessories



4 210 44



4 210 31



4 210 72



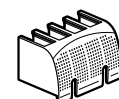
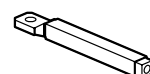
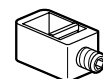
Dimensions p. 93

Technical characteristics and tripping curves p. 97-99

Can be mounted on rail or on plate in XL³ cabinets and enclosures
MCCBs for switching, control isolation and protection of low voltage electrical lines
Supplied with insulated shields, screw terminals 120 mm² max. (flexible cable) or 150 mm² max. rigid cable with accessories
Can be fitted with accessories and DPX³ common auxiliaries (p. 84)
Conform to IEC 60947-2

Pack	Cat. No.		Electronic release MCCBs with ground fault
	3P	4P	
			Protection against overloads: I _r adjustable from 0.4 to 1 x I _n T _r adjustable from 3 to 15s (p. 99) Protection against short circuits: I _{sd} adjustable from 1.5 to 10 x I _r T _{sd} adjustable from 0 to 0.5s (p. 99) Protection against earth fault: I _g adjustable: from 0.2 to 1 x I _n and OFF position T _g adjustable from 0.1 to 1s (p. 97)
			Breaking capacity I_{cu} 36 kA (400 V_~)
			I _n (A)
1	4 205 22	4 205 32	40
1	4 205 25	4 205 35	100
1	4 205 27	4 205 37	160
1	4 205 29	4 205 39	250
			Breaking capacity I_{cu} 50 kA (400 V_~)
1	4 205 42	4 205 52	40
1	4 205 45	4 205 55	100
1	4 205 47	4 205 57	160
1	4 205 49	4 205 59	250
			Breaking capacity I_{cu} 70 kA (400 V_~)
1	4 206 92	420 702	40
1	4 206 95	420 705	100
1	4 206 97	420 707	160
1	4 206 99	420 709	250

Pack	Cat. No.	Equipment for plug-in version
		A plug-in version DPX ³ is a fixed version DPX ³ mounted on a plug-in base
		Plug-in bases for DPX³ 250
		Front or rear terminal mounting base
1	4 210 42	For DPX ³ 250 - 3P
1	4 210 43	For DPX ³ 250 - 4P with or without earth leakage module
		Connectors for auxiliary contacts
1	4 210 44	Set of connectors
		Padlocks for plug-in base
1	4 210 45	Ronis locking accessory
1	4 210 46	Profalux locking accessory
1	4 210 47	Padlock accessory
		Connection accessories
		Cage terminals
		For Cu/Al cables, 1 x 150 mm ² for flexible cables and 1 x 180 mm ² for rigid cable and bars or lugs 25 x 8 mm
1	4 210 30	Set of 3 terminals
1	4 210 31	Set of 4 terminals
		Phase barriers
1	4 210 70	Set of 3 insulated shields
		Spreaders
		For incoming bars or cable lugs
1	4 210 34	Set of 3 spreaders for DPX ³ 250 3P
1	4 210 35	Set of 4 spreaders for DPX ³ 250 4P
		Rear terminals
		Flat swivel terminals Used to convert a fixed version with front terminals to a fixed version with rear terminals
1	4 210 38	Set of 3 rear terminals for DPX ³ 250 3P
1	4 210 39	Set of 4 rear terminals for DPX ³ 250 4P
		Sealable terminal shields
		Long terminals
1	4 210 56	For DPX ³ 250 3P
1	4 210 57	For DPX ³ 250 4P
		Short terminals
1	4 210 52	For DPX ³ 250 3P
1	4 210 53	For DPX ³ 250 4P
		Fixing plates
		For fixing DPX ³ 250 on 2 rail or on plate
1	4 210 72	For DPX ³ 250 3P/4P without earth leakage module
1	4 210 74	For DPX ³ 250 4P with earth leakage module
1	4 210 69	For DPX ³ 250 3P/4P with side mounting motor operator



DPX³ 160 and 250 common auxiliaries and accessories



4 210 00



4 210 10



4 210 11



4 210 16



4 210 22



4 210 58

Pack	Cat. No.	Mechanical interlock plate
		Plate for mounting and interlocking of 2 DPX ³ 160 or 2 DPX ³ 250 or 1 DPX ³ 160 and 1 DPX ³ 250
1	4 210 58	For fixed version
1	4 210 59	For plug-in and draw-out version
Rotary handles		
Direct on DPX		
1	4 210 00	Standard handle for thermal magnetic DPX ³ without earth leakage module
1	4 210 01	Standard handle for electronic DPX ³ and/or with earth leakage module
1	4 210 02	Handle for emergency use for thermal magnetic DPX ³ without earth leakage module
1	4 210 03	Handle for emergency use for electronic DPX ³ and/or with earth leakage module
Vari-depth handles		
For all version of DPX ³		
1	4 210 04	Standard handle
1	4 210 05	Handle for emergency use
Locking accessories		
1	4 210 06	Ronis for direct handle
1	4 210 07	Profalux for direct handle
1	4 210 08	Ronis for vari-depth handle
1	4 210 09	Profalux for vari-depth handle

Motor-driven handles		
Motor operators 24 to 230 V~/=		
1	4 210 60	Side motor operator
1	4 210 61	Front motor operator
Locking accessories		
1	4 210 62	Ronis key barrel for front motor operator
1	4 210 63	Profalux key barrel for front motor operator
1	4 210 64	Padlock for front motor operator
1	4 210 65	Ronis key barrel for side motor operator
1	4 210 66	Profalux key barrel for side motor operator
1	4 210 67	Padlock for side motor operator

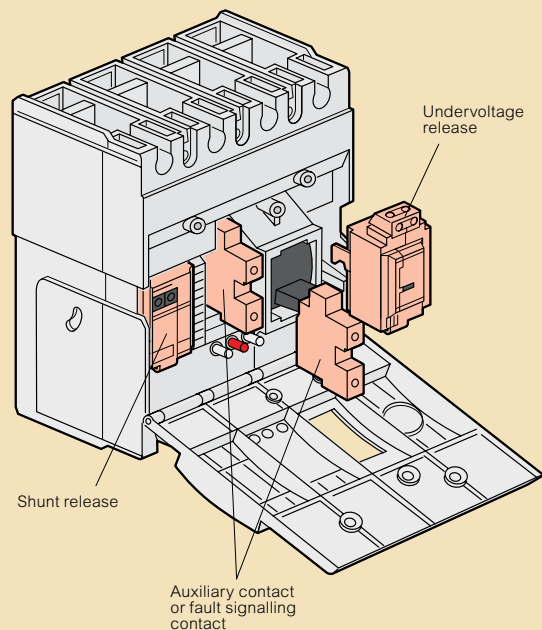
Pack	Cat. No.	Auxiliaries
Auxiliary contacts		
1	4 210 10	1 N/C + 1 N/O auxiliary contact for rotary handles
1	4 210 11	Auxiliary contact or fault signalling contact
1	4 210 48	Signalling contact plugged-in / drawn-out (for DPX ³ plug-in version)
Shunt releases		
1	4 210 12	12 V~/=
1	4 210 13	24 V~/=
1	4 210 14	48 V~/=
1	4 210 15	110-130 V~/=
1	4 210 16	200-277 V~/=
1	4 210 17	380-480 V~/=
Undervoltage releases		
1	4 210 18	12 V~/=
1	4 210 19	24 V~/=
1	4 210 20	48 V~/=
1	4 210 21	110-130 V~/=
1	4 210 22	200-240 V~/=
1	4 210 23	277 V~
1	4 210 24	380-415 V~
1	4 210 25	440-480 V~

Locking accessory		
1	4 210 49	Padlock for locking in "open" position

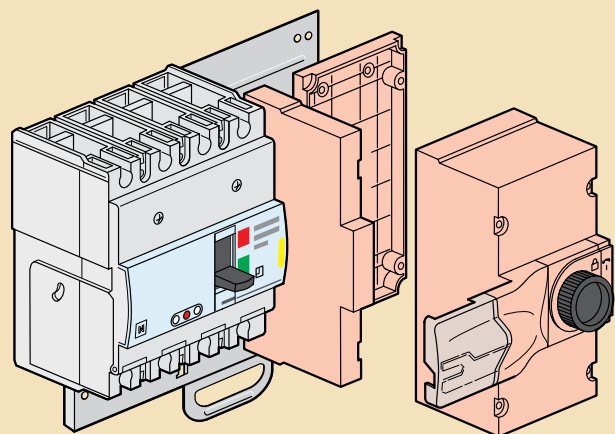
Communication interface		
1	4 210 75	Modbus

DPX³ 160/250

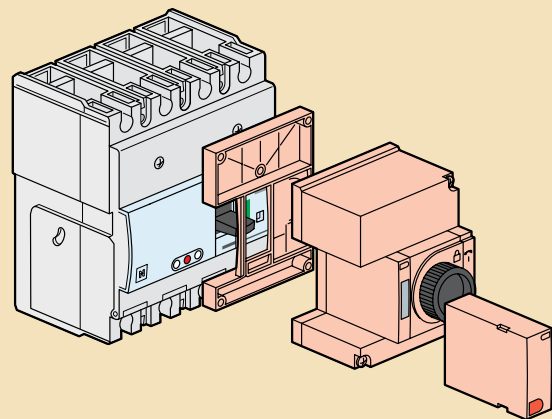
■ Auxiliaries mounting



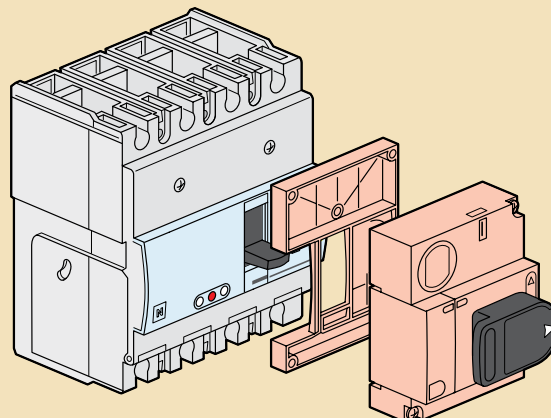
■ Side mounting motor-driven handle



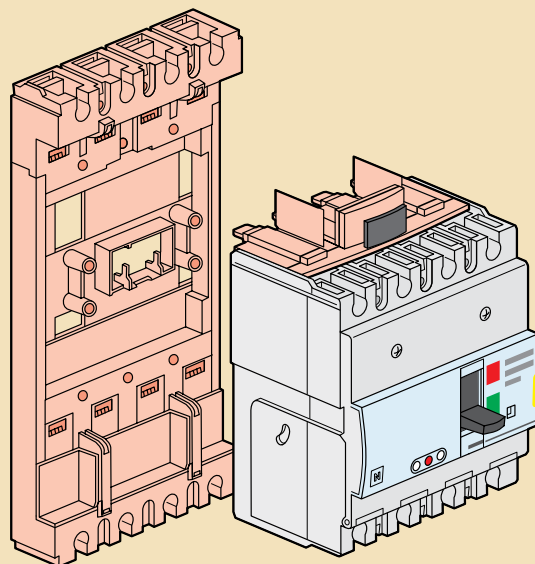
■ Front mounting motor-driven handle



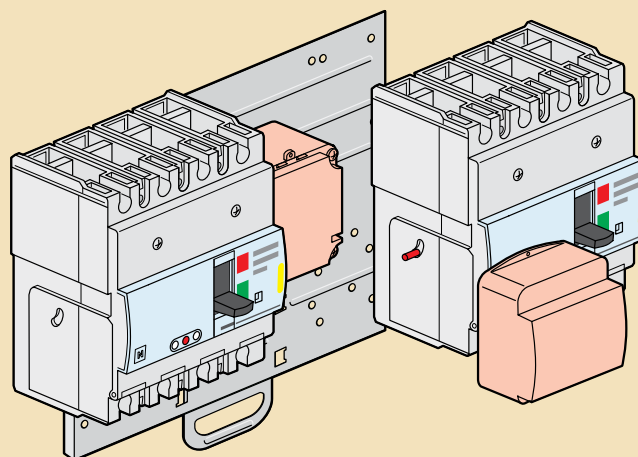
■ Direct rotary handle



■ Plug-in version



■ Transfer switch



DPX™ 630

Thermal magnetic and electronic release MCCBs from 250 to 630 A



255 40



255 38



Dimensions **p. 95**
Electrical characteristics **p. 100**

Moulded case MCCBs for switching, control isolation and protection of low voltage electrical lines
Can be fitted with auxiliaries (p. 91)

Can be used with earth leakage modules or with residual current relays (p. 87)

Supplied complete with:

- connection plates for bars
- terminal shields

Conform to IEC 60947-2 - Sealable adjustment

Pack	Cat. No.		DPX 630 thermal magnetic
			Thermal adjustable from 0.8 to 1 In Magnetic adjustable from 5 to 10 In
			DPX 630 36 kA Breaking capacity Icu 36 kA (400 V~)
	3P	4P	In
1	255 21	255 36	250 A
1	255 22	255 37	320 A
1	255 23	255 38	400 A
1	255 25	255 39	500 A
1	255 24	255 40	630 A
			DPX-H 630 70 kA Breaking capacity Icu 70 kA (400 V~)
	3P	4P	In
1	255 43	255 58	400 A
1	255 45	255 59	500 A
1	255 44	255 60	630 A

Pack	Cat. No.		DPX 630 electronic release S1
			Adjustment of Ir, Im, (p. 87) Instantaneous protection If = 5 kA Green indicator lamp Connector for test unit Dynamic selectivity 4P version: ajustement of neutral on front panel
			DPX 630 36 kA Breaking capacity Icu 36 kA (400 V~)
	3P	4P	In
1	256 02	256 06	400 A
1	256 03	256 07	630 A
			DPX-H 630 70 kA Breaking capacity Icu 70 kA (400 V~)
	3P	4P	In
1	256 10	256 14	400 A
1	256 11	256 15	630 A

DPX™ 630

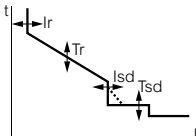
Thermal magnetic and electronic release MCCBs
from 250 to 630 A (continued)



256 35



260 63

Pack	Cat. No.		Electronic release S2 MCCBs - fixed version
	3P	4P	
			Adjustment of I_r , I_{sd} , T_r , T_{sd} (opposite) Instantaneous protection $I_f = 5$ kA Green indicator lamp Connector for test unit Logic and dynamic selectivity 4P version: adjustment of neutral on front panel
			
			Breaking capacity I_{cu} 36 kA (400 V~)
			I_n (A)
1	256 26	256 30	250
1	256 27	256 31	400
1	256 28	256 32	630
			Breaking capacity I_{cu} 70 kA (400 V~)
			I_n (A)
1	256 35	256 39	400
1	256 36	256 40	630
			Breaking capacity I_{cu} 100 kA (400 V~)
			I_n (A)
1	256 43	256 47	400
1	256 44		630

Earth leakage modules

Can be fitted onto DPX/DPX-I 630
Adjustable, sealable sensitivity:
0.03 - 0.3 - 1 - 3 A
Adjustable time delay: 0 - 0.3 - 1 - 3 s
Test push-button
Reset push-button
Remote earth fault signalling contact
Switch for mechanical tests (installation insulation test)
Mounted underneath
230-500 V~

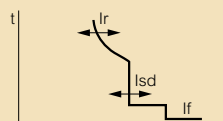
LED version

	4P	I_n
1	260 63	400 A
1	260 67	630 A

DPX™ 630

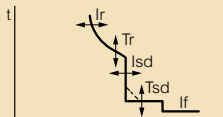
■ Performance data

S1 - Adjustment of I_r , I_{sd}



- Long delay protection against overloads with an adjustable threshold based on the rms value of the current:
 $I_r = 0.4 - 0.5 - 0.7 - 0.8 - 0.95 - 1 \times I_n$ (8 steps)
 $T_r = 5$ s (fixed at 6 tr)
- Short delay protection against short-circuits with an adjustable I_m threshold:
 $I_{sd} = 1.5 - 2 - 3 - 4 - 5 - 6 - 8 - 10 \times I_r$ (8 steps)
 $T_{sd} = 0.05$ s (fixed)
- Instantaneous protection if with fixed threshold: $I_f = 5$ kA

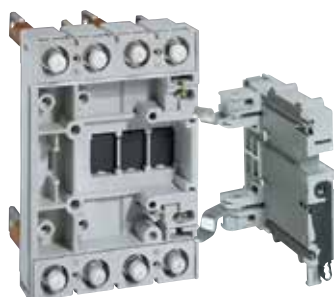
S2 - Adjustment of I_r , T_r , I_{sd} , T_{sd}



- Long delay protection against overloads with an adjustable threshold based on the rms value of the current:
 $I_r = 0.4 - 0.5 - 0.7 - 0.8 - 0.9 - 0.95 - 1 \times I_n$ (8 steps)
 $T_r = 5 - 10 - 20 - 30$ s (at 6 I_r) (4 steps)
- Short delay protection against short-circuits with an adjustable I_{sd} threshold:
 $I_{sd} = 1.5 - 2 - 3 - 4 - 5 - 6 - 8 - 10 \times I_r$ (8 steps)
 $T_{sd} = 0 - 0.1 - 0.2 - 0.3$ s (4 steps)
 $T_{sd} = 0.01 - 0.1 - 0.2 - 0.3$ s at $12 \times I_r$ ($I_2 t$ constant) (4 steps)
- Instantaneous protection against short-circuits with fixed threshold: $I_f = 5$ kA

DPX™ 630

Equipment and accessories



265 56



265 66



262 50



262 51



262 48

Pack	Cat. No.	Plug-in version
	3P	A DPX plug-in is a DPX fitted with tulip contacts mounted on a base with connections
1	265 50	Tulip contacts Set of tulip contacts (supplied with an incoming/outgoing protective cover)
		Bases for DPX only
1	265 52	Accept DPX/DPX-I fitted with tulip contacts
1	265 54	Front terminal mounting base
1	265 56	Rear terminal mounting base with threaded rod
1	263 68	Flat rear terminal mounting base
1	263 99	Set of 2 extractor handle
1	263 99	Set of connectors (8-pin)

	3P	Draw-out version A DPX draw-out version is a plug-in DPX fitted with a "Debro-lift" mechanism and handle which can be used to withdraw the DPX while keeping it on its base
		"Debro-lift" mechanism
1	265 66	Supplied with a rigid slide and handle for drawing-out
		For DPX base only (without earth leakage module)
		Key-lock for "Debro-lift" mechanism
1	265 76	Enable locking of DPX in drawn-out position
1	265 78	1 key Ronis for DPX only
1	265 78	1 key Ronis for motorised DPX or with rotary handle
		Accessories for "Debro-lift" mechanism
1	265 75	Isolated handle for drawing-out
1	265 74	Signalling contact (plugged-in/drawn-out)

		Mechanical interlock plate
1	264 09	Plate for MCCB or trip-free switch fixed version
1	264 04	Plate for MCCB or trip-free switch plug-in and draw-out version

Pack	Cat. No.	Rotary handles
1	262 41	Direct on DPX Standard (grey)
		Vari-depth handle IP 55 mechanism Comprising: connection rod, bracket, self-adhesive drilling template, mounting accessories and door lock mechanism
1	262 81	Standard (grey)
1	262 82	For emergency use (red/yellow) can be fitted on Cat. No. 262 81 or 262 41
		Locking accessories
1	262 92	Eurolocks for vari-depth handle
1	262 93	Profalux for vari-depth handle
1	262 94	Ronis for vari-depth handle
1	262 25	Eurolocks for direct handle

		Motor-driven handles
		Front operated
1	261 40	24 V~/~
1	261 44	230 V~
		Accessory
1	261 59	Ronis locking accessory

		Accessories
		Phase barriers
1	262 30	Set of 3
	3P 4P	
1	262 44 262 45	Sealable phase barriers Set of 2
		Padlock
1	262 40	For locking in "OPEN" position
		Cage terminals
1	262 93	Set of 4 terminals for cable 300 mm² max. (rigid) or 240 mm² max. (flexible)
1	262 50	Set of 4 high-capacity terminals for cable 2 x 240 mm² (rigid) or 2 x 185 mm² (flexible)
1	262 51	
		Extended front terminals
1	262 47	Set of 4
	3P 4P	
1	262 48 262 49	Spreaders Set of incoming or outgoing spreaders
		Rear terminals
		Used to convert the fixed version with front terminals to the fixed version with rear terminals
1	263 50 263 51	Set of incoming or outgoing swivel terminals
1	263 52	Set of incoming or outgoing flat terminals

DPX™ 1250 and 1600

Thermal magnetic and electronic release MCCBs from 800 to 1600 A



258 16



258 23



Dimensions **p. 96**
Electrical characteristics **p. 100**

Moulded case circuit breakers for switching, control isolation and protection of low voltage electrical lines

Can be fitted with auxiliaries (integrated terminal blocks)

Can be used with earth leakage modules or with residual current relays

Supplied complete with:

- connection plates for bars
- terminal shields

Conform to IEC 60947-2

Fixed version - Sealable adjustment

Pack	Cat. No.		Thermal magnetic MCCBs
			Thermal adjustable from: 0.8 to 1 In Magnetic adjustable from: 5 to 10 In
			Breaking capacity Icu 50 kA (400 V~)
	3P	4P	In (A)
1	258 02	258 09 ⁽¹⁾	800
1	258 03	258 10 ⁽¹⁾	1000
1	258 04	258 11 ⁽¹⁾	1250
			Breaking capacity Icu 70 kA (400 V~)
			In (A)
1	258 16	258 23 ⁽¹⁾	800
1	258 17	258 24 ⁽¹⁾	1000
1	258 18	258 25 ⁽¹⁾	1250

Pack	Cat. No.		Electronic release S1 MCCBs
			Adjustment of Ir, Isd Instantaneous protection If = 20 kA (for In 1600 A) Indicator lamp Minimum current for indicator lamp operation (20 % In): green: normal; fixed red: $I \geq 0.9 I_r$; flashing red: $I \geq 1.05 I_r$ Connector for test unit Dynamic selectivity
			Breaking capacity Icu 50 kA (400 V~)
	3P	4P	In (A)
1	257 02	257 06 ⁽²⁾	800
1	257 03	257 07 ⁽²⁾	1250
1	257 04	257 08 ⁽²⁾	1600
			Breaking capacity Icu 70 kA (400 V~)
			In (A)
1	257 10	257 14 ⁽²⁾	800
1	257 11	257 15 ⁽²⁾	1250
1	257 12	257 16 ⁽²⁾	1600

Pack	Cat. No.		Electronic release S2 MCCBs
			Adjustment of Ir, Isd, Tr, Tsd Instantaneous protection If = 20 kA (for In 1600 A) Indicator lamp Minimum current for indicator lamp operation (20 % In): green: normal; fixed red: $I \geq 0.9 I_r$; flashing red: $I \geq 1.05 I_r$ Connector for test unit Logic and dynamic selectivity
			Breaking capacity Icu 50 kA (400 V~)
	3P	4P	In (A)
1	257 26	257 30 ⁽²⁾	800
1	257 27	257 31 ⁽²⁾	1250
1	257 28	257 32 ⁽²⁾	1600
			Breaking capacity Icu 70 kA (400 V~)
			In (A)
1	257 34	257 38 ⁽²⁾	800
1	257 35	257 39 ⁽²⁾	1250
1	257 36	257 40 ⁽²⁾	1600

Note: For DPX-L 1250 100 kA and Sg electronic release version, please consult us.

(1) Neutral without protection

(2) Neutral settings 0 - 0.5 - 1 N (0 - 50% - 100% Neutral)

DPX™ 1600

Equipment and accessories



265 84 (supplied assembled)



262 60



262 70



262 67 + 262 68

Pack	Cat. No.		Draw-out version
			A DPX draw-out version is a plug-in DPX fitted with a "Debro-lift" mechanism handle which can be used to withdraw the DPX while keeping it on its base
			Draw-out base
			Base for DPX 1600 supplied with "Debro-lift" assembled a rigid slide and handle for drawing-out
	3P	4P	
1	265 82	265 83	Front terminals
1	265 84	265 85	Rear terminals
			Key lock for "Debro-lift" mechanism
			Enable locking of DPX in drawn-out position
1	265 76		One key Ronis for DPX only
1	265 80		Two key Ronis (one key supplied) for motorised DPX or with rotary handle
			Accessories for "Debro-lift" mechanism
1	265 75		Isolated handle for drawing-out
1	265 74		Signalling contact (plugged-in/drawn-out)

1	264 10	Mechanical interlock plate
		Plate for MCCBs or trip-free switch fixed version
1	264 05	Plate for MCCBs or trip-free switch plug-in and draw-out version

		Rotary handles
		Direct on DPX
1	262 61	Standard (black)
		Vari-depth handle IP 55 mechanism
		Comprising: connection rod, bracket, self-adhesive drilling template, mounting accessories and door lock mechanism
1	262 83	Standard (black)
1	262 84	For emergency use (red/yellow)
		Locking accessories
1	262 92	Eurolocks for vari-depth handle
1	262 93	Profalux for vari-depth handle
1	262 94	Ronis for vari-depth handle
1	262 25	Eurolocks for direct handle

Pack	Cat. No.		Motor-driven handles
			Factory assembled
			Front operated
1	261 54		230 V~
			Customer assembled
			for DPX1600 up to 1250 A
			Front operated
1	261 24		24 V~/=
1	261 25		48 V~/=
1	261 23		230 V~/=
			Customer assembled
			for DPX1600 In = 1600 A
1	261 19		24 V~/=
1	261 28		48 V~/=
1	261 27		230 V~/=
			Locking accessory for motor-driven handles
1	261 59		Ronis locking accessory
1	261 58		Profalux locking accessory

		Accessories
		Phase barriers
		Used to isolate the connections between each pole
1	262 66	Set of 3
		Sealable phase barriers
1	262 64 262 65	Set of 2
		Padlock
1	262 60	For locking in "open" position
		Cage terminals
1	262 69	Set of 1 terminal for cables without lug
		2 x 240 mm ² for rigid cable or
		2 x 185 mm ² for flexible cable
1	262 70	Set of 1 high-capacity terminal for cables without lug
		4 x 240 mm ² for rigid cable
		4 x 185 mm ² for flexible cable
		Extended front terminals
		Set of 4
1	262 67	Short terminals for 630 - 1250 A (2 bars max. per pole)
1	262 68	Long terminals for 1600 A (3 bars max. per pole)
		Spreaders
1	262 73 262 74	Set of incoming or outgoing spreaders
		Rear terminals
		Used to convert the fixed version with front terminals to the fixed version with rear terminals
		Set of incoming or outgoing rear terminals
1	263 80 263 82	Short terminals
1	263 81	Long terminals

DPX™ auxiliaries

For DPX, DPX-I and DPX-IS



261 85



261 93

Pack	Cat. No.	Auxiliary contact or fault signal
1	261 60	For signalling the state of the contacts or opening of the MCCB on a fault For DPX/DPX-I/DPX-IS Changeover switch 3 A - 240 V~

			Releases	
			Allow remote tripping of a DPX	
			Shunt releases	
			For DPX-IS/DPX-I and DPX	
			Shunt inrush power 300 VA	
1	261 64		Coil voltage 24 V~/=	
1	261 65		Coil voltage 48 V~/=	
1	261 66		Coil voltage 110 V~/=	
1	261 67		Coil voltage 230 V~/=	
1	261 68		Coil voltage 400 V~/=	
	For DPX-IS 250, 630	For DPX 630 to 1600 DPX-IS 1600	Undervoltage releases	
1	261 70	261 80	Coil voltage 24 V=	
1	261 71	261 81	Coil voltage 24 V~	
1	261 72		Coil voltage 48 V=	
1	261 73	261 83	Coil voltage 230 V~	
1	261 74	261 84	Coil voltage 400 V~	
			Time-lag (ms) undervoltage releases	
			Allow remote tripping of a DPX	
			Prevent false tripping in the event of AC supply microbreaks	
			Require a time-lag module connected to the undervoltage releases below	
				Number of modules
1	261 90	Time-lag modules 230 V~	3	
1	261 91	Time-lag modules 400 V~	3	
1	261 75	Undervoltage releases For DPX-IS 250, 630		
1	261 85	Undervoltage releases For DPX 250 to 1600 and DPX-IS 1600		

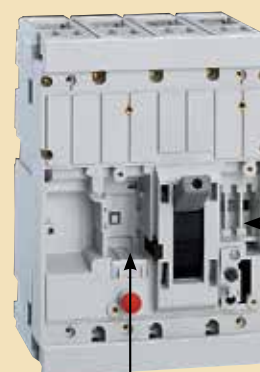
Automation control unit

For setting the conditions for switching over supply, generator on loft status acquisition for DMX and DPX circuit-breakers, open/closed
Power supply: 230 V~ and 12-24-48 V=
Connection by plug-in terminals
Standard unit
Communicating unit, enabling data transmission (RS 485 port)

1	261 93	Standard unit
1	261 94	Communicating unit, enabling data transmission (RS 485 port)

DPX™ auxiliaries

For DPX, DPX-I and DPX-IS



Auxiliary contact or fault signal

A single Cat. No. 261 60 auxiliary contact or fault signal



Undervoltage releases



Shunt releases



Time-lag undervoltage releases

Max. number of contacts per DPX-IS device

	Device	Auxiliary contact			Shunt release or undervoltage release
		AC	EBAC	FS	
Without release	DPX-IS 250	1	2	–	–
With release	DPX-IS 250	1	1	1	1

AC = auxiliary contact
EBAC = "early" auxiliary contact
FS = break on trip contact

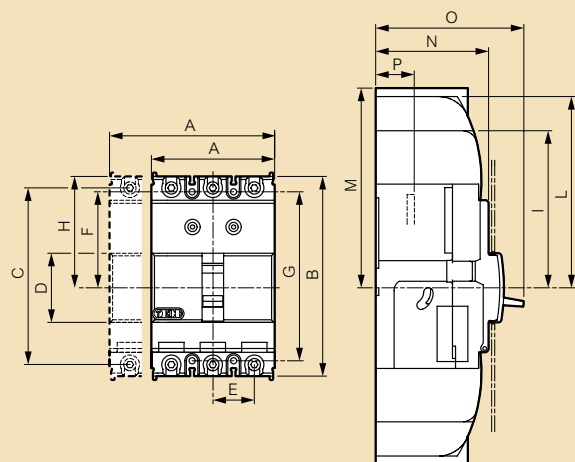
Max. number of contacts per DPX device

Device	Auxiliary contact		Shunt release or undervoltage release
	AC	FS	
DPX 250	2	1	1
DPX 630	2	2	1
DPX 1600	3	1	1

DPX³ 160 thermal magnetic

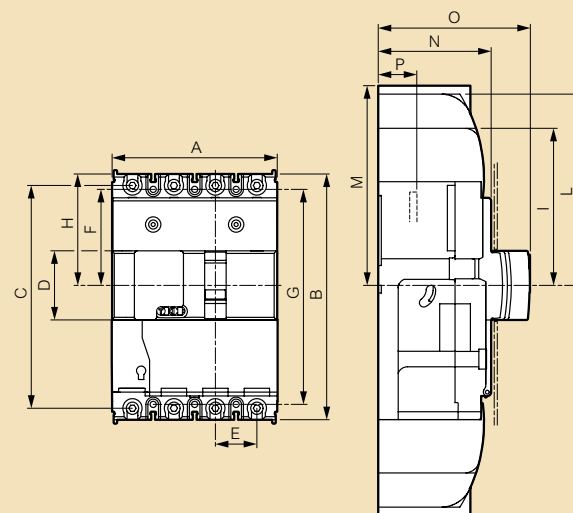
■ Dimensions

Fixed version

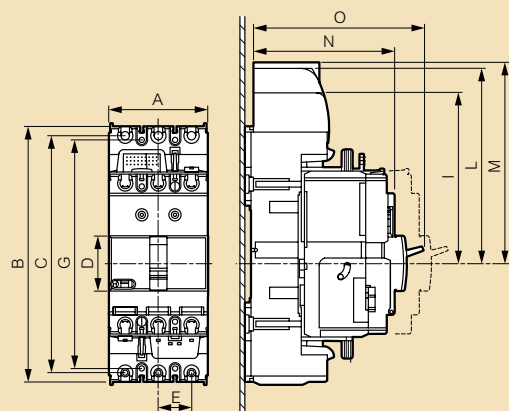


	A	B	C	D	E	F	G	H	I	L	M	N	O	P
3P	81	130	115	45	27	62,5	110	72,5	102,5	125	-	74	100	18
4P	108	130	115	45	27	62,5	110	72,5	102,5	125	-	74	100	18
e.l.c.bs	108	160	145	45	27	62,5	140	72,5	102,5	125	-	74	100	18

Fixed version with earth leakage module

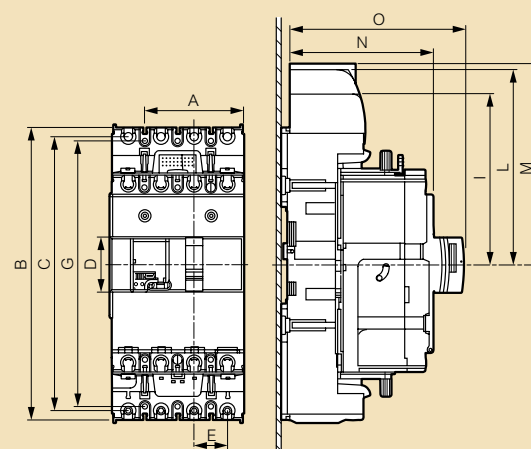


Plug-in version



	A	B	C	D	E	F	G	H	I	L	M	N	O	P
3P	81	208	193	45	27	100,5	186	111,5	141,5	164	-	122	148	-
4P	108	238	223	45	27	100,5	216	111,5	141,5	164	-	122	148	-
e.l.c.bs	108	230	223	45	27	100,5	216	111,5	141,5	164	-	122	148	-

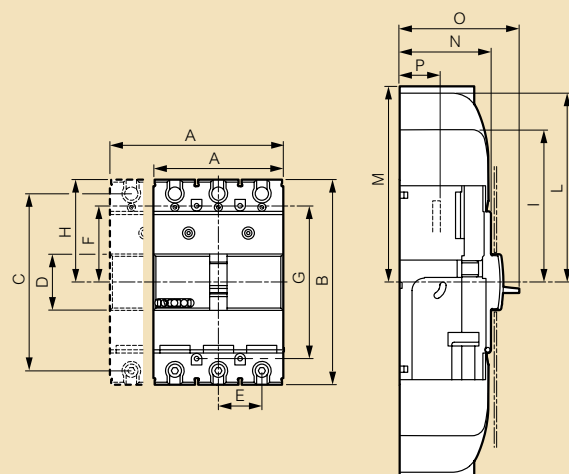
Plug-in version with earth leakage module



DPX³ 250 thermal magnetic and electronic release

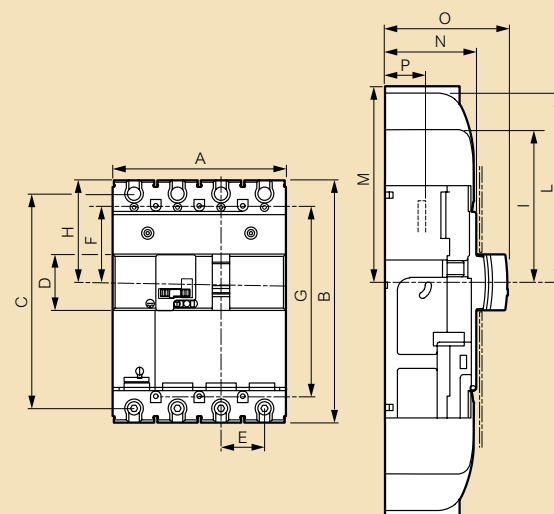
■ Dimensions

Fixed version

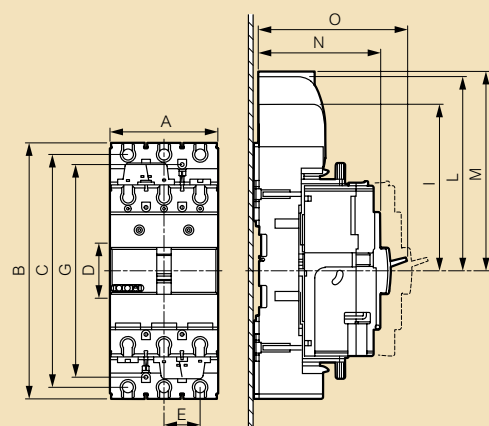


	A	B	C	D	E	F	G	H	I	L	M	N	O	P
3P	105	165	142,5	45	35	61,5	123	82,5	112,5	150	-	74	100	18
4P	140	165	142,5	45	35	61,5	123	82,5	112,5	150	-	74	100	18
e.l.c.bs	140	195	172,5	45	35	61,5	153	82,5	112,5	150	-	74	100	18

Fixed version with earth leakage module

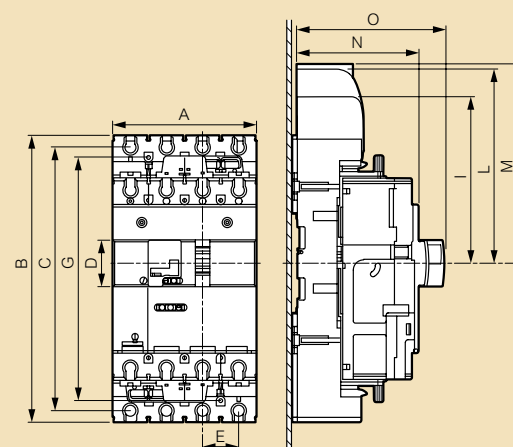


Plug-in version



	A	B	C	D	E	F	G	H	I	L	M	N	P
3P	105	248	225,5	45	35	103	206	150	180	217,5	-	122	148
4P	140	278	225,5	45	35	103	236	150	180	217,5	-	122	148
e.l.c.bs	140	278	225,5	45	35	103	236	150	180	217,5	-	122	148

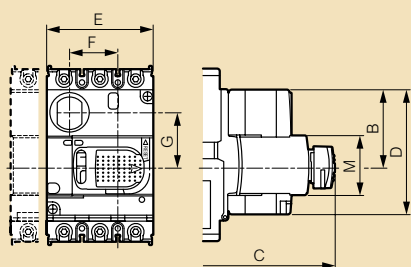
Plug-in version with earth leakage module



DPX³ 160/250 accessories

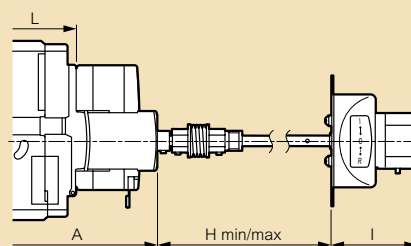
■ Dimensions

Direct rotary handles Cat. No. 4 210 00/001/002/003

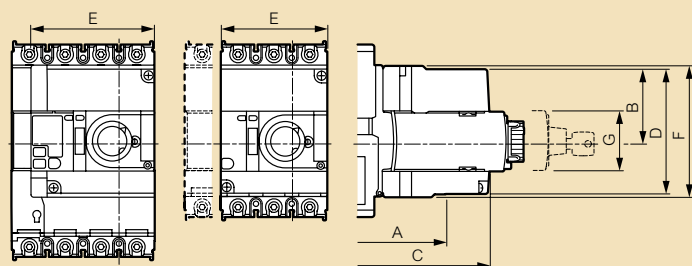


	A	B	C	D	E	F	G	H min	H max	I	L	M
160	122	57	155	94	80,5	36,5	41,7	132	361	62	74	45
160 with e.l.c.bs	122	57	155	94	93	36,5	41,7	132	361	62	74	45
250	122	57	155	94	80,5	40,5	41,7	132	361	62	74	45
250 with e.l.c.bs	122	57	155	94	93	40,5	41,7	132	361	62	74	45
250 electronic release	122	57	155	94	93	40,5	41,7	132	361	62	74	45
250 electronic release with e.l.c.bs	122	57	155	94	93	40,5	41,7	132	361	62	74	45

Vari-depth rotary handles Cat. No. 4 210 04/005

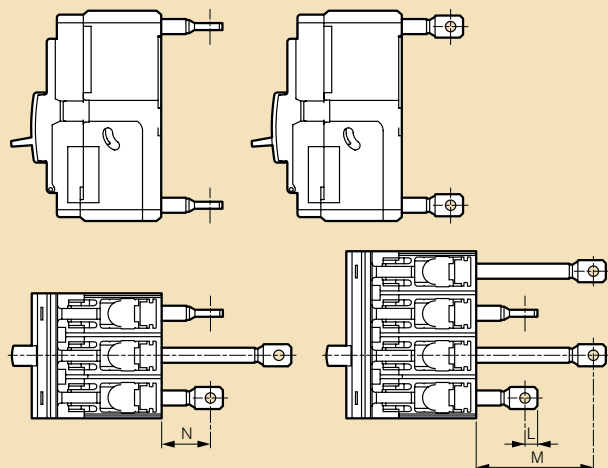


Front motor-driven handle Cat. No. 4 210 61

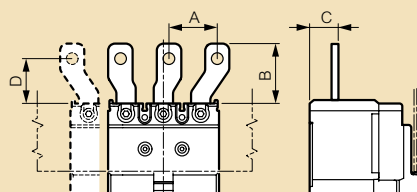


	A	B	C	D	E	F	G	H
160	125	54,5	154	94	80,5	99	45	74
160 with e.l.c.bs	125	54,5	154	94	93	99	45	74
250	125	54,5	154	94	80,5	99	45	74
250 with e.l.c.bs	125	54,5	154	94	93	99	45	74
250 electronic release	125	54,5	154	94	93	99	45	74
250 electronic release with e.l.c.bs	125	54,5	154	94	93	99	45	74

Rear terminals Cat. No. 4 210 36/037/038/039



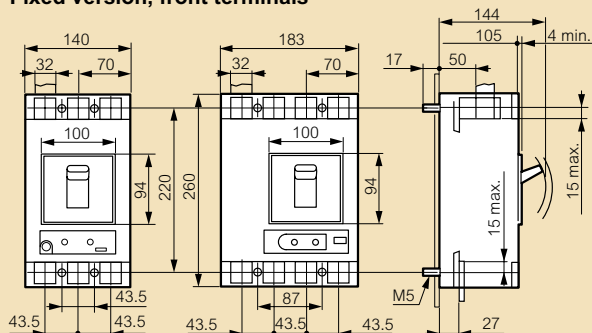
Incoming spreaders Cat. No. 4 210 32/033/034/035



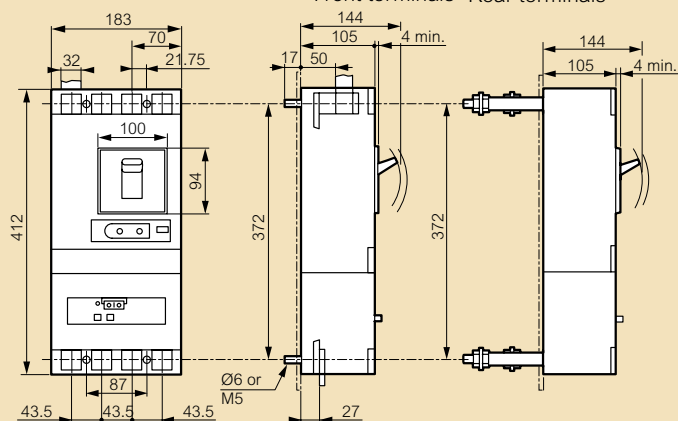
	A	B	C	D
160	35	41	23	33
160 with e.l.c.bs	35	41	23	33
250	48,5	55	23	39
250 with e.l.c.bs	48,5	55	23	39

■ Dimensions

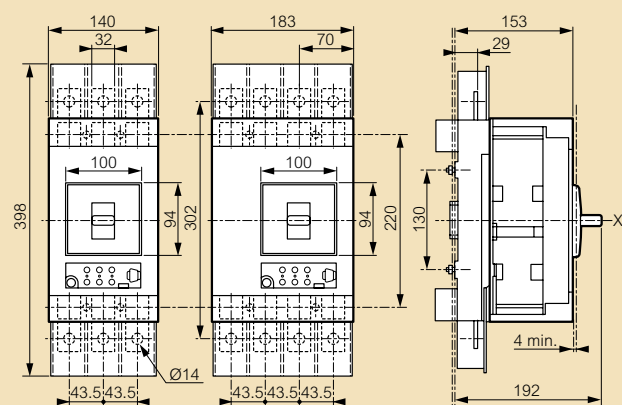
Fixed version, front terminals



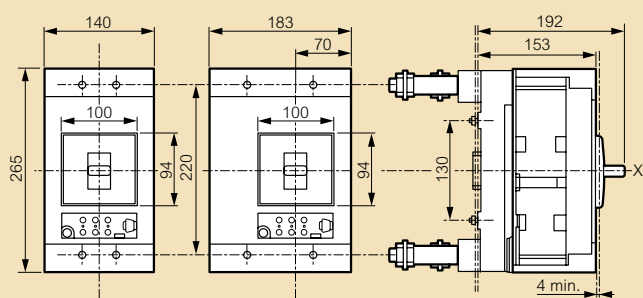
Fixed version with earth leakage module mounted underneath



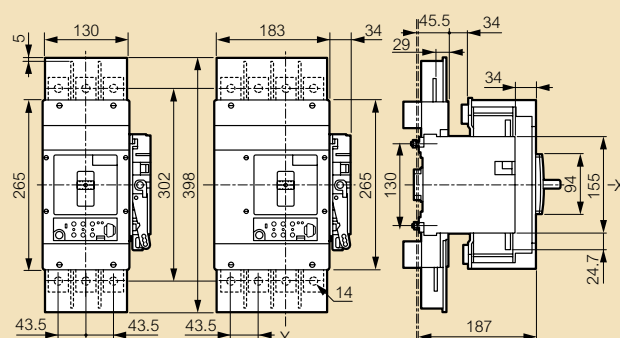
Plug-in version, front terminals



Plug-in version, rear terminals

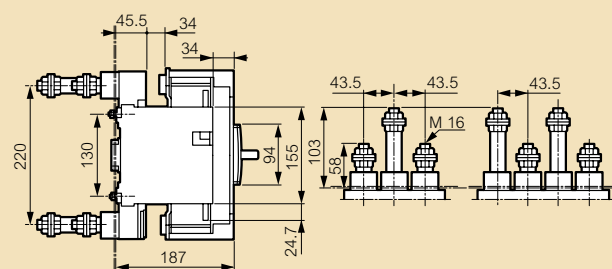


Draw-out version, front terminals

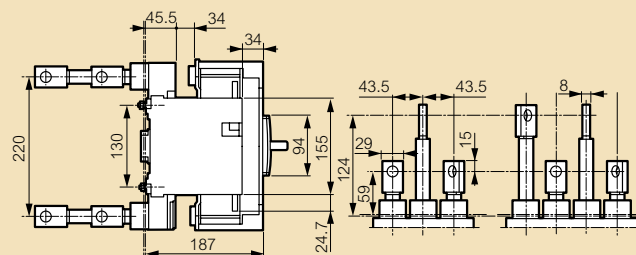


Draw-out version, rear terminals

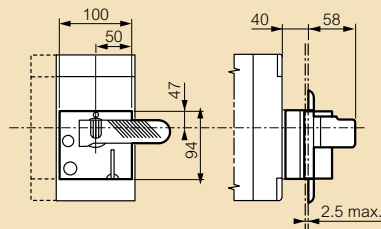
Rear terminal with threaded rod



Flat rear terminal



Rotary handle-direct on DPX

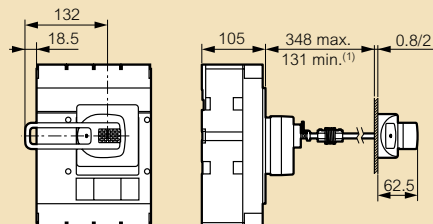


Terminal shields

	A
DPX 630	390
DPX 630 + earth leakage module	542

Rotary handle-vari-depth handle on door

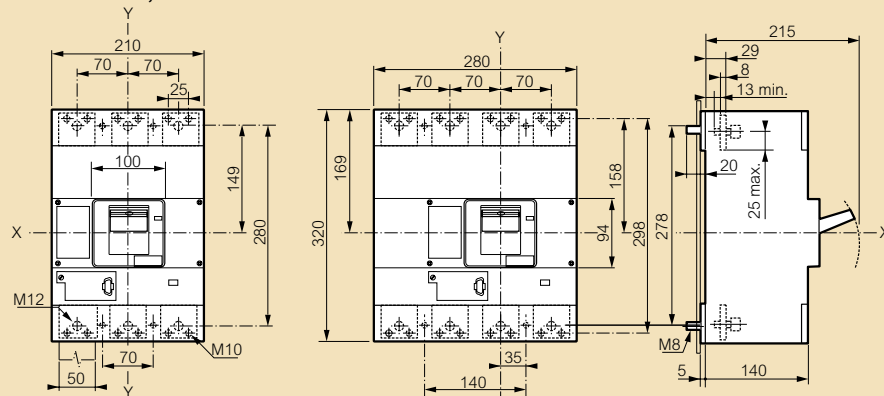
Mounting with flexible seal



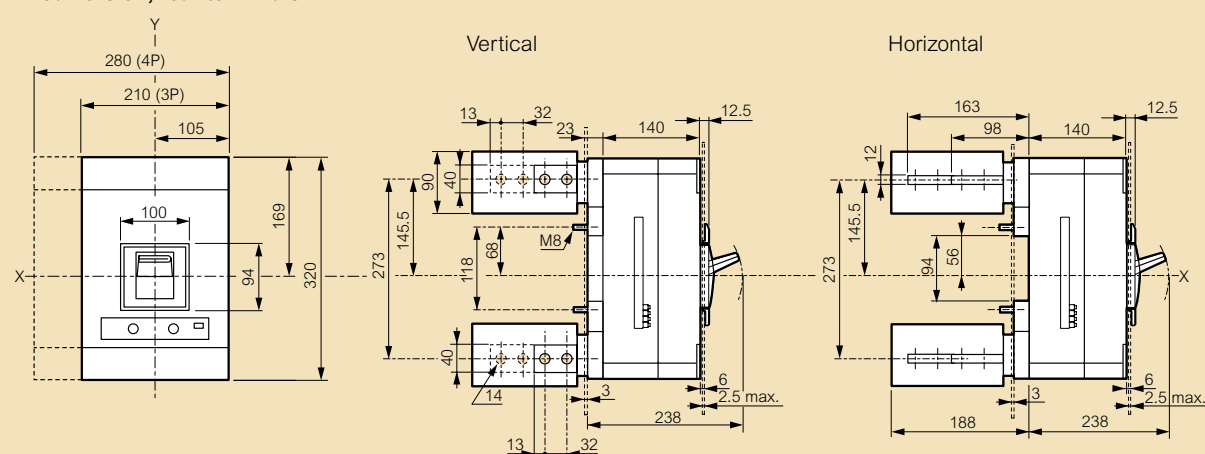
(1) 75 mm without mechanical system

■ Dimensions

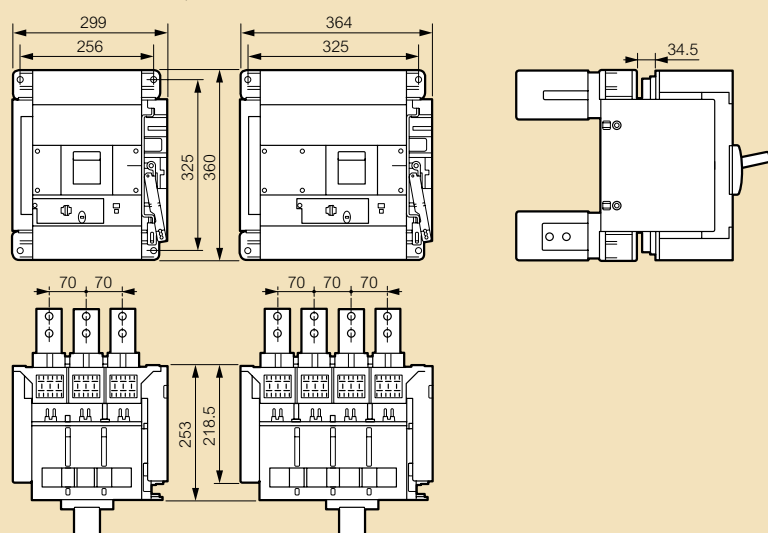
Fixed version, front terminals



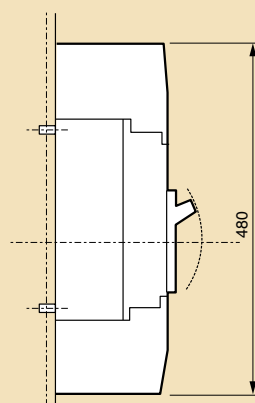
Fixed version, rear terminals



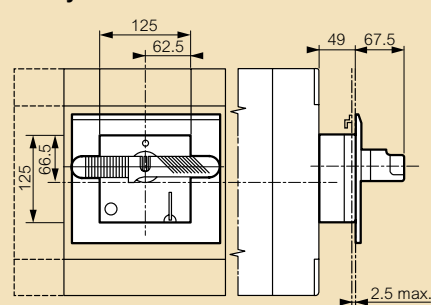
Draw-out version, rear terminals



Terminal shields

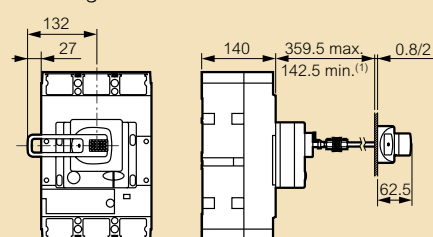


Rotary handle-direct on DPX



Rotary handle-vari-depth handle on door

Mounting with flexible seal



(1) 75 mm without mechanical system

DPX³ 160/250

■ Technical characteristics (at 40°)

MCCBs		DPX ³ 160 thermal magnetic				DPX ³ 160 with electronic earth leakage module			
		16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	36 kA	50 kA
Nominal current In (A)		16-25-40-63-80-100-125-160				16-25-40-63-80-100-125-160			
Rated insulation voltage (V)		50-60Hz				600			
Rated operational voltage (V)		50-60Hz				500			
		Continuous				500			
Rated impulse withstand current Uimp (kV)		8				8			
Category of use		A				A			
Ultimate breaking capacity (kA) in AC	220/240 V~	25	35	50	65	25	35	50	65
	380/415 V~	16	25	36	50	16	25	36	50
	440 V~	10	18	25	30	10	18	25	30
	480/500 V~	8	10	12	15	8	10	12	15
	690 V~	5	5	8	10	5	5	8	10
Ultimate breaking capacity (kA) in DC	125 V _{DC} ⁽¹⁾	32	50	60	80	32	50	60	80
	250 V _{DC} ⁽¹⁾	16	25	30	40	16	25	30	40
	400 V _{DC} ⁽²⁾	16	25	30	40	16	25	30	40
	500 V _{DC} ⁽²⁾	10	20	25	35	10	20	25	35
Standard breaking capacity Ics (% Icu)		100	100	100	100	100	100	100	100
Short-circuit making capacity Icm (kA)		415 V~	32	52,5	75,6	105	32	52,5	75,6
Breaking capacity on 1 pole Isu (kA) For IT neutral earthing system	220/240 V~	6,25	8,75	12,5	16,3	6,25	8,75	12,5	16,3
	380/415 V~	4	6,25	9	12,5	4	6,25	9	12,5
	440 V~	2,5	4,5	6,25	7,5	2,5	4,5	6,25	7,5
	480/500 V~	2	2,5	3	3,75	2	2,5	3	3,75
	690 V~	1,25	1,25	2	2,5	1,25	1,25	2	2,5

MCCBs		DPX ³ 250 thermal magnetic				DPX ³ 250 electronic release			
		25 kA	36 kA	50 kA	70 kA	25 kA	36 kA	50 kA	70 kA
Nominal current In (A)		100-160-200-250				40-100-160-250			
Rated insulation voltage (V)		50-60Hz				800 (with integrated e.l.c.bs: 500)			
Rated operational voltage (V)		50-60Hz				690 (with integrated e.l.c.bs: 500)			
		Continuous				500			
Rated impulse withstand current Uimp (kV)		8				8			
Category of use		A				A			
Ultimate breaking capacity (kA) in AC	220/240 V~	40	60	80	100	40	60	80	100
	380/415 V~	25	36	50	70	25	36	50	70
	440 V~	20	30	40	60	20	30	40	60
	480/500 V~	10	25	30	40	10	25	30	40
	690 V~	8	16	18	20	8	16	-	20
Ultimate breaking capacity (kA) in DC	125 V _{DC} ⁽¹⁾	50	72	80	90	50	72	80	90
	250 V _{DC} ⁽¹⁾	25	36	40	45	25	36	40	45
	400 V _{DC} ⁽²⁾	30	45	50	55	30	45	50	55
	500 V _{DC} ⁽²⁾	25	36	40	45	25	36	40	45
Standard breaking capacity Ics (% Icu)		100	100	100	100	100	100	100	100
Breaking capacity on 1 pole Isu (kA) For IT neutral earthing system	220/240 V~	10	15	20	25	15	15	20	25
	380/415 V~	6,25	9	12,5	17,5	6,25	9	12,5	17,5
	440 V~	5	7,5	10	15	5	7,5	10	15
	480/500 V~	2,5	6,25	7,5	10	2,5	6,25	7,5	10
	690 V~	2	4	4,5	5	-	-	-	-

■ Temperature derating

DPX³ 160

In (A)	Temperature (°C)											
	-25	-20	-10	-5	0	10	20	30	40	50	60	70
16	23	22	21	21	20	19	18	17	16	15	15	14
25	37	35	34	33	32	30	28	26	25	23	22	21
40	55	54	52	51	50	47	43	42	40	38	36	34
63	88	87	84	83	81	76	69	66	63	60	57	55
80	115	113	111	109	107	97	87	84	80	78	75	72
100	135	133	130	123	115	108	100	100	100	95	90	85
125	160	158	155	153	150	138	125	125	125	118	112	105
160	224	221	214	210	205	192	176	168	160	152	145	139

DPX³ 250

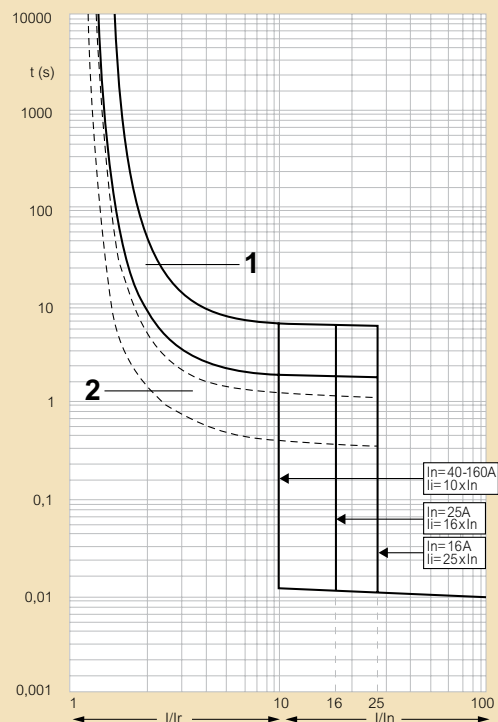
In (A)	Temperature (°C)											
	-25	-20	-10	-5	0	10	20	30	40	50	60	70
40	54	53	51	50	49	48	45	41	40	38	36	34
100	135	132	128	126	123	120	112	102	100	94	90	84
160	216	211	205	201	197	192	179	163	160	151	143	134
200	270	264	256	251	246	240	224	203	200	189	179	168
250	338	330	320	314	308	300	280	254	250	236	224	210

(1) 2 poles in series
(2) 3 poles in series

■ Derating at different altitudes

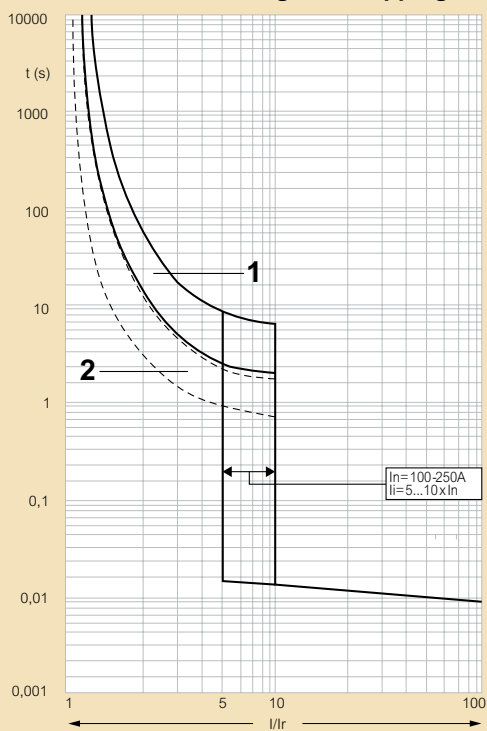
Altitude (m)		2000	3000	4000
Rated current (A)		1 x In	0,96 x In	0,93 x In
Rated voltage (V)	DPX ³ no e.l.c.bs	690	690	550
	DPX ³ with e.l.c.bs	500	500	400

■ DPX³ 160 thermal-magnetic Tripping curve



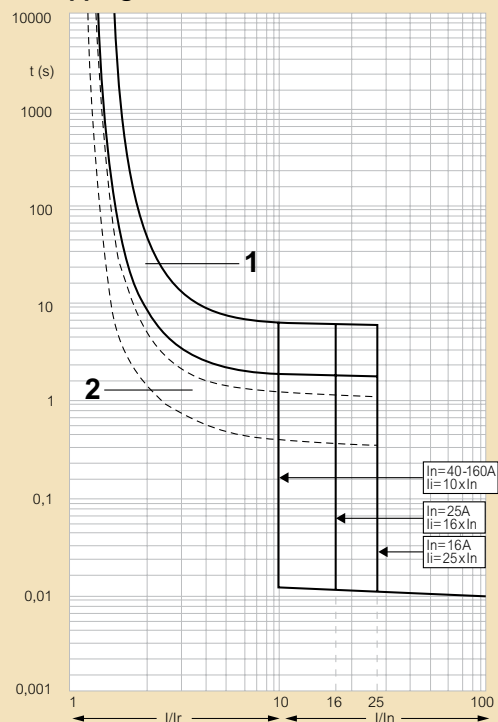
t: time
 I : rated current
 I_r : setting current
 Curve n°1: charateristic with cold start
 Curve n°2: charateristic with hot start

■ DPX³ 250 thermal-magnetic Tripping curves



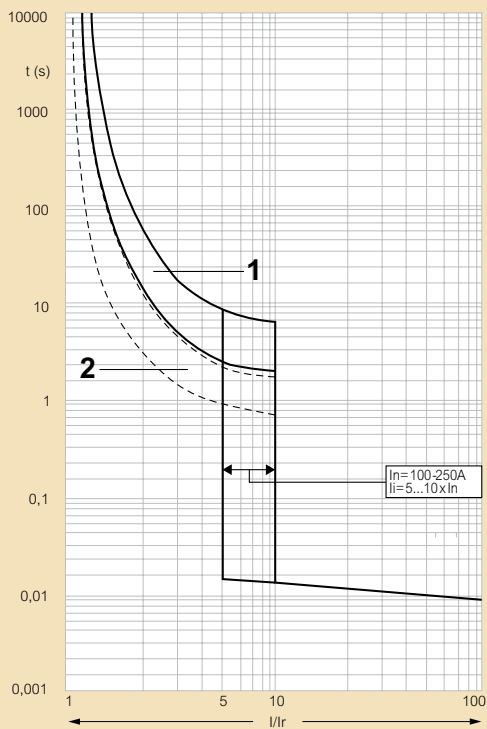
t: time
 I : rated current
 I_r : setting current
 Curve n°1: charateristic with cold start
 Curve n°2: charateristic with hot start

■ DPX³ 160 thermal-magnetic with integrated e.l.c.bs Tripping curves



t: time
 I : rated current
 I_r : setting current
 Curve n°1: charateristic with cold start
 Curve n°2: charateristic with hot start

■ DPX³ 250 thermal-magnetic with integrated e.l.c.bs



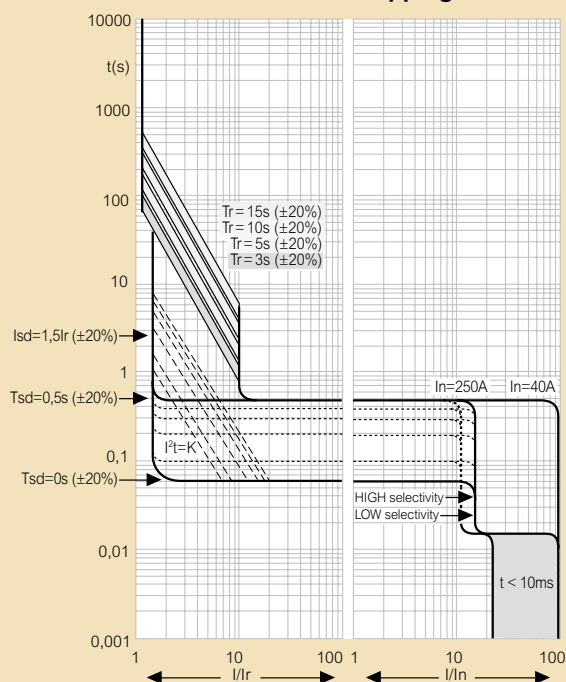
t: time
 I : rated current
 I_r : setting current

DPX³ 160/250 (continued)

DPXTM

Reading DPX characteristic curves and adjustment ranges

■ DPX³ 250 electronic release Tripping curves



■ Adjustment for thermal-magnetic DPX³

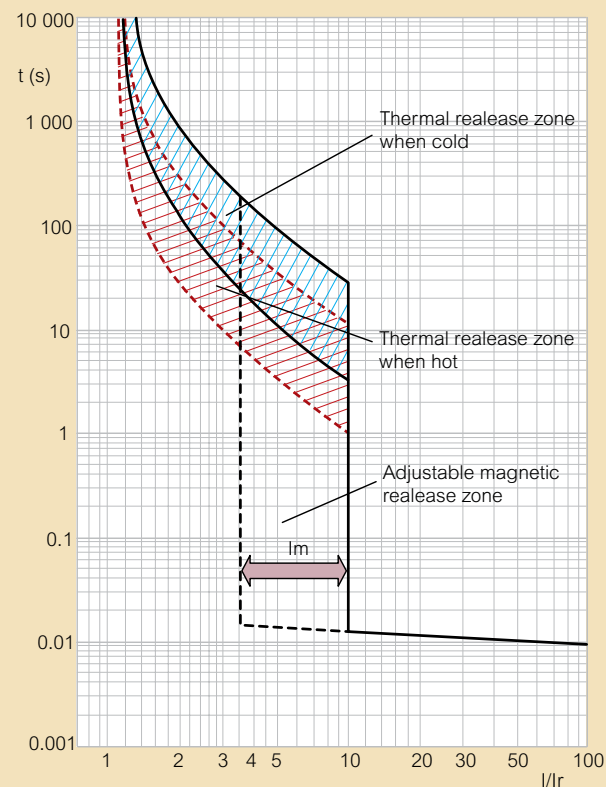
Setting	DPX ³ thermal magnetiac	DPX ³ with integrated e.l.c.bs
I_r overload trip threshold (thermal)	0.4 to 1 I _n	0.4 to 1 I _n
I_m short-circuit trip threshold (magnetic)	fixed: 10 I _n ⁽¹⁾	fixed: 10 I _n ⁽¹⁾
I_{Δn} (A)	-	0.03 - 0.03 - 1 - 3
Δt (s)	-	0 - 0.3 - 1 - 3

(1) 400 A for DPX³ 160 In 16 A and 25 A

■ Adjustment for DPX³ electronic release

Setting	DPX ³	DPX ³ with integrated e.l.c.bs
I_r overload trip threshold (long delay)	0.4 to 1 I _n	
Tr long delay trip time	3 - 5 - 10 - 15s	
I_m short-circuit trip threshold (short delay)	1.5 - 2 - 2.5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x I _r	
T_m short delay trip time	0.01 - 0.1 - 0.2 - 0.3 - 0.4 - 0.5s	
I_g	(0.2 - 0.3 - 0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 1 - OFF) x I _n	
T_g	0.1 - 0.2 - 0.5 - 1s	

■ Tripping curve for a DPX thermal-magnetic trip



I: actual current

I_r: thermal protection against overloads (setting: I_r = x I_n)

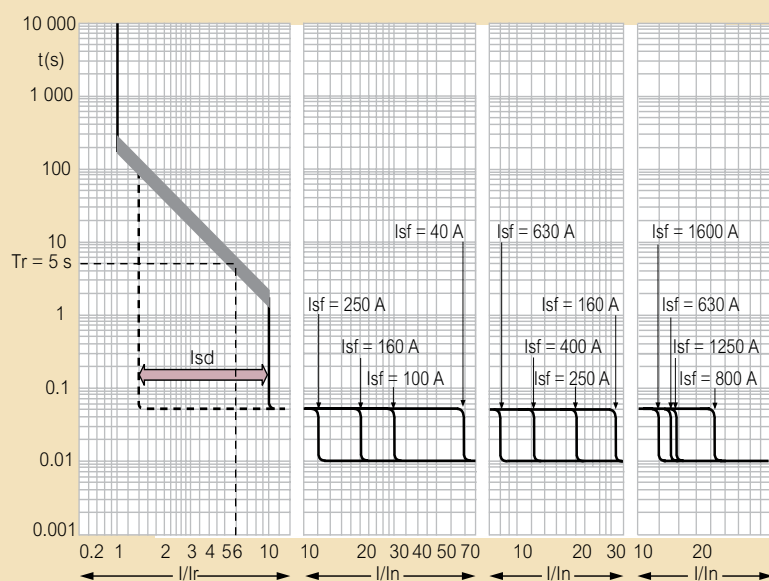
I_m: magnetic protection against short-circuits (setting: I_m = x I_n or I_m = x I_r)

As the abscissa of the curves represents the ratio I/I_r, modifying the setting of I_r will not change the graphical representation of the thermal trip. However, the magnetic setting can be read directly (between 3.5 and 10 in the example).

DPX™

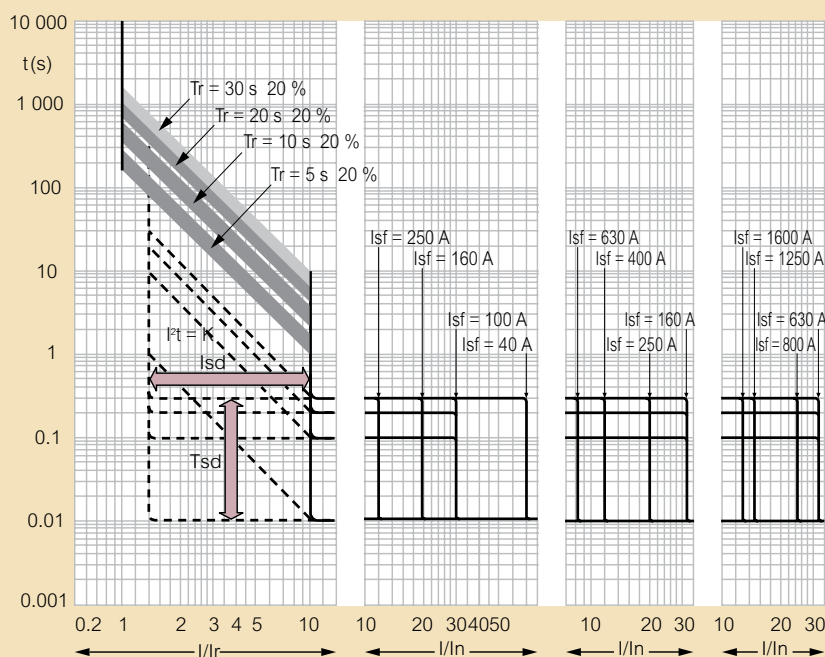
Reading DPX characteristic curves and adjustment ranges

■ Tripping curve for a DPX electronic release S1, adjustable I_r and I_{sd}



I : actual current
 I_r : long delay protection against overloads (setting: $I_r = x I_n$)
 I_{sd} : long delay protection operation time (fixed value: 5 s at 6 I_r)
 I_{sd} : short delay protection against short-circuits (setting: $I_m = x I_r$, between 1.5 and 10 I_r in the example)
 T_{sd} : short delay protection operation time (fixed value: 0.05 s)
 I_f : fixed threshold instantaneous protection (4 to 20 kA depending on model)

■ Tripping curve for a DPX electronic release S2, adjustable I_r , I_{sd} , T_r and T_{sd}



I : actual current
 I_r : long delay protection against overloads (setting: $I_r = x I_n$)
 T_r : long delay protection operation time (fixed value: 5 to 30 s)
 I_{sd} : short delay protection against short-circuits (setting: $I_m = x I_r$, between 1.5 and 10 I_r in the example)
 T_{sd} : short delay protection operation time (setting: 0 to 0.3 s)
 I^2t constant (adjustable via T_m)
 I_f : fixed threshold instantaneous protection (4 to 20 kA depending on model)

■ Adjustment for thermal-magnetic DPX

Setting	DPX 630	DPX 1600
I_r overload trip threshold (thermal)	0.8 to 1 I_n	0.8 to 1 I_n
I_m short-circuit trip threshold (magnetic)	5 to 10 I_n	5 to 10 I_n

■ Adjustment for DPX electronic release

Setting	DPX 630 / 1600 S1	DPX 630 / 1600 S2
I_r overload trip threshold (long delay)	$0.4 - 0.5 - 0.6 - 0.7 - 0.8 - 0.9 - 0.95 - 1) \times I_n$	
T_r long delay trip time	fixed: 5 s (to 6 I_r)	5 - 10 - 20 - 30 s (to 6 I_r)
I_m short-circuit trip threshold (short delay)	$(1.5 - 2 - 3 - 4 - 5 - 6 - 8 - 10) \times I_r^{(1)}$	
T_m Short delay trip time	fixed: 0.05 s	0 - 0.1 - 0.2 - 0.3 s

(1) 7.9 I_r for DPX 630 I_n 630 A

Selectivity table thermal-magnetic release DPX / DPX³

■ Limits of selectivity (average values kA at 400 V~)

Downstream MCCB	In (A)	Upstream MCCB																					
		DPX ³ 160 (16. 25. 36. 50 kA) with or without e.l.c.bs								DPX ³ 250 (25. 36. 50. 70 kA) with or without e.l.c.bs				DPX and DPX-H 630 (36 and 70 kA)						DPX and DPX-H 1250 (36 and 70 kA)			
		16	25	40	63	80	100	125	160	100	160	200	250	250	320	400	500	630	800	1000	1250		
DPX ³ 160 (16. 25. 36. 50 kA) with or without e.l.c.bs	16	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	25	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	40	-	-	-	0.63	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	63	-	-	-	-	0.8	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	80	-	-	-	-	-	1	1.25	1.6	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	100	-	-	-	-	-	-	1.25	1.6	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	125	-	-	-	-	-	-	-	1.6	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
DPX ³ 250 thermal-magnetic (25, 36, 50, 70 kA) with or without e.l.c.bs	100	-	-	-	-	-	-	-	-	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	200	-	-	-	-	-	-	-	-	-	-	-	2.5	2.5	3.2	4	5	6.3	16	16	16		
	250	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	4	5	6.3	16	16	16		
DPX ³ 250 electronic release ⁽¹⁾ (25, 36, 50, 70 kA) with or without e.l.c.bs	40	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2.5	3.2	4	5	-	-	-	
	100	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2.5	3.2	4	5	-	-	-	
	160	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2.5	3.2	4	5	-	-	-	
	200	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2.5	3.2	4	5	-	-	-	
DPX ³ 250 electronic release ⁽²⁾ (25, 36, 50, 70 kA) with or without e.l.c.bs	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	3.2	4	5	-	-	-	
	40	-	-	-	-	-	-	-	-	1	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	100	-	-	-	-	-	-	-	-	-	1.6	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	160	-	-	-	-	-	-	-	-	-	-	2	2.5	2.5	3.2	4	5	6.3	16	16	16		
	200	-	-	-	-	-	-	-	-	-	-	-	2.5	2.5	3.2	4	5	6.3	16	16	16		
DPX and DPX-H 630 thermal magnetic (36, 70 kA)	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	4	5	6.3	16	16	16	
	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	6.3	16	16	16	
	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6.3	16	16	16	
	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3	16	16	16	
	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	16	16	
DPX and DPX-H 630 electronic release ⁽¹⁾ S1 and S2 (36, 70 kA)	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DPX and DPX-H 630 electronic release ⁽²⁾ S1 and S2 (36, 70 kA)	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	4	5	6.3	8	8	8	
	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6.3	8	8	8	
	630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	
DPX and DPX-H 1250 thermal magnetic (50, 70 kA)	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	
	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DPX and DPX-H 1600 electronic release ⁽¹⁾ S1 and S2 (50, 70 kA)	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DPX and DPX-H 1600 electronic release ⁽²⁾ S1 and S2 (50, 70 kA)	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	
	1250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

T = total selectivity, up to downstream circuit breaker breaking capacity, according to IEC 60947-2

(1) Electronic release, selector switch on "HIGH"

(2) Electronic release, selector switch on "LOW"

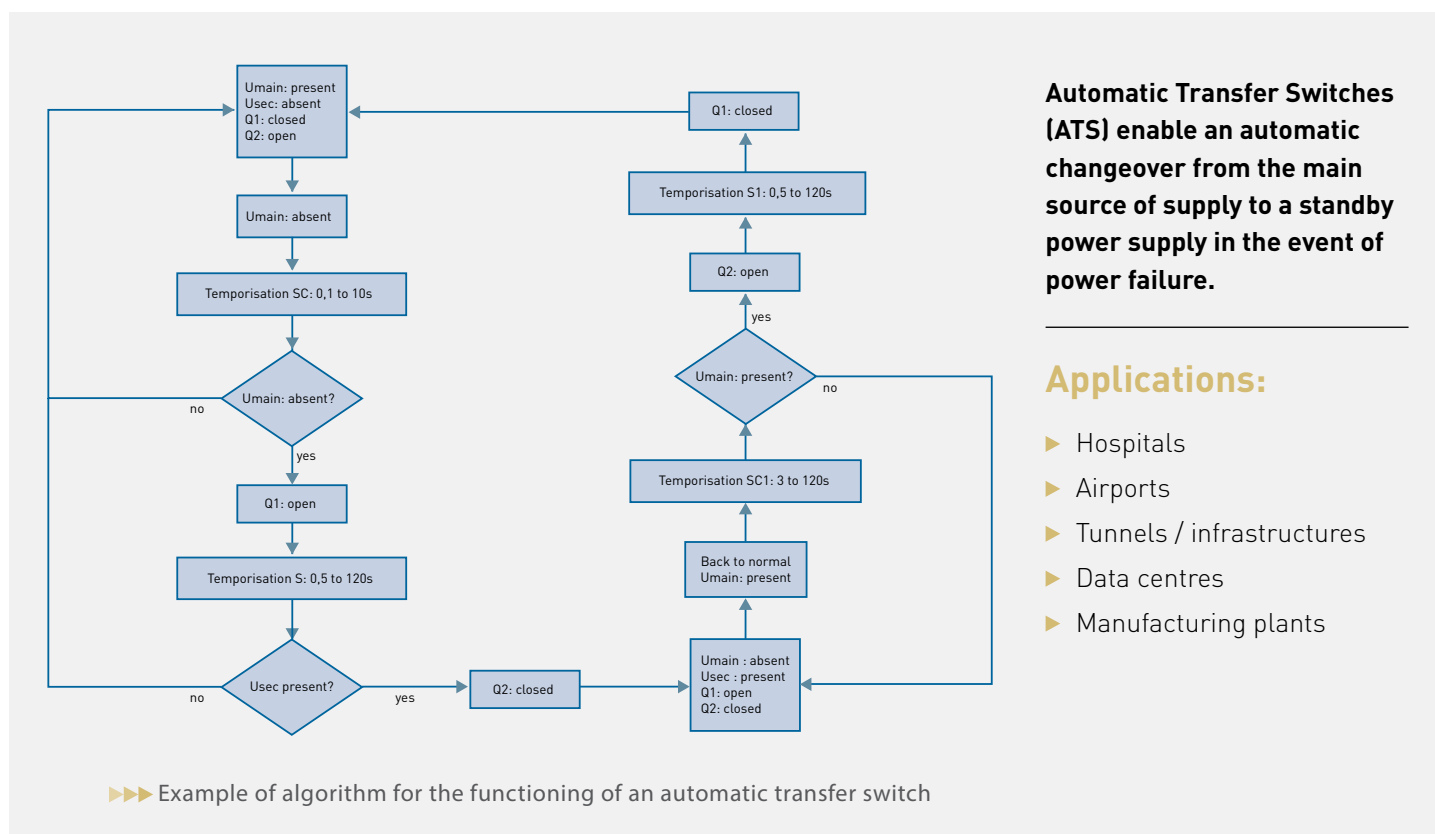
MCCB Automatic Transfer Switches

Legrand can supply Automatic Transfer Switches (ATS) for Moulded Case Circuit Breakers to suit your requirements.

DISCOVER THE RANGES

Available from 16 to 630A, Legrand Automatic Transfer switches accommodate DPX³ or DPX Moulded Case Circuit Breakers (3 Pole versions). They consist of two circuit breakers (motor-operated and fitted with 230V AC/DC shunt release) on a mechanical interlock plate, one control panel and one controller. Common loadside busbar can be ordered as an option.

Automatic transfer switches are factory-assembled, pre-wired and tested by Legrand. They are to be ordered as one catalogue no. see opposite page.



Automatic Transfer Switches (ATS) enable an automatic changeover from the main source of supply to a standby power supply in the event of power failure.

Applications:

- Hospitals
- Airports
- Tunnels / infrastructures
- Data centres
- Manufacturing plants

Key benefits:

- Automatic Transfer Switches are designed and developed by our R&D team.
- They are assembled and tested in our factory to guarantee the Legrand reknown quality.
- Pre-wired and fitted with connectors (plug-in type), they will enable quick installation and ensure a professional work for end-users.

Automatic transfer switches

DPX³ / DPX MCCBs

HOW TO ORDER

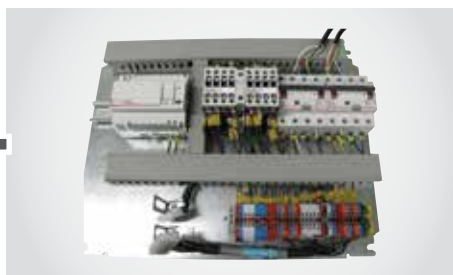
1 BASIC TRANSFER SWITCH

Mechanical interlock between two MCCBs (BTS)

1 CONTROL PANEL

Prewired and mounted on metal plate

1 CONTROLLER



Catalogue No.

ATS 160 3P 25kA 25 = 1+2+3

MCCB
frame
size

3 pole

MCCB
kA rating

MCCB
nominal
current

Pack	Cat. No.	ATS for DPX ³ 160 3P TM MCCBs
1	ATS1603P25kA25	with DPX ³ 160 25 kA breaking capacity
1	ATS1603P25kA40	ATS for DPX3 160 3P/3P 25 kA 25A
1	ATS1603P25kA63	ATS for DPX3 160 3P/3P 25 kA 40A
1	ATS1603P25kA80	ATS for DPX3 160 3P/3P 25 kA 63A
1	ATS1603P25kA100	ATS for DPX3 160 3P/3P 25 kA 80A
1	ATS1603P25kA125	ATS for DPX3 160 3P/3P 25 kA 100A
1	ATS1603P25kA160	ATS for DPX3 160 3P/3P 25 kA 125A
		with DPX ³ 160 36 kA breaking capacity
1	ATS1603P36kA63	ATS for DPX3 160 3P/3P 36 kA 63A
1	ATS1603P36kA80	ATS for DPX3 160 3P/3P 36 kA 80A
1	ATS1603P36kA100	ATS for DPX3 160 3P/3P 36 kA 100A
1	ATS1603P36kA125	ATS for DPX3 160 3P/3P 36 kA 125A
1	ATS1603P36kA160	ATS for DPX3 160 3P/3P 36 kA 160A
		with DPX ³ 160 50 kA breaking capacity
1	ATS1603P50kA63	ATS for DPX3 160 3P/3P 50 kA 63A
1	ATS1603P50kA80	ATS for DPX3 160 3P/3P 50 kA 80A
1	ATS1603P50kA100	ATS for DPX3 160 3P/3P 50 kA 100A
1	ATS1603P50kA125	ATS for DPX3 160 3P/3P 50 kA 125A
1	ATS1603P50kA160	ATS for DPX3 160 3P/3P 50 kA 160A

Pack	Cat. No.	ATS for DPX ³ 250 3P TM MCCBs
		with DPX ³ 250 36 kA breaking capacity
1	ATS2503P36kA100	ATS for DPX3 250 3P/3P 36 kA 100A
1	ATS2503P36kA160	ATS for DPX3 250 3P/3P 36 kA 160A
1	ATS2503P36kA200	ATS for DPX3 250 3P/3P 36 kA 200A
1	ATS2503P36kA250	ATS for DPX3 250 3P/3P 36 kA 250A
		with DPX ³ 250 50 kA breaking capacity
1	ATS2503P50kA100	ATS for DPX3 250 3P/3P 50 kA 100A
1	ATS2503P50kA160	ATS for DPX3 250 3P/3P 50 kA 160A
1	ATS2503P50kA200	ATS for DPX3 250 3P/3P 50 kA 200A
1	ATS2503P50kA250	ATS for DPX3 250 3P/3P 50 kA 250A
		with DPX ³ 250 70 kA breaking capacity
1	ATS2503P70kA100	ATS for DPX3 250 3P/3P 70 kA 100A
1	ATS2503P70kA160	ATS for DPX3 250 3P/3P 70 kA 160A
1	ATS2503P70kA200	ATS for DPX3 250 3P/3P 70 kA 200A
1	ATS2503P70kA250	ATS for DPX3 250 3P/3P 70 kA 250A

Pack	Cat. No.	ATS for DPX 630 3P MCCBs
		with DPX 630 36 kA breaking capacity (TM)
1	ATS6303P36kA400	ATS for DPX630 3P/3P 36 kA 400A
1	ATS6303P36kA630	ATS for DPX630 3P/3P 36 kA 630A
		with DPX 630 70 kA breaking capacity (TM)
1	ATS6303P70kA400	ATS for DPX630 3P/3P 70 kA 400A
1	ATS6303P70kA630	ATS for DPX630 3P/3P 70 kA 630A
		with DPX 630 Electronic 36 kA breaking capacity
1	ATS6303P36K400E	ATS for DPX630 3P/3P 36 kA 400A Electronic
1	ATS6303P36K630E	ATS for DPX630 3P/3P 36 kA 630A Electronic
		with DPX 630 Electronic 70 kA breaking capacity
1	ATS6303P70K400E	ATS for DPX630 3P/3P 70 kA 400A Electronic
1	ATS6303P70K630E	ATS for DPX630 3P/3P 70 kA 630A Electronic

TM = Thermal Magnetic

Note: 1. MCCBs fitted with 230V AC/DC Shunt release

2. Control Panel supplied with wire looms for quick plug-in connections with controller & BTS

3. Common loadside busbar available on request

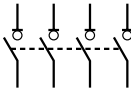
DX³ - IS main switches

16 to 125A



4 064 00

4 064 59

Pack	Cat. No.	Main switches		
		AC 22 A category as per EN60947-3 Grey handle Accept 1 signalling auxiliary		
		Single Pole - 250 V~		
		Rating (A)		No of modules
10	4 064 00	16		1
10	4 064 01	20		1
10	4 064 03	32		1
10	4 064 11	40		1
10	4 064 12	63		1
10	4 064 23	100		1
		Two Pole - 400 V~		
10	4 064 31	16		1
10	4 064 32	20		1
10	4 064 34	32		1
5	4 064 40	40		2
5	4 064 41	63		2
5	4 064 49	100		2
5	4 064 50	125		2
		Three Pole - 400 V~		
5	4 064 57	20		2
5	4 064 59	32		2
1	4 064 60	40		3
1	4 064 61	63		3
1	4 064 69	100		3
1	4 064 70	125		3
		Four Pole - 400 V~		
5	4 064 77	20		2
5	4 064 79	32		2
1	4 064 80	40		4
1	4 064 81	63		4
1	4 064 89	100		4
1	4 064 90	125		4

Vistop™ isolating switches

63 to 160A



225 15



225 18

Safety isolating switches with visible breaking of load and positive action of the contacts
Double breaking of the phases by self-cleaning snap open/close action contacts
Label holders for identification of the circuits
Connection via cage terminals tightened by Allen key (except 63 A ; by PZ 2 screws)
Screw-fixing or fixing on EN 50022 rail (only on rail for 63 A Vistop)
Two versions for mounting on faceplate:

- With left or right external side handle with seal to maintain the IP protection (up to IP 55), mounting accessories, self-adhesive drilling template, adjustable extension rod (30 to 170 mm)
- With direct or external front handle with Cat. No. 227 32 to be ordered separately

Possibility of attaching a 2-pole - 16 A auxiliary isolating switch Cat. No. 227 22, or one or two N/C + N/O auxiliary Cat. No. 227 04/07

Pack	Cat. No.		63 to 160A	
	Front handle	Side handle	63 A	No of 17.5 mm modules
1	225 12	225 16	3-pole	7
1	225 15	225 18	4-pole	7
			100 A	
1	225 20	225 25	3-pole	7.5
1	225 22	225 27	4-pole	9
			125 A	
1	225 34	225 44	3-pole	7.5
1	225 39	225 46	4-pole	9
			160 A	
1	225 51	225 54	3-pole	7.5
1	225 53	225 56	4-pole	9

Auxiliary contacts

Set of 2 auxiliary switches for on/off signalling 5A/250V
Single pole auxiliary from 63A to 160A (1NO + 1NC)
Additional contact from 63A to 160A (2NO + 2NC)

1	227 04
1	227 07

Door interlock facilities

Extension shaft door interlock
For 63/100/125A /160 Vistop

1	227 32
---	--------

Sealable terminal shields

Set of 2 separate, sealable terminal shields
Clip on upstream and/or downstream of Vistop
100 to 160 A
2P 16A Contact (Switch module) for Vistop
100/125/160A

1	227 98
1	227 22

Vistop™ 63 to 160 A

Isolating switch rail mounting

Conform to standards NF C 63-130, NF EN 60947-3, IEC 60947-3, BS EN 60947-3, VDE 0660, NBN EN 60947-3, CNOMO E03 - 15-611 R, Veritas approved

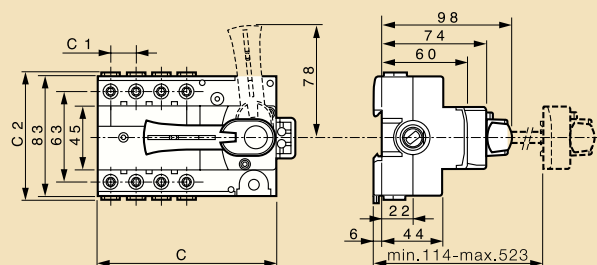
Version with red handle/yellow front plate conforms to standards NF C 79-130, VDE 0113, IEC 60204-1, EN 60204

Glass fibre reinforced insulating casing, self-extinguishing at 960° C (IEC NF EN 60695-2-1)

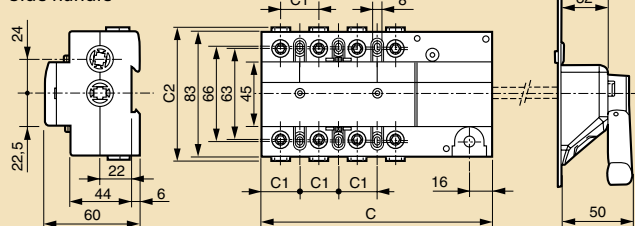
Handle can be padlocked in open position using 1-3 padlocks Ø 6 mm Vistop™ 63 to 160 A - visible contact indication

Accept auxiliary contacts N/C + N/O (Cat. No. 227 04/07) 1 or 2 (side handle)

Front handle

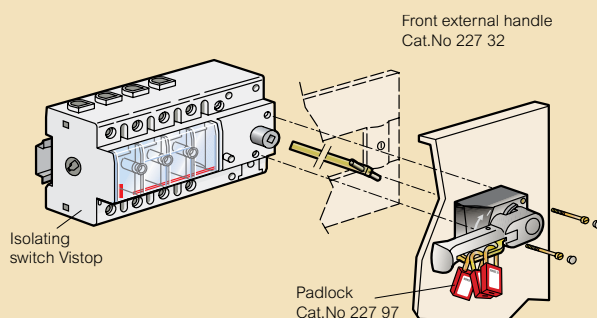


Side handle



	Front handle		External side handle	
	63 A 3 and 4-pole	100 A, 125 A, 160 A 3P 4 P	63 A 3 and 4-pole	100 A, 125 A, 160 A 3 P 4 P
C	125	133 160	125	133 160
C ₁	17.7	26.7	17.7	26.7
C ₂	90	91	90	91

■ Example of mounting with Vistop 100 to 160 A



- (1) Test according to IEC 60947-3
AC 22 A / DC 22 A: resistive motor breaking
AC 23 A / DC 23 A: inductive motor breaking
- (2) 32 A (20 kW) for AC 22 A
20 A (14 kW) for AC 23 A
- (3) No of breaking contacts: 2
- (4) 100 A (aM) with blade type cartridge fuses

Electrical characteristics

Thermal rating (Ith) 63 A	100 A	125 A	160 A	
Terminals	cage	cage	cage	cage
Conne- ction	Cu (flexible)	4 to 35 ²		4 to 50 mm ²
	Cu (rigid)	4 to 50 ²		4 to 70 mm ²
Insulating voltage (U _i)	690 V~	800 V~	800 V~	800 V~
Impulse resistant voltage (U _{imp})	8 kV	8 kV	8 kV	8 kV
AC 22 A	63 A (35 kW)	100 A (55 kW)	125 A (70 kW)	160 A (88 kW)
AC 23 A ⁽¹⁾	63 A (44 kW)	100 A (69 kW)	125 A (87 kW)	160 A (110 kW)
	690 V	40 A (38 kW)	100 A (96 kW)	125 A (120 kW)
DC 22 A/250 V ⁽¹⁾⁽²⁾ *	63	125	125	16 A
DC 23 A/250 V ⁽¹⁾⁽²⁾ *	63	125	125	10 A
Breaking capacity (I _{cu}) (kA peak)	15	15	15	15
1 s resistant current (I _{cs}) (kA rms)	3,5	3,5	3,5	
I _{cc} with fuses (kA rms)	100	100	100	80
Fuse rupture capacity	63 A	100 A (gG) 63 A (aM) ⁽³⁾	125 A (gG) 125 A (aM) ⁽³⁾	160 A (gG) 125 A (aM)
Short circuit capacity (kA prospective peak) ⁷ (I _{cm})	12	12	12	
Mechanical endurance (No of operations)	> 30 000	> 30 000	> 30 000	> 30 000
Index of Protection (IP)	IP 2x B 3x C under frontplates)	IP 2x B (IP 3x C under frontplate) from 10 mm ²		

- (1) Test conditions accordance with IEC 60947-3
AC = alternating current. DC = direct current. A = for frequent switching
AC 22 A/DC 22 A : resistive motor breaking
AC 23 A/DC 23 A : inductive motor breaking
- (2) N° of breaking contacts: 2
- (3) 100 A (aM) with blade type cartridge fuses
- (4) Values correspond to the device mounted on Vistop 100 - 125 - 160 A
- (5) Early break type of "AC"

DPX™-IS 250 isolating switches

160 to 250 A



266 07



266 17



262 39

Isolating switches for on-load circuit breaking by visible isolation and positive action of the contacts

Padlock integrated in the handle

Connection with cage terminals

Supplied with terminal shields

Conform to IEC 60947-3

Category of use AC 23 A

Accept the same electrical auxiliaries as the DPX (p. 91)

Pack	Cat. No.		DPX-IS without release
	3P	4P	
1	266 02		Front handle
1	266 03	266 07	160 A
			250 A
			Right-hand side handle
1	266 12		160 A
1	266 13	266 17	250 A
			Left-hand side handle
1	266 22		160 A
1	266 23	266 27	250 A
			Mounting on rail
1	262 39		Rail 4 fixing plate
			For mounting DPX-IS 250

Pack	Cat. No.		Rotary handles
			Vari-depth handle IP 55
			Comprising: connecting rod, bracket, self-adhesive drilling template, fixing accessories (seal to maintain the IP protection up to IP 55, door lock mechanism)
1	266 86		For front and side handle device
			Accessories
			Cage terminals
1	262 88 ⁽¹⁾		Set of 4
			For cable 185 mm ² (rigid) or 150 mm ² (flexible) for DPX 250 ER and DPX-IS 250
			Spreaders
1	273 22		Set of upstream and downstream spreaders
			Rear terminals
			Used to convert the fixed version with front terminals to the fixed version with rear terminals
1	265 10		Set of upstream and downstream terminals
			Terminal shields
			Set of 2
			Rail height spacer fits on Din Rail used to mount on the same row DX and DPX/DPX-IS
			262 87
			262 99

(1) Can not be mounted on side by side mounted earth leakage modules 160 A

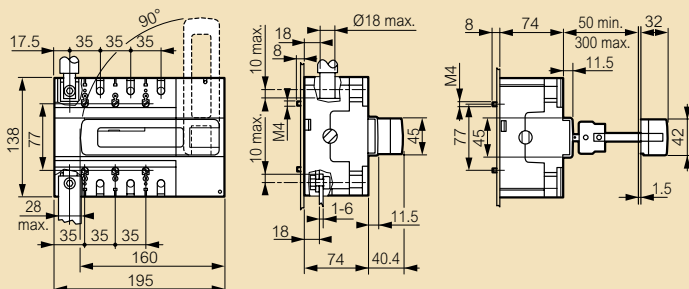
DPX™-IS 250 isolating switches

Electrical characteristics

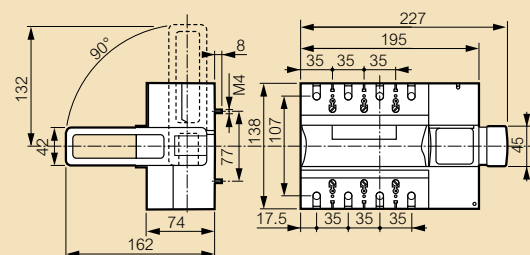
Rating		160 A	250 A
Connection	Cu flexible	150 mm²	
	Cu rigid / Alu	185 mm²	
Copper bar		Width max. 28 mm	
Nominal rating (Ue)		690 V~ - 250 V=	
Rated insulation voltage (Ui)		800 V~	
Rated impulse withstand voltage (Uimp)		8 kV~	
AC 23 A	400 V~	160 A	250 A
	690 V~	160 A	160 A
AC 22 A	690 V~	160 A	250 A
Short-circuit making capacity (kA efficient) (Icm)		40 kA	
I admissible Is (Icw)		12 kA efficient	
I admissible with fuse (Icc)		100 kA efficient	
Max. rating of fuse	gG	160 A	250 A
	aM	160 A	160 A
Rated closing capacity on short circuit (kA peak) (Icm)		40 kA	
Endurance	mechanical	25000 operations	
	electrical (AC 23 - 400 V~)	2500 operations	
Index of protection		IP 20 front panel	

Dimensions

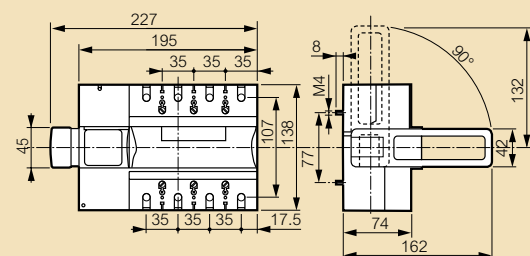
Front handle



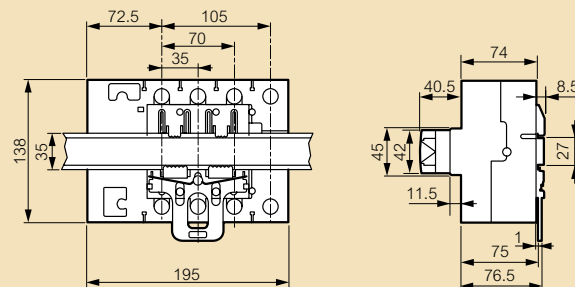
Right lateral handle



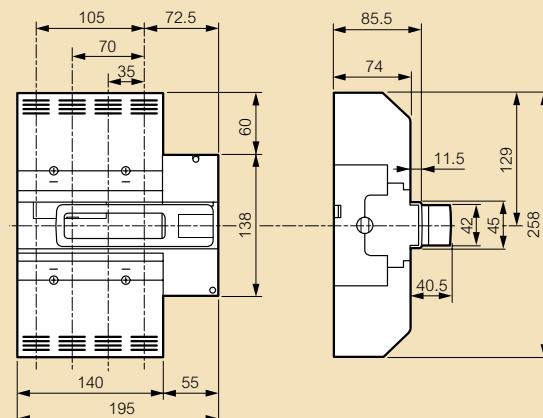
Left lateral handle



Mounted on rail Din

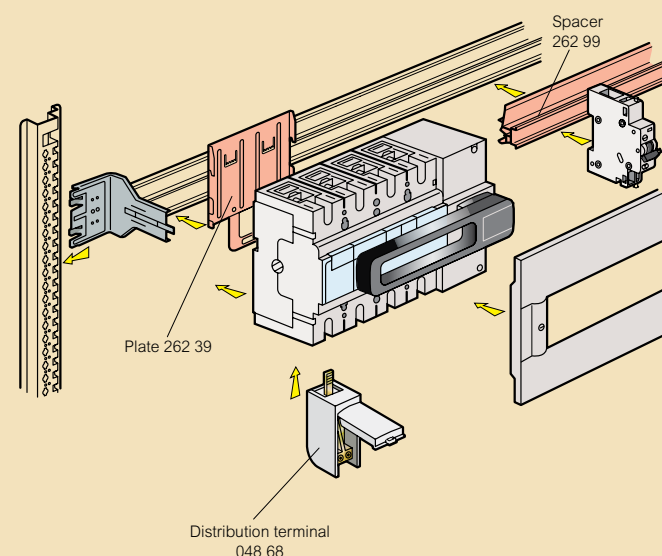


With terminal shields



Mounting

Mounted on rail with plate



DPX™-IS 630 isolating switches

400 to 630 A



266 62



266 70



262 50

Isolating switches for on-load circuit breaking by visible isolation and positive action of the contacts

Padlock integrated in the handle

Supplied with terminal shields, and cage terminals

Conform to IEC 60947-3

Category of use AC 23 A

Accept the same electrical auxiliaries as the DPX (p. 91)

Pack	Cat. No.		DPX-IS without release
	3P	4P	
1	266 60	266 62	400 A
1	266 61	266 63	630 A
			Front handle
			Right-hand side handle
1	266 64	266 66	400 A
1	266 65	266 67	630 A
			Left-hand side handle
1	266 68	266 70	400 A
1	266 69	266 71	630 A
			Rotary handles
			Comprising: connecting rod, bracket, self-adhesive drilling template, fixing accessories (seal to maintain the IP protection up to IP 55, door lock mechanism)
1	266 86		For front and side handle device

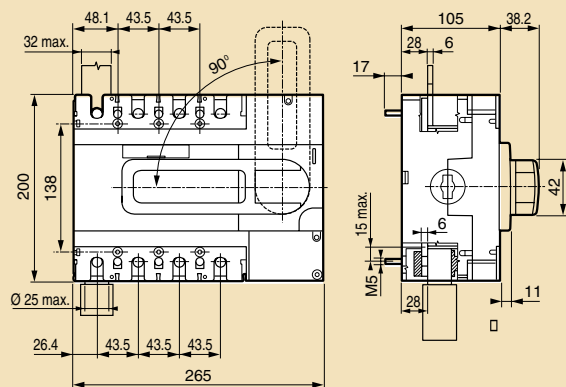
Pack	Cat. No.		Accessories
			Cage terminals
1	262 50		Set of 4 terminals for cable 300 mm ² max. (rigid) or 240 mm ² max.(flexible)
	3P	4P	Spreaders
1	262 48	262 49	Set of incoming or outgoing spreaders
			Rear terminals
			Used to convert the fixed version with front terminals to the fixed version with rear
1	263 50	263 51	Set of incoming and outgoing swivel rear terminals
1	263 52	263 53	Set of incoming and outgoing flat rear terminals
			Sealable terminal shields
1	262 45		Set of 2
			Padlock
			For locking mechanism in open position
1	266 97		Ronis

Technical characteristics

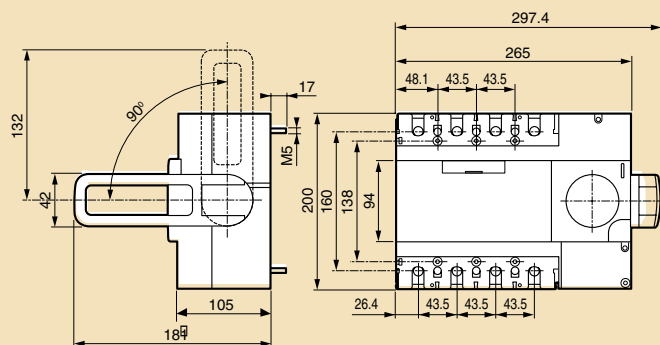
Rating		400 A	630 A
Terminals		cage	
Connection	Cu flexible	1 x 240 or 2 x 185 mm ²	
	Cu rigid	1 x 240 or 2 x 185 mm ²	
Copper bar		Width max 32 mm	
Nominal Rating (Ue)		690 V~	
Rated insulation voltage (Ui)		800 V~	
Rated impulse withstand voltage (Uimp)		8 kV~	
AC 23 A	400 V ac	400 A	630 A
	500 V ac	400 A	630 A
	690 V ac	400 A	630 A
AC 22 A	690 V ac	400 A	630 A
I admissible Is (Icw)		20 kA RMS	
I admissible with fuse (ka efficient) (Icc)		100 kA	
Max. rating of fuse gG		400 A	630 A
Max. rating of fuse aM		400 A	630 A
Short-circuit making capacity (ka efficient) (Icm)		40 kA	
Mechanical endurance		15 000 operations	
Electrical endurance (AC 23 400 V ac)		1 500 operations	
Index of protection		IP 20 front panel	

Dimensions

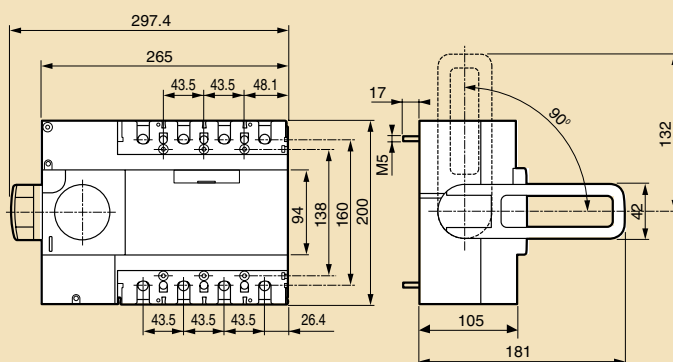
Front handle



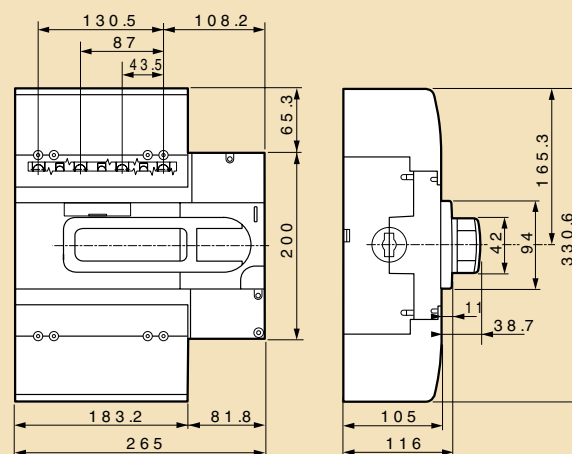
Right lateral handle



Left lateral handle



Front handle with terminal shields



DPX-IS 1 600 isolating switches

800 to 1 600 A



265 98



262 65

Isolating switches for on-load circuit breaking by visible isolation and positive action of the contacts
Connection with cage terminals
Padlock integrated in the handle
Supplied with terminal shields
Conform to IEC 60947-3
Category of use AC 23 A

Pack	Cat. No.		DPX-IS with release
	3P	4P	Supplied without shunt release Can be associated with a residual current relay with separate coil
1	265 91		Front handle 800 A
1	265 92		1 000 A
1	265 93	265 97	1 250 A
1	265 94	265 98	1 600 A
1	262 45		Sealable terminal shields Set of 2
1	266 97		Padlock For locking mechanism in open position Ronis

Pack	Cat. No.		Mounting accessories
1	3P	4P	Sealable terminal shields
	262 64	262 65	Set of 2 short terminal shields
			Insulation shields
			Used to isolate the connections between each pole
1	262 66		Set of 3 insulation shields

Pack	Cat. No.		Connection accessories
1	262 45		Cage terminals
			Set of 1 terminal for cables 2 x 240 mm ² max. (rigid) or 2 x 185 mm ² max. (flexible)
1	262 45		Set of terminal for cables 4 x 240 mm ² max. (rigid) or 4 x 185 mm ² max. (flexible)
			Spreaders
			For increasing the distance between each pole to be connected
1	3P	4P	Set of upstream or downstream spreaders
	262 73	262 74	Rear terminals
			Set of 6 (or 8) rear terminals, upstream or downstream
1	263 80	263 82	Short terminals
1	263 81		Long terminals
			Extended front terminals
1	262 67		Short terminals
1	262 68		Long terminals

Note: For common auxiliaries to DPX see page 91

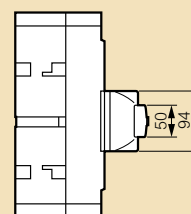
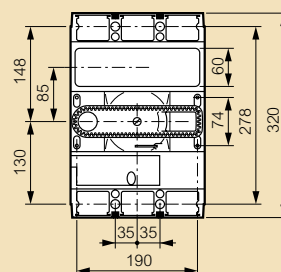
DPX-IS 1 600 isolating switches

Electrical characteristics

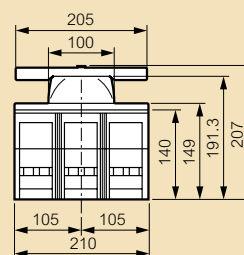
Rating		800 A	1 000 A	1 250 A	1 600 A
Connection	Cu flexible	2 x 185 mm ² or 4 x 185 mm ²			
	Cu rigide	2 x 240 mm ² or 4 x 240 mm ²			
	Alu	2 x 240 mm ² or 4 x 240 mm ²			
Copper bar		50 mm or 80 mm			
Nominal rating (Ue)		690 V±			
Rated insulation voltage (Ui)		690 V±			
Rated impulse withstand voltage (Uimp)		8 kV±			
AC 23 A	400 V±	800 A	1 000 A	1 250 A	1 600 A
	500 V±	800 A	1 000 A	1 250 A	1 600 A
	690 V±	800 A	1 000 A	1 250 A	1 600 A
DC 23 A	250 V±	800 A	1 000 A	1 250 A	1 600 A
I admissible is for 1s (Icw)		20 kA RMS			
I admissible with fuse (Icc)		100 kA RMS			
Max. rating of fuse		800 A	1 000 A	1 250 A	1 600 A
Short-circuit making capacity (kA peak) (Icm)		40 kA			
Mechanical endurance		10 000			
Electrical endurance (AC 23 A - 400 V~)		3 000	3 000	2 000	2 000
Index of protection		IP 20 front panel			

Dimensions

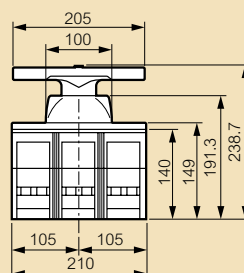
3P



Without handle extension

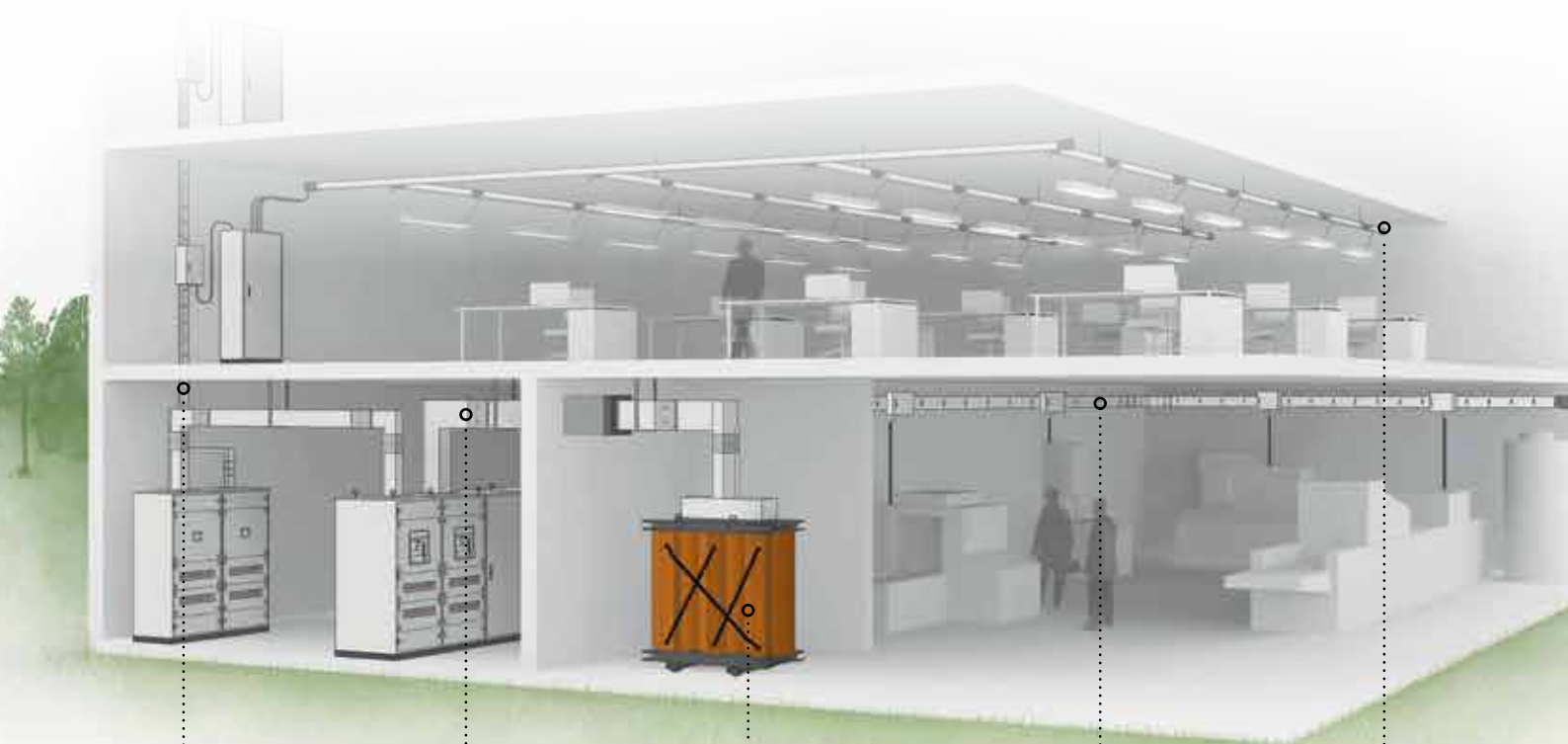


With handle extension



A complete solution from the transformer to the lighting units

Legrand energy distribution systems can offer an end-to-end Power Solution to meet your needs: from medium voltage to low voltage cast resin transformers, copper/aluminium busbar distribution and main switch-boards.



RISING MAINS



Medium Rating Busbar (MR)

TRANSFORMER-MAIN SWITCH-BOARD CONNECTIONS



Super Compact High Rating Busbar SCP/HR

LOW-VOLTAGE SUPPLY



EdM Cast Resin Transformers

LOW TO MEDIUM VOLTAGE DISTRIBUTION



Busbars MS

LIGHTING DISTRIBUTION



Busbar LB/LBplus

+ MORE INFORMATION

Contact your Legrand Area Manager for a full presentation

SPX Fuse Carriers
selection chart

SPX Fuse Carriers
isolators with blade type fuse carrier mounted on DIN rail plate
or 60 mm distance collector rail

Fuse carriers for blade type fuses



Accessories p. 116
Technical characteristics p. 117
Dimensions p. 118

Pack	Cat. No.		SPX blade type isolators			
			Conform to standard IEC/EN 60947-3 – enables safe handling while energised – protection against accidental contact – fuse can be checked through transparent window – voltage control via small opening in window – sealable cover – simultaneous switching on all poles, 1600 mechanical operations – cover position indicated by auxiliary contact (accessory) – screw connection for lug – interchangeable connection accessories 4 types of connection possible: – flush-mounted terminals (SPX 000) – with lugs (SPX 00-3) – flat connections (included with the SPX 000, as an accessory for SPX 00-3) – prism connections (as accessory for SPX 00-3) Mounting: – on plate – on DIN rail – on 60 mm collector rail: • on 5 or 10 mm thick rails for models SPX 000, SPX 00 • on 10 mm rails for models SPX 1, SPX 2, SPX 3 • with installation kit 6052 48 for models SPX 1 and SPX 2, mounting on 5 mm thick rails possible Interchangeable outgoing line, via top or bottom The blade type fuses are available separately			
	Mounting on plate	Mounting on collector rail	Nominal current In	Size	Connection	
1	6052 00	6052 01	125 A	000	Connection cr-sect. 1.5-50 mm ²	
1	6052 02	6052 03	160 A	00	With M8 sleeve	
1	6052 04	6052 05	250 A	1	With M10 sleeve	
1	6052 06	6052 07	400 A	2	With M10 sleeve	
1	6052 08	6052 09	630 A	3	With M12 sleeve	

➤ **Fuse carriers SPX – in-line fuse carriers**
Designed to protect against short-circuits and over-loads, connects and disconnects electric circuit parts without load or at full load.



Pack	Cat. No.		Type aM (motor rated)		
			Conform to EN 60269-1 IEC 60269-1,2 and VDE 0636-1		
			Size 00		
	With indicator	With striker	Rating (Amps)	Voltage A (Volts)	Rupture capacity (Amps)
	3	160 35	63	500	120000
	3	160 40	80		
	3	160 45	100		
	3	160 50	125	400	
			Size 0		
	3	166 35	63	500	120000
	3	166 40	80		
	3	166 45	100		
	3	166 50	125		
	3	166 55	160		
			Size 1		
	3	171 50	125	500	120000
	3	171 55	160		
	3	171 60	200		
	3	171 65	250		
			Size 2		
	3	176 60	200	500	120000
3	176 65	250			
3	176 70	315			
3	176 75	400			

Pack	Cat. No.		Type aM (motor rated)		
			Conform to EN 60269-1 IEC 60269-1,2 and VDE 0636-1		
			Size 00		
	With indicator	With striker	Rating (Amps)	Voltage A (Volts)	Rupture capacity (Amps)
	3	160 35	63	500	120000
	3	160 40	80		
	3	160 45	100		
	3	160 50	125	400	
			Size 0		
	3	166 35	63	500	120000
	3	166 40	80		
	3	166 45	100		
	3	166 50	125		
	3	166 55	160		
			Size 1		
	3	171 50	125	500	120000
	3	171 55	160		
	3	171 60	200		
	3	171 65	250		
			Size 2		
	3	176 60	200	500	120000
3	176 65	250			
3	176 70	315			
3	176 75	400			

SPX accessories



Technical characteristics p. 117
Dimensions p. 119

Pack	Cat. No.	Cage terminals for SPX		
		Flat terminals for flexible copper rail		
		Conductor: flexible or rigid multicore copper cables		
		Cross-section		
		Conductor (mm ²)	Flexible rail (mm ²)	SPX size
3	6052 18	1.5-70	12 x 10	00
3	6052 19	70-150	18 x 7-18	1
3	6052 20	120-240	21 x 5-19	2
3	6052 21	150-300	25 x 7-20	3
		Prism terminals for flexible copper rail		
		Conductor: flexible or rigid multicore copper and aluminium cables		
		Cross-section		
		Conductor (mm ²)	Flexible rail (mm ²)	SPX size
3	6052 22	16-70	12 x 8	00
3	6052 23	70-150	18 x 10	1
3	6052 24	120-240	21 x 15	2
3	6052 25	150-300	25 x 20	3
		Extension connector with 3 inputs		
		Fix with M8 screws		
3	6052 26	3 inputs for 1.5-16 mm ² wires		SPX size 00
		Terminals shields		
		Fix at top or bottom of isolator		
1	6052 49	With installation plate		SPX size 00
1	6052 31	With collector rail		00
1	6052 32	For all types		1
1	6052 33	For all types		2
1	6052 34	For all types		3

		Connection terminals to feed the bars, for SPX		
		Collector rail system: 60, 100 and 185 mm		
		Prism terminals for longitudinal feed		
		For flexible copper rail		
		Conductor: flexible or rigid multicore copper and aluminium cables		
		Cross-section		
		Conductor (mm ²)	Bar (mm ²)	
3	6052 78	70-150	15 x 5	
3	6052 79	120-240	20 x 5	
3	6052 80	150-300	25 x 5	
		Flat terminals for flat bars		
		For copper and aluminium rigid or flexible flat bars		
		Size (mm ²)	Bar thickness (mm ²)	In (A)
10	6052 68	25 x 20	20	250
10	6052 69	30 x 20	20	400
10	6052 73	35 x 30	20	600
3	6052 74	50 x 32	30	600
3	6052 75	63 x 40	30	800
3	6052 76	63 x 50	30	1000
3	6052 77	80 x 60	30	1250

		Connection terminals to feed the bars, for SPX (continued)		
		Universal connection terminals for flexible copper rail		
		Conductor: flexible or rigid multicore copper and aluminium cables		
		Conductor (mm)	Flexible rail (mm)	In (A)
100	6052 63	1.5-1.6	5	180
50	6052 64	4-35	5	270
25	6052 65	16-70	10	400
25	6052 66	16-120	10	440
		Signalling contactor for SPX		
		To indicate the status of the cover		
	6052 30	Changeover contactor		SPX size 000, 00, 1, 2, 3
		5 A 250 V AC; 4 A 30 V DC		
		Lockable faceplate for SPX		
		In closed position, the cover can be locked		
		For 4-7 mm padlocks		
		SPX size		
1	6052 35	000		
1	6052 36	00		
1	6052 37	1, 2, 3		
		DIN rail adaptor for SPX		
1	6052 45	For 1 isolator		SPX size 000
		Collector rail supports for 60 mm phase offset		
		Isolating support for 12, 15, 20, 25, 30 x 510 mm flat rigid copper rails		
		For installing SPX isolators on 60 mm collector rail		
		Can be installed in XL ³ 400/800/4000 distribution using vertical adaptors for uprights		
		Tightening torque: Md = 4 Nm		
		The internal strengthening uprights provide the necessary support		
		Maximum temperature: Tmax = 120 °C		
1	6052 46	3P		SPX size 000, 00, 1, 2, 3

SPX

isolator with blade type fuse carrier

Electrical characteristics

Type		SPX 000	SPX 00	SPX 1	SPX 2	SPX 3
Size		000	00	1	2	3
Nominal current I _n		125 A	160 A	250 A	400 A	630 A
Type of current		AC (50-60 Hz) DC	AC (50-60 Hz) DC	AC (50-60 Hz) DC	AC (50-60 Hz) DC	AC (50-60 Hz) DC
Nominal voltage U _n		690 V AC 250 V DC	690 V AC 250 V DC	690 V AC 440 V DC	690 V AC 440 V DC	690 V AC 440 V DC
Rated insulating voltage U _e		800 V	800 V	800 V	800 V	800 V
Rated impulse withstand voltage U _{imp}		6 kV	6 kV	6 kV	6 kV	6 kV
Category of use EN 60947-3	400 V 	AC 23 B	AC 23 B	AC 23 B	AC 23 B	AC 23 B
	500 V 	AC 22 B	AC 22 B, AC 23 B (125 A)	AC 23 B	AC 23 B	AC 23 B
	690 V 	AC 21 B	AC 22 B	AC 23 B	AC 23 B	AC 23 B
	220 V 	DC 21 B; DC 22 B (100 A)	DC 22 B (160 A)	DC 22B	DC 22B	DC 22B
	440 V 	DC 21 B (80 A); DC 22 B (63 A)	DC 21 B (160 A); DC 22 B (125 A)	DC 22B	DC 22B	DC 22B
Conditional rated short-circuit current (with gG/gL fuses)		50 kA (peak 105 kA)	50 kA (peak 105 kA)	50 kA (peak 105 kA)	50 kA (peak 105 kA)	50 kA (peak 105 kA)
Power dissipated per pole, with blade type fuse carrier ⁽¹⁾		9 W	12 W	23 W	34 W	48 W

Connection characteristics

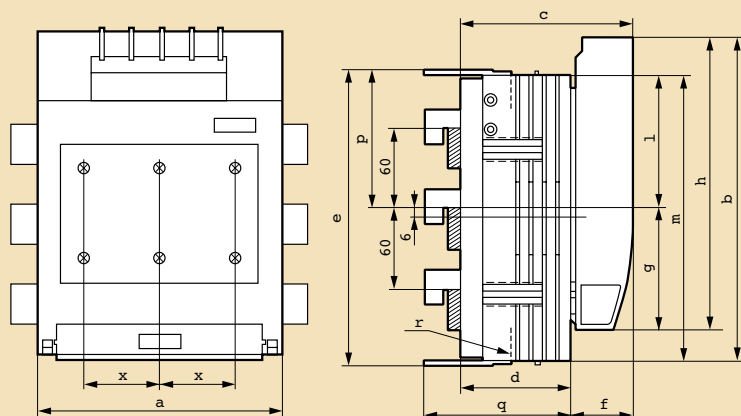
Type		SPX 000	SPX 00	SPX 1	SPX 2	SPX 3
Lug mounting	Connection	-	M 8	M 10	M 10	M 12
	Tensile strength	-	12-14 Nm	30-35 Nm	30-35 Nm	35-40 Nm
Flat fixing for flexible copper rail, for flexible or rigid copper and multi-core cables	Connection	-	1.5-70 mm ²	70-150 mm ²	120-240 mm ²	150-300 mm ²
	Tensile strength	-	3 Nm	5-6 Nm	6-8 Nm	6-8 Nm
Prism fixing for flexible copper rail, for flexible or rigid multicore copper and aluminium cables	Connection	-	16-70 mm ²	70-150 mm ²	120-240 mm ²	150-300 mm ²
	Tensile strength	-	3 Nm	5-6 Nm	6-8 Nm	6-8 Nm
Other fixings	Connection	Cage terminals 1.5-50 mm ²	3 inputs connector Cat. No. 6052 26 3 x 1.5-16 mm ²	-	-	-
	Tensile strength	4 Nm	3 Nm	-	-	-

(1) Fuse carrier nominal current according to standard DIN 43620

SPX

isolators with blade type fuse carrier (continued)

SPX 1 Cat. No. 6052 05, SPX 2 Cat. No. 6052 07, SPX 3 Cat. No. 6052 09



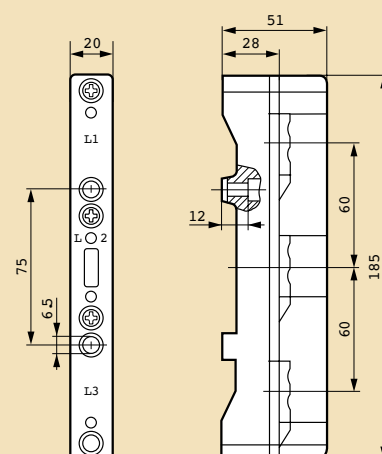
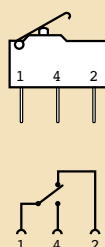
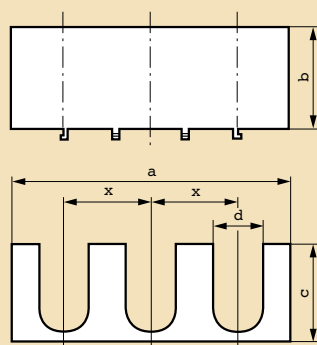
Cat. No.	a	b	c	d	e	f	g	h	l	m	p	q	r	x
6052 05	184	243	128.5	83	221	45.5	90	220	101	214.5	104.5	110.5	M10	57
6052 07	210	288	145	97	228	48	98	249	118	255	128	124.5	M10	65
6052 09	256	300	159.5	111.5	285	48	104.5	259	121.5	267	136.5	139	M12	81

Accessories

Cover for fixing accessories

Signalling contact Cat. No. 6052 30

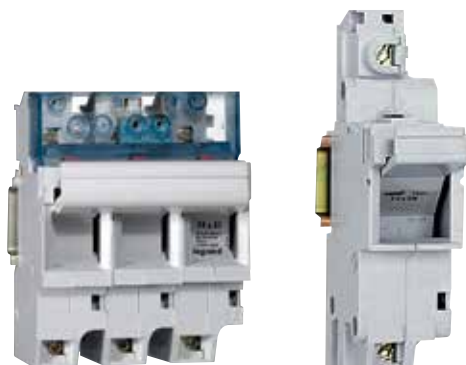
Collector rail support for a 60 mm phase distance Cat. No. 6052 46



Cat. No.	a	b	c	d	x
6052 31	105	34	46	22	33
6052 32	182.5	68	65	33	57
6052 33	208.5	51.5	79	43	65
6052 34	254	48	93.5	43	81

SP fuse carriers

With protected terminals



215 04

216 01

Conform to IEC 60269-2
Veritas approved
Height under front plate : 44 mm
3 rail mounting or panel mounting
IP2X - IP2XC under front plate

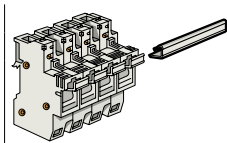
Pack	Cat. No.	SP 51 for HRC fuses 14 x 51			No of 17.5 mm modules
5	215 01	Single pole	1 x 35 mm ² or		1.5
1	215 04	Triple pole	2 x 16 mm ²		4.5

Pack	Cat. No.	SP 58 for HRC fuses 22 x 58			No of 17.5 mm modules
3	216 01	Single pole	1 x 50 mm ² or		2
1	216 04	Triple pole	2 x 25 mm ²		6

With 5 A - 250 V~ changeover micro-switch
Signalling and cut-out functions
Supplied with 3 x 2.8 mm clips

1	216 36	Triple pole	1 x 50 mm ² or 2 x 25 mm ²		6
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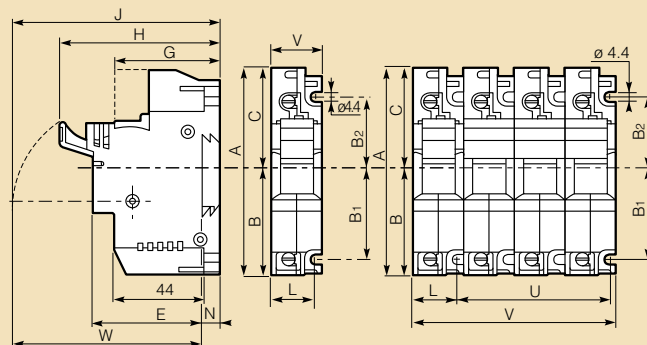
5	216 96	Accessory Link handle for association of single pole units SP 51 or SP 58 Length 300 mm Can be cut to required length HRC cartridge fuses		
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SP fuse carriers

With protected terminals

SP 51 and SP 58



In mm	A	B	B ₁	B ₂	C	E	G	H 1 P	H multi.	J 1 P
SP 51	106	54.5	45	35	51.5	55	53	81	84	96
SP 58	140	74	65	45	66	59	53	87	90	111

In mm	J multi.	L	N	U 2 P	U 3 P	U 4 P	V 1 P	V 2 P	V 3 P	V 4 P	W 1 P	W multi.
SP 51	99	20.7	9	26.5	53	79.5	26.5	53	79.5	106	87	90
SP 58	114	27	9	36	72	108	36	72	108	144	101	109

Choice of equipment

Type	Rated current	Maximum cartridge rating					
		400 V±		500 V±		690 V±	
		gG	aM	gG	aM	gG	aM
SP 51	50 A	50	50	50	40	25	25
SP 58	100 A (125 A in 400 V)	125	125	100	100	50	50

These values are standardised according to IEC 60269-2/2-1
They can be reduced under certain specific applications

Index of protection: IP 2X - IP 2XC - under casing

Equipment derating

Recommended for equipment exposed to high temperatures:

- Ambient temperature over 35° C: derate fuse by one rating per 10° C (UTE C 20-051 IEC 60943)
- Side-by-side equipment in simultaneous function

2 - 3 devices	0.9 x I _n
4 - 5 devices	0.8 x I _n
6 - 7 - 8 - 9 devices	0.7 x I _n
≥ 10 devices	0.6 x I _n

This coefficient is to be applied on the nominal rating of the base (IEC 60439-1)

- Uninterrupted usage: it may be necessary to upgrade the bases by one size

HRC cartridge fuses



Pack	Cat. No.	Cylindrical type gG			Pack	Cat. No.	Cylindrical type aM (motor rated)		
		Conform to EN 60269-1, IEC 60269-1 and 2 Veritas approved					Conform to EN 60269-1, IEC 60269-1 and 2 Veritas approved		
		Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps)			Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps)
	Without indicator	8 x 32 (previously 8.5 x 31.5)				Without indicator	10 x 38 HRC		
10	123 01	1			10	130 95	0.50		
10	123 02	2			10	130 01	1		
10	123 04	4			10	130 02	2		
10	123 06	6	400	20000	10	130 04	4		
10	123 10	10			10	130 06	6		
10	123 16	16			10	130 08	8	500	100000
	Without indicator	10 x 38 HRC			10	130 10	10		
10	133 94	0.5			10	130 12	12		
10	133 01	1			10	130 16	16		
10	133 02	2			10	130 20 ⁽²⁾	20	400	
10	133 04	4			10	130 25 ⁽²⁾	25	400	
10	133 06	6				Without striker	14 x 51 HRC		
10	133 08	8	500	100000	10	140 08	8		
10	133 10	10			10	140 10	10		
10	133 16	16			10	140 12	12	500	100000
10	133 20	20			10	140 16	16		
10	133 25	25			10	140 20	20		
	Without striker	14 x 51 HRC			10	140 25	25		
10	143 02	2			10	140 32	32		
10	143 04	4			10	140 40	40		
10	143 06	6			10	140 50 ⁽¹⁾	50	400	
10	143 10	10				Without striker	22 x 58 HRC		
10	143 16	16			10	150 25	25		
10	143 20	20	500	100000	10	150 32	32		
10	143 25	2			10	150 40	40		
10	143 32	32			10	150 50	50	500	100000
10	143 40	40			10	150 63	63		
10	143 50 ⁽¹⁾	50			10	150 80	80		
	Without striker	22 x 58 HRC			10	150 96	100		
10	153 16	16			10	150 97	125	400	
10	153 20	20							
10	153 25	25							
10	153 32	32							
10	153 40	40							
10	153 50	50	500	100000					
10	153 63	63							
10	153 80	80							
10	153 96	100							
10	153 97 ⁽¹⁾	125	400						

		Neutral links		
10	123 00	8 x 32 (previously 8.5 x 31.5)		
10	133 00	10 x 38		
10	143 00	14 x 51		
10	153 00	22 x 58		

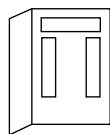
Note: For Isolating fuse carriers 8.5 x 32 and 10 x 38 see page 165
 (1) Overrating described by standards
 (2) Overrating not described by standards

Distribution Boards DBXIP

IP55



HPM0800L2425F



DBXIP top knock-out configuration

Technical Data

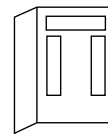
24 to 84 pole
Fitted with 250 A chassis 25 kA/0.1s
Ample space for wiring
Full size Earth & Neutral bars fitted
Top Din knock-out facility (20 module wide)
Circuit identification and schedule cards provided
Available with 250 A Main switch
Panel board depth 200mm

Distribution Boards DBX³

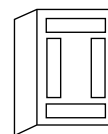
IP42



DB24P250M0800H



DBX³ 1D top knock-out configuration



DBX³ 2D top & bottom knock-out configuration

Technical Data

24 to 84 pole
Fitted with 250 A chassis 25 kA/0.1s
Ample space for wiring
Double screw, split Earth and Neutral bars fitted
Slotted duct for better cable management
Top and/or bottom Din knock-out facility (30 module wide)
Equipped with sturdy flush lock
Reversible door
Hinged escutcheon
Top and bottom removable gland plates
Circuit identification and schedule cards provided
Extension box can be added as an option
Available with 250 A main switch
Panel board depth 225mm including door (door = 20mm)

Pack	Cat. No.		No. of poles	Dimensions All DBs are 200mm deep
	GREY	ORANGE		
1	HPM0800L2425F	HPM0800L2425F0	24 pole	800(H)x600(W)
1	HPM0800L3625F	HPM0800L3625F0	36 pole	800(H)x600(W)
1	HPM1000L4825F	HPM1000L4825F0	48 pole	1000(H)x600(W)
1	HPM1000L6025F	HPM1000L6025F0	60 pole	1000(H)x600(W)
1	HPM1200L7225F	HPM1200L7225F0	72 pole	1200(H)x600(W)
1	HPM1200L8425F	HPM1200L8425F0	84 pole	1200(H)x600(W)

Distribution Boards with top row knock-out

Pack	Cat. No.		No. of poles	Dimensions All DBs are 225mm deep
	GREY	ORANGE		
1	DB24P250M0800H	DB24P250M0800HO	24 pole	800(H)x590(W)
1	DB36P250M0800H	DB36P250M0800HO	36 pole	800(H)x590(W)
1	DB48P250M1000H	DB48P250M1000HO	48 pole	1000(H)x590(W)
1	DB60P250M1000H	DB60P250M1000HO	60 pole	1000(H)x590(W)
1	DB72P250M1200H	DB72P250M1200HO	72 pole	1200(H)x590(W)
1	DB84P250M1400H	DB84P250M1400HO	84 pole	1400(H)x590(W)

Distribution Boards with top row knock-out (1 knock-out)

Pack	Cat. No.		No. of poles	Dimensions All DBs are 225mm deep
	GREY	ORANGE		
1	DB24PM2D0800H	DB24PM2D0800O	24 pole	800(H)x590(W)
1	DB36PM2D1000H	DB36PM2D1000O	36 pole	1000(H)x590(W)
1	DB48PM2D1200H	DB48PM2D1200O	48 pole	1200(H)x590(W)
1	DB60PM2D1200H	DB60PM2D1200O	60 pole	1200(H)x590(W)
1	DB72PM2D1400H	DB72PM2D1400O	72 pole	1400(H)x590(W)
1	DB84PM2D1400H	DB84PM2D1400O	84 pole	1400(H)x590(W)

Distribution Boards with top & bottom row knock-outs (2 knock-outs)

Pack	Cat. No.		No. of poles	Dimensions All DBs are 225mm deep
	GREY	ORANGE		
1	DBEQUIP-2D400H	DBEQUIP-2D400HO	400(H)x590(W)x225(D) mm	

Common accessories

Equipment boxes provide additional space for mounting extra protection or control gear. They can be mounted on top or bottom of Distribution Boards and are fitted with 2 Din rails 24 module wide.

Dimensions

Note: Grey colour DBXIP Distribution Boards have fixed escutcheon.
Orange colour DBXIP Distribution Boards have hinged escutcheon

Distribution Boards, Chassis & Accessories



602210

Pack	Cat. No.	Split Chassis DBs
1	DB12/24P10002D	12/24P SPLIT CHASSIS DB
1	DB12/36P12002D	12/36P SPLIT CHASSIS DB
1	DB24/24P12002D	24/24P SPLIT CHASSIS DB
1	DB12/48P12002D	12/48P SPLIT CHASSIS DB
1	DB24/36P12002D	24/36P SPLIT CHASSIS DB
1	DB12/60P14002D	12/60P SPLIT CHASSIS DB
1	DB24/48P14002D	24/48P SPLIT CHASSIS DB
1	DB36/36P14002D	36/36P SPLIT CHASSIS DB
1	DB12/12P08002D	12/12P SPLIT CHASSIS DB
1	DB12/72P14002D	12/72P SPLIT CHASSIS DB
1	DB24/60P14002D	24/60P SPLIT CHASSIS DB
1	DB36/48P14002D	36/48P SPLIT CHASSIS DB

Pack	Cat. No.	Chassis – 3 Pole – 250 A
		(red, white, blue) 250 A Chassis for 17.5mm module MCB's – 25 kA/ 0.1s
1	6 022 08	12 Pole
1	6 022 09	18 Pole
1	6 022 10	24 Pole
1	6 022 11	36 Pole
1	6 022 12	48 Pole
1	6 022 13	60 Pole
1	6 022 14	72 Pole
1	6 022 15	84 Pole

Pack	Cat. No.	Chassis – 3 Pole – 400 A
		400 A Chassis for 17.5mm module MCB's – 30 kA/ 0.1s
1	6 022 18	12 Pole
1	6 022 19	18 Pole
1	6 022 20	24 Pole
1	6 022 21	36 Pole
1	6 022 22	48 Pole
1	6 022 23	60 Pole
1	6 022 24	72 Pole
1	6 022 25	84 Pole

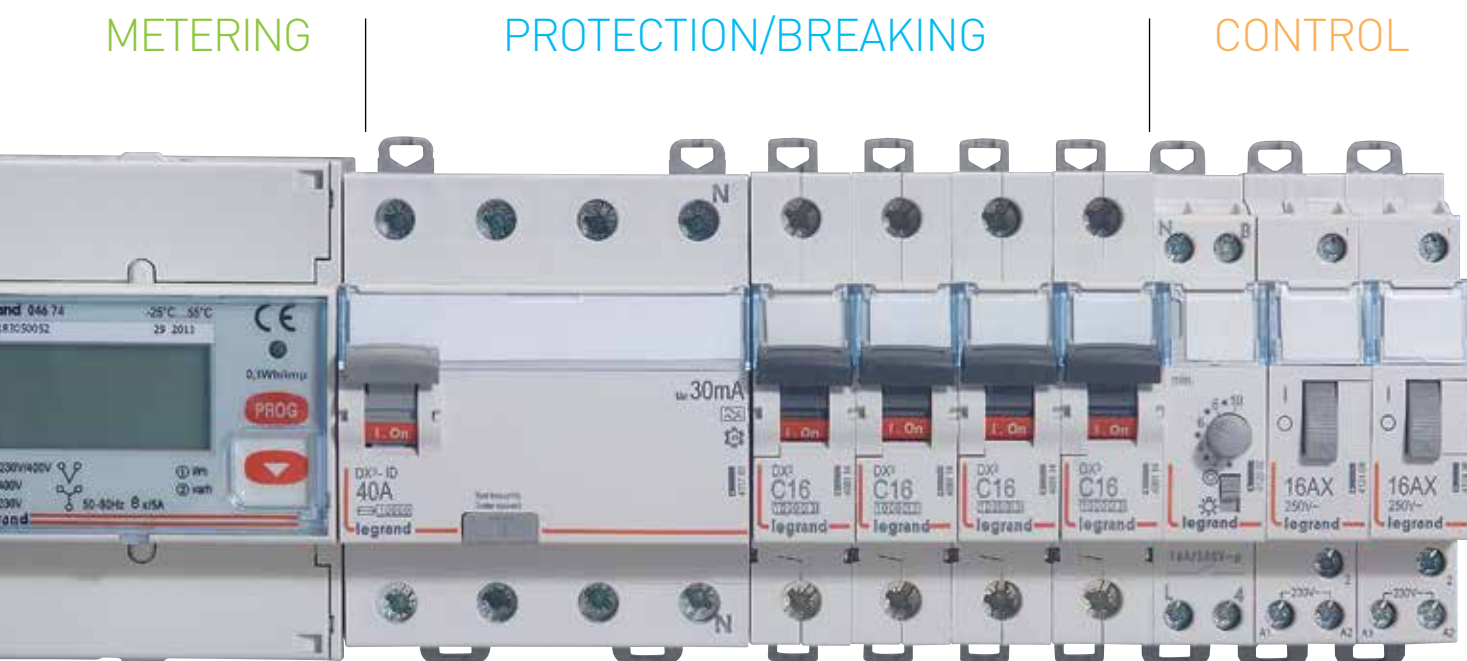
Pack	Cat. No.	Main Switch
1	2 046 39	3 Pole 250 A

Pack	Cat. No.	Emergency Lighting Test Switch
1	6 820 84	Modular E/L test switch (contactor not included)
1	041 29	Modular contactor 2pn/c 25A
1	041 32	Modular contactor 4pn/c 25A

Note: For 400A Distribution Boards, please consult us.

A clear comprehensive offer

With DX³, the variety of functions and range of characteristics offered will enable you to equip all your distribution boards. The very high levels of coordination between the various ranges of DX³ modular circuit breakers or between DX³ modular circuit breakers and DPX³ MCCBs enable the cost of the installation to be optimised.

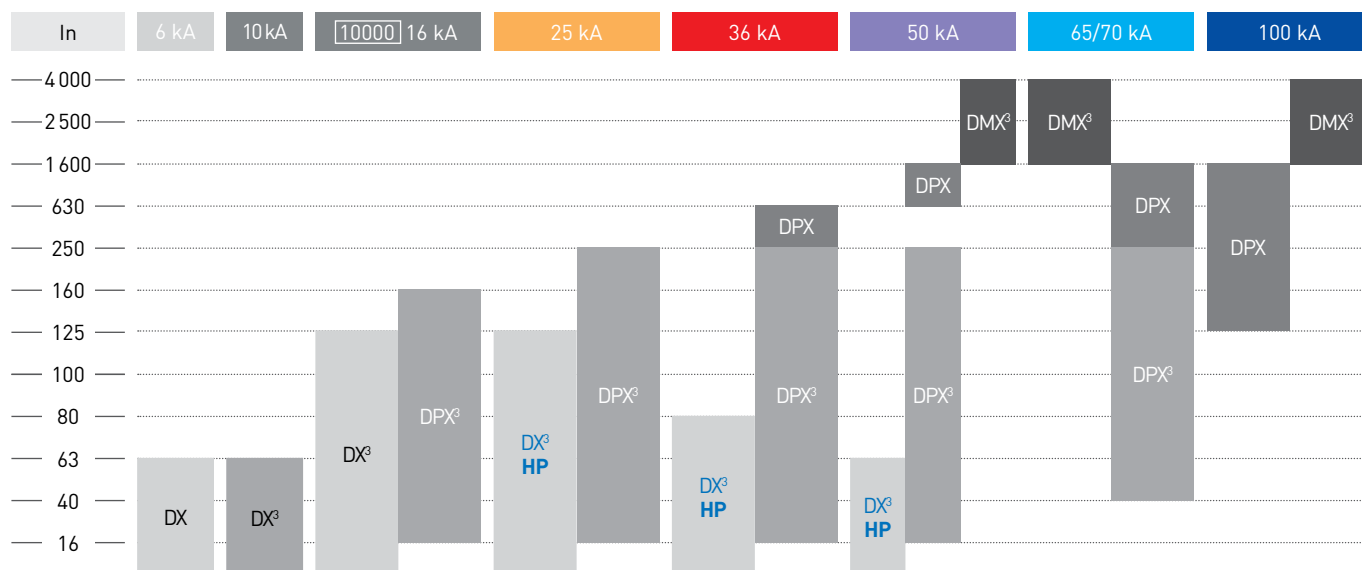


All functions on DIN rail



Each breaking capacity has its own power solution

Perfect complementary for your distribution boards up to 4000 A* and 100 kA breaking capacity



DX³ HP provides superior protection up to 50 kA in a compact frame DIN rail mounted

Top quality electrical performance

The DX³ range is designed to meet the efficiency, safety and compliance requirements.

Nominal current,
breaking capacity,
number of poles,
tripping curve,
discrimination:

The electrical characteristics of the new DX³ circuit breakers have been designed to meet the needs of all types of installations, from commercial buildings to the largest industrial sites.

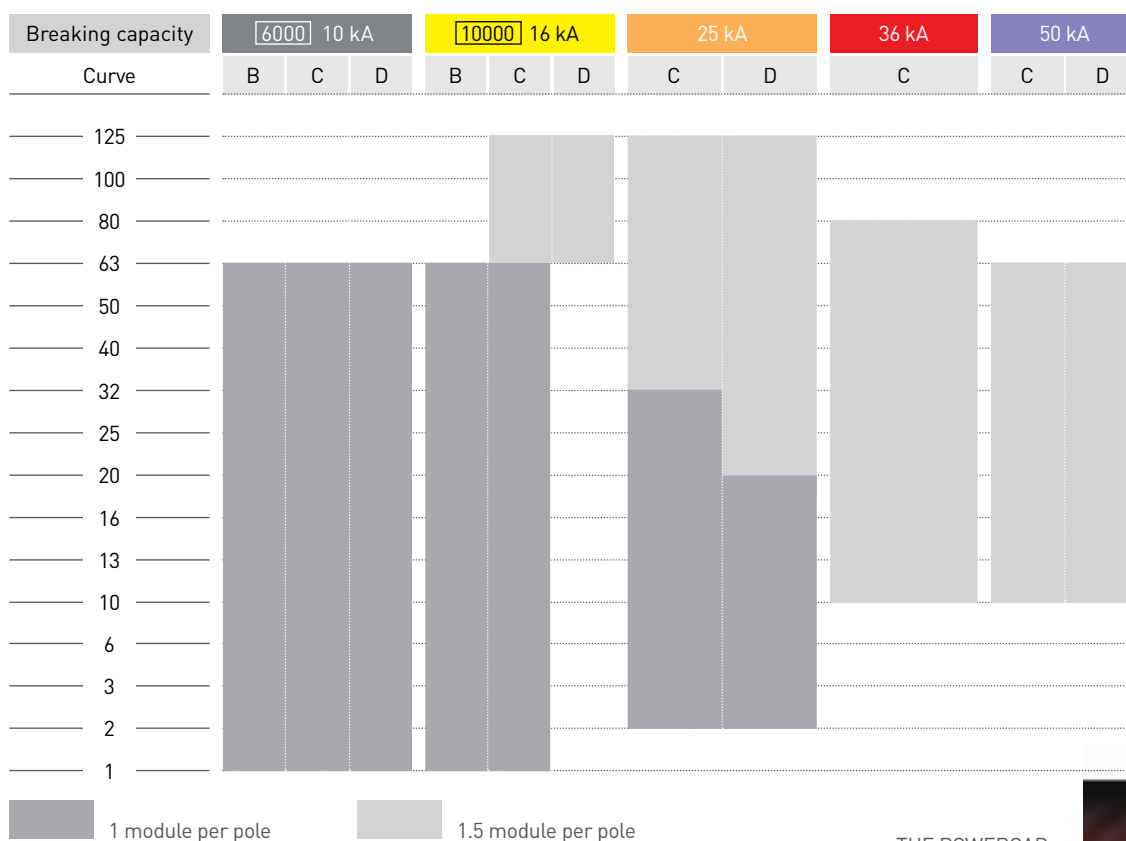


Compact:
10 to 32 A 4-pole DX³ RCBO only 4
modules, protected neutral.



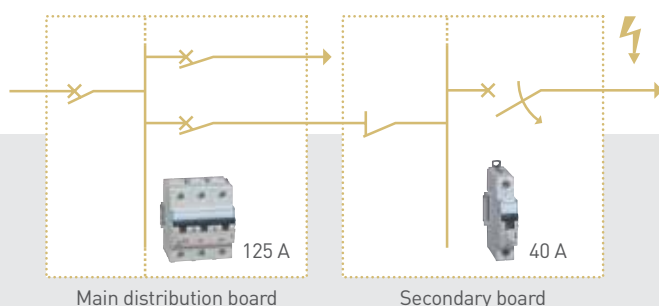
DX³ performance

A comprehensive, uniform range up to 125 A nominal current and 50 kA breaking capacity in a compact unit (1 or 1.5 modules/pole).



DX³ circuit breakers are limitation class 3: they limit the short-circuit power in the cables and can prolong the installation's life by avoiding damage to the cables resulting from the stresses caused by the power flowing through them. The products never work at the "limit" of their capacity.

The information in the table applies to 1P, 3P and 4P circuit breakers. For further information on the number of modules per pole, please refer to the catalogue pages.



The tripping characteristics are calculated and adjusted to ensure correct discrimination between the different protection levels in order to improve ease of use.

THE POWERCAD software include the whole DX³, DPX³ and DMX³ range for designing perfect electrical installations.



CONTINUITY OF SERVICE: OPTIMUM DISCRIMINATION

The excellent discrimination between DX³ circuit breakers and with DPX or DPX³ MCCBs ensures optimum continuity of service for your installations.

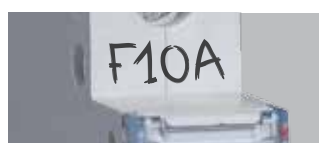
Clear identification of each circuit

At the head of distribution boards, at the head of rows
or to protect outgoing lines up to 125 A. There is always a DX³ solution

Quick identification of devices and
circuits is a guarantee of efficiency
not only for installation but also for
operation and maintenance

Legrand has always taken great care with
the marking and ease of identification
of its circuit breakers. The DX³ range
includes new enhancements so that your
distribution boards are even easier to use.

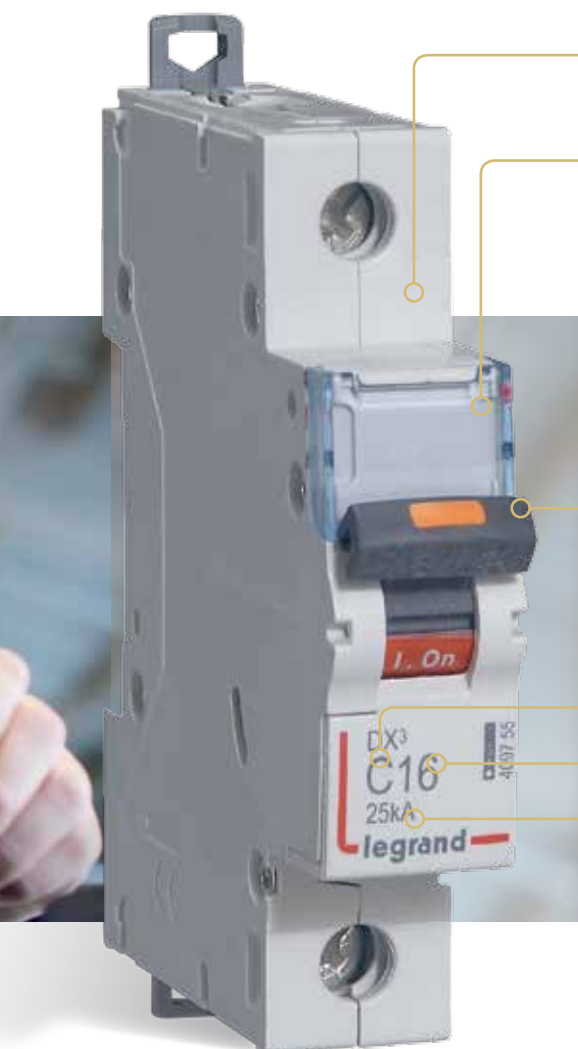




Technical
labelling area

Innovative label-holder:

- Improved opening
- Enhanced dust protection
- Label remains firmly in place during transport



Identification

Dual identification of the breaking capacity and clear marking for easier maintenance

Black handle: circuit breakers
Grey handle: switches

Breaking capacity

- 16 kA
- 25 kA
- 36 kA
- 50 kA

Curve

Rating

Breaking capacity according to IEC 60898-1

Limitation class and breaking capacity



STATE OF THE CIRCUIT BREAKER

Can be identified quickly via the colour marking on the handle:

- I-On/red
- O-Off/green

DX³ impeccable quality

Legrand pays particular attention to how these devices perform:
each of them is set and checked individually on the production lines

Main switches, RCCBs,
circuit breakers, RCB0s,
add-on modules, control
and signalling auxiliaries

the guarantee of finding
the function you need with a
uniform appearance and
optimised dimensions.



CERTIFICATION
OF LEGRAND'S FACTORIES:

- ISO 9001 for quality
- ISO 14001 for environmental protection



DX³ PRODUCTS ARE CERTIFIED IN ACCORDANCE WITH AUSTRALIAN AND INTERNATIONAL PRODUCT STANDARDS.

Approvals, such as RCM, which are universally recognised for the rigour of their requirements, are renewed regularly.



All DX³ circuit breakers can be used with an add-on module.

The DX³ control and signalling auxiliaries are common to all the protection devices irrespective of their size (1 or 1.5 modules per pole).



COPYTRACER, THE FIGHT AGAINST COUNTERFEITING

Copytracer is a unique registration number that is marked on some of our products. The number is stored in a database.

Go to the website: www.legrand-copytracer.com

Protection tailored to your requirements

The new DX³ add-on modules have a wide range of features to meet the most stringent requirements for the protection of people. Like the new DX³ circuit breakers, they offer high performance levels and incorporate innovative solutions for installation and operation.



Tripping on residual current faults is signalled by a yellow indicator

125 A add-on modules have automatic connection tap-off terminals for auxiliary circuits

Sealable terminal shield included on the whole range

High-capacity terminals and integrated insulating shields

Version		FIXED				ADJUSTABLE	
Sensitivity		30 mA		300 mA		300-500-1 000 mA	
Time delay		Instantaneous		Instantaneous		0-60-150 ms	
Max. current		63 A	125 A	63 A	125 A	63 A	125 A
AC type	4P		•		•		
	2P	•	•			•	•
	3P	•	•	•		•	•
	4P	•	•	•		•	•
A type Hpi	4P						
	2P						
	3P						
	4P						

A single mounting principle for all DX³ add-on modules

It has never been so quick and safe to fit an add-on module.

The exclusive Legrand system, common to the whole DX³ range, makes the assembly extremely strong and provides guaranteed safety.



Maximum continuity of service

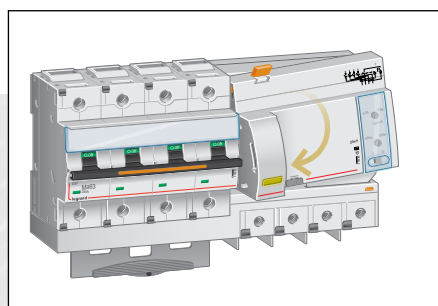
DX³ adjustable add-on modules can provide discrimination up to 3 levels by adjusting their sensitivity. They enable those parts of the installation that are not affected by a fault to remain operational, while ensuring total safety of people.



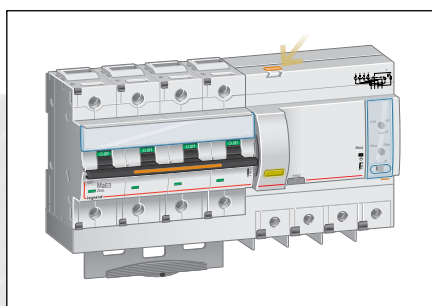
4P - 125 A ADD-ON MODULE
adjustable version



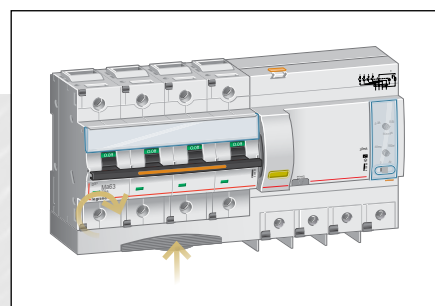
Easy to access settings on the front panel
with sealable transparent cover



FIT THE CIRCUIT BREAKER
and the add-on module



LOCK THE COMBINATION TOGETHER



TIGHTEN THE TERMINALS
and fit the terminal shield

Perfect control of your installation

The DX³ range has a selection of electrical auxiliaries for monitoring and controlling circuits remotely

Auxiliary contacts and fault signal contacts, shunt trips, undervoltage releases, motorised controls and automatic reclosers





The auxiliaries fit firmly without the need for any tools and ensure the whole assembly is robust



The accessibility of the terminals and the visibility of the screw heads make the installer's work easier

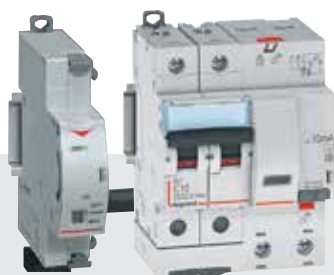


Marking of auxiliaries (characteristics, connection, mounting)

The fault signal contacts have a test button

The colour code of the indicators on the signalling auxiliaries is the same as that of the remote indicators

DX³ circuit breakers take up to 3 auxiliaries including one control auxiliary



DX³ motorised controls can be used with 1 module per pole devices (circuit breakers, RCBOs and RCCBs) just as easily as auxiliaries.

OPTIMISED SPACE IN THE DISTRIBUTION BOARD

Legrand motorised controls are the most compact on the market: 1 module wide. They save a great deal of space inside the distribution board.

Easy, safe connection

Safety is prioritised with the innovative features of the DX³ products

The quality and hold of the connections are vital for the safety of distribution boards

This is why Legrand, with its wealth of experience and expertise, has broken new ground again with terminals with a loosening compensation system and retractable insulating shields.



1 MODULE/POLE
Terminal capacity:
 $I_n \leq 63 \text{ A} \rightarrow 35 \text{ mm}^2$



1,5 MODULES/POLE
Terminal capacity:
 $I_n \leq 63 \text{ A} \rightarrow 50 \text{ mm}^2$
 $I_n \geq 80 \text{ A} \rightarrow 70 \text{ mm}^2$





Wire guide flap ensures the wire is in the correct position



Rising clamp terminals ensure a high quality, durable connection



Reliable connections, compensation for the effect of loosening to ensure excellent hold over time and consistent contact ($I_n \geq 80$ A)

Temperature rise
-20%



1
module/pole

1,5
modules/pole



Clamping screw for flat or pozidrive screwdriver. Tightening torques higher than those recommended by the standard



The use of an Allen key makes it easier to tighten to the required torque ($I_n \geq 80$ A)



RETRACTABLE INSULATING SHIELDS

With the integrated retractable insulating shields, no additional accessories are needed to isolate the connections on all breaking capacities and high ratings of the 1.5 modules/pole ($I_n \leq 63$ A) circuit breakers.

Easy operation and maintenance

When designing the DX³ range, Legrand did not forget about users and maintenance engineers

As well as the already well-known functions such as the double clip which enables maintenance to be carried out on the module, new features such as the labelling area, automatic connection tap-off terminals and status indicators have been added to make day-to-day use of distribution boards even easier.

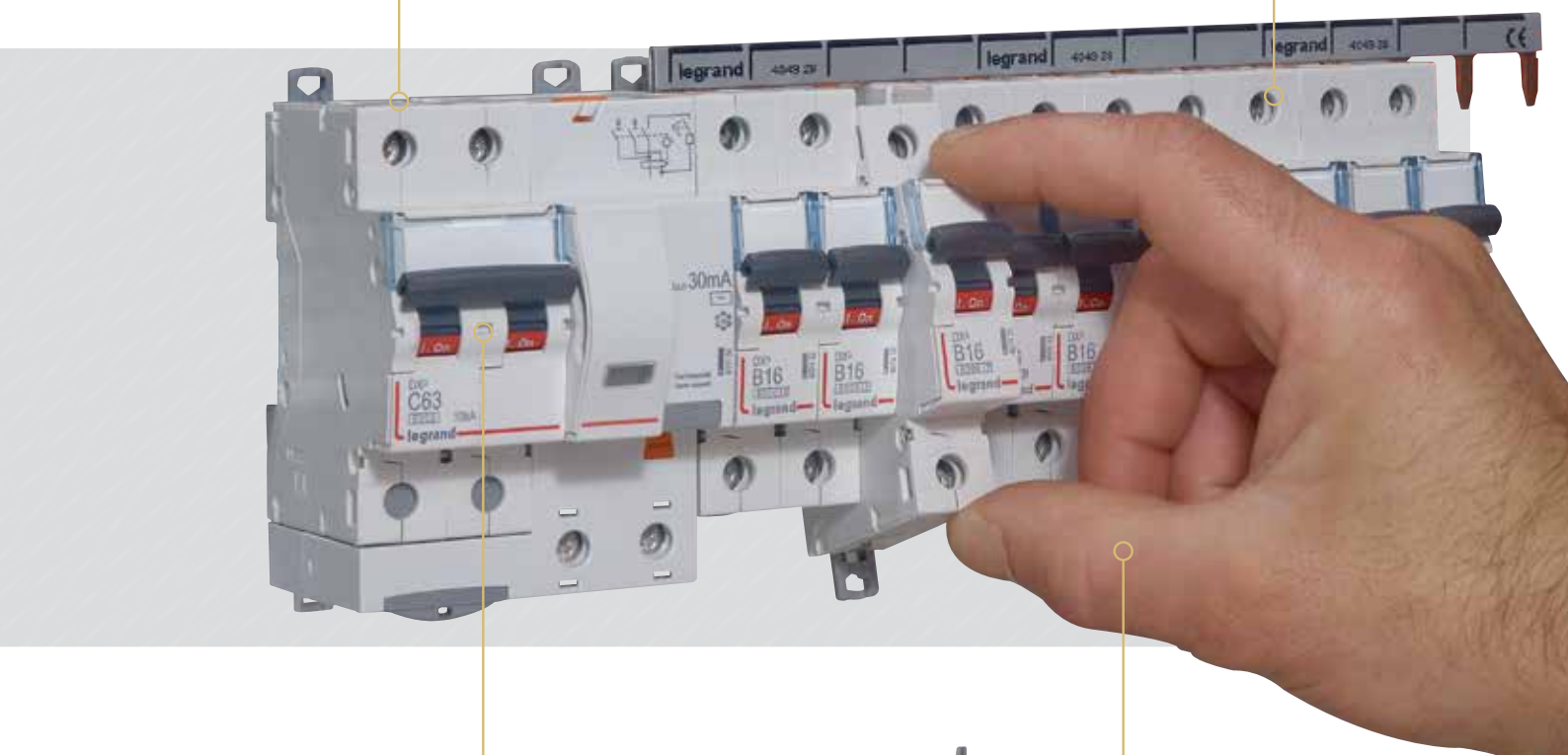




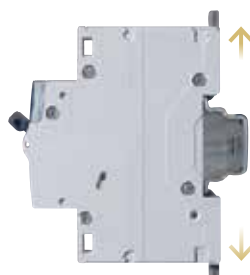
EASY TAP-OFF CONNECTION FROM 80 A
The IP 2x automatic tap-off terminals can be used to connect an auxiliary circuit or a measuring device safely



INCREASED SAFETY
The DX³ range guarantees IP2x protection. There is no risk of contact with live parts, even when the faceplate is open.



LOCKING IN OPEN POSITION
for 1.5 module per pole devices using a single Colring cable tie



THE DOUBLE CLIP
enables a device to be replaced without disconnecting the whole row

Smart control devices for energy savings

The Legrand modular control and monitoring devices are a perfect addition to the range of DX³ protection devices

With the same design, they
integrate perfectly in your
distribution boards

Power contactors, pulse operated latching relays, pushbuttons, indicators, timers, programmers, etc. With the selection of functions available it is simple to improve the safety, efficiency and comfort of installations and meet energy requirements.



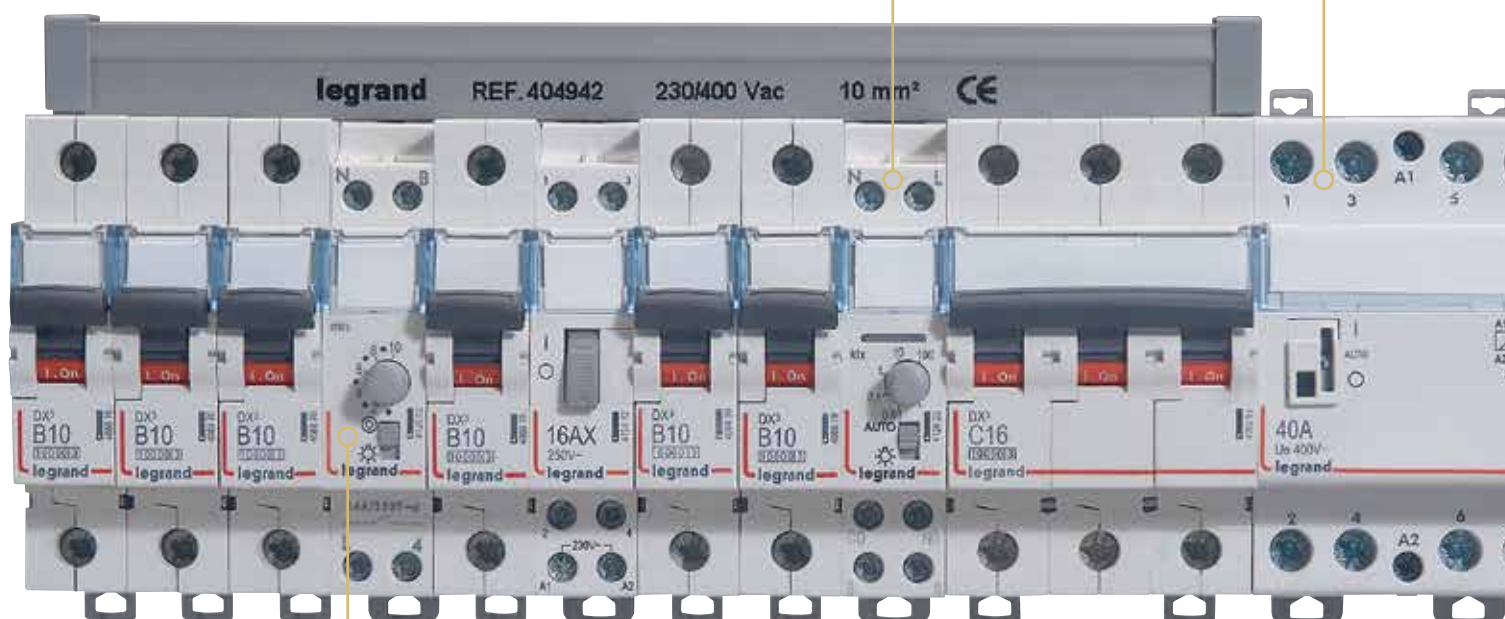


SUPPLY BUSBAR INSERTION

There is a position on the top of the control devices for inserting the supply busbar

LIGHT SENSITIVE SWITCH
to switch lighting on automatically when the natural light decreases

16 A TO 63 A LEGRAND POWER CONTACTORS are available with 24 VAC or 230 VAC coil



TIMER
to switch off of lighting automatically after an adjustable period of 0.5 s to 10 min



- 1 to 4 x 16 A outputs
- 24-hour, 7-day or annual programming
- Programming direct or from a PC with a transfer key



ENERGY SAVINGS WITH TIMERS

In order to optimise power consumption, Legrand electronic timers can be used to assign operating periods, for example for heating or lighting.

MCBs DX³ 10000 - 16 kA

thermal magnetic circuit breakers from 1 A to 125 A
C curve



4 091 11



4 092 03



4 092 82



Main switches

p. 108



Dimensions see **p. 145**
Technical characteristics **p. 152**

Conform to IEC 60898-1
Breaking capacity
10000 - IEC 60898-1 - 400 V~
16 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	MCBs DX ³ 10000 - 16 kA - C curve	
		Single pole 230/400 V~	
		C curve	Number of modules
1	4 091 07	1	1
1	4 091 08	2	1
1	4 091 09	3	1
1	4 091 11	6	1
1	4 091 12	10	1
1	4 091 13	13	1
1	4 091 14	16	1
1	4 091 15	20	1
1	4 091 16	25	1
1	4 091 17	32	1
1	4 091 18	40	1
1	4 091 19	50	1
1	4 091 20	63	1
1	4 091 40	80	1.5
1	4 091 41	100	1.5
1	4 091 42	125	1.5
		2-pole 230/400 V~	
1	4 091 95	1	2
1	4 091 96	2	2
1	4 091 97	3	2
1	4 091 99	6	2
1	4 092 00	10	2
1	4 092 01	13	2
1	4 092 02	16	2
1	4 092 03	20	2
1	4 092 04	25	2
1	4 092 05	32	2
1	4 092 06	40	2
1	4 092 07	50	2
1	4 092 08	63	2
		3-pole 400 V~	
1	4 092 47	1	3
1	4 092 48	2	3
1	4 092 49	3	3
1	4 092 51	6	3
1	4 092 52	10	3
1	4 092 53	13	3
1	4 092 54	16	3
1	4 092 55	20	3
1	4 092 56	25	3
1	4 092 57	32	3
1	4 092 58	40	3
1	4 092 59	50	3
1	4 092 60	63	3
1	4 092 80	80	4.5
1	4 092 81	100	4.5
1	4 092 82	125	4.5

Pack	Cat.No.	MCBs DX ³ 10000 - 16 kA - C curve (continued)	
		4-pole 400 V~	
		C curve	Number of modules
1	4 093 29	1	4
1	4 093 30	2	4
1	4 093 31	3	4
1	4 093 33	6	4
1	4 093 34	10	4
1	4 093 35	13	4
1	4 093 36	16	4
1	4 093 37	20	4
1	4 093 38	25	4
1	4 093 39	32	4
1	4 093 40	40	4
1	4 093 41	50	4
1	4 093 42	63	4

NEW

MCBs DX³ [6000] - 10 kA

thermal magnetic circuit breakers from 1 A to 63 A
D curve



4 079 67



4 080 33



Dimensions see **p. 145**
Technical characteristics **p. 152**

Conform to IEC 60898-1

Breaking capacity

[6000] - IEC 60898-1 - 400 V~

10 kA - IEC 60947-2 - 400 V~

Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	MCBs DX ³ 6000 - 10 kA - D curve	
		Single pole 230/400 V~	
	D curve	Nominal rating I _n (A)	Number of modules
1	4 079 67	6	1
1	4 079 69	10	1
1	4 079 71	16	1
1	4 079 72	20	1
1	4 079 73	25	1
1	4 079 74	32	1
1	4 079 75	40	1
1	4 079 76	50	1
1	4 079 77	63	1
		2-pole 230/400 V~	
1	4 080 27	6	2
1	4 080 29	10	2
1	4 080 31	16	2
1	4 080 32	20	2
1	4 080 33	25	2
1	4 080 34	32	2
1	4 080 35	40	2
1	4 080 36	50	2
1	4 080 37	63	2
		3-pole 400 V~	
1	4 080 85	6	3
1	4 080 87	10	3
1	4 080 89	16	3
1	4 080 90	20	3
1	4 080 91	25	3
1	4 080 92	32	3
1	4 080 93	40	3
1	4 080 94	50	3
1	4 080 95	63	3
		4-pole 400 V~	
1	4 081 43	6	4
1	4 081 45	10	4
1	4 081 47	16	4
1	4 081 48	20	4
1	4 081 49	25	4
1	4 081 50	32	4
1	4 081 51	40	4
1	4 081 52	50	4
1	4 081 53	63	4

Auxiliaries and remote control

Common auxiliaries and motorised controls for DX³ MCBs, RCBs and RCCBs

DISCOVER THE RANGE

- Perfect fitting on protection devices
- Easy to access and visible terminals
- Allow insertion of supply busbars



>>> Signalling auxiliaries, p. 150



>>> Current shunt trips, p. 150



>>> Undervoltage releases, p. 150



>>> Motorised controls, p. 150

+ MORE INFORMATION



> www.legrand.com.au

NEW

MCBs DX³ - 25 kA

thermal magnetic MCBs from 6 A to 125 A



Orange marking = 25 kA

4 097 81



Dimensions see **p. 145**
Technical characteristics **p. 152**

Breaking capacity:
25 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	MCBs DX ³ - 25 kA - C curve	
		Single pole 230/400 V~	
		C curve	
		Nominal rating I _n (A)	Number of modules
1	4 097 53	6	1
1	4 097 54	10	1
1	4 097 55	16	1
1	4 097 56	20	1
1	4 097 57	25	1
1	4 097 58	32	1.5
1	4 097 59	40	1.5
1	4 097 60	50	1.5
1	4 097 61	63	1.5
1	4 097 62	80	1.5
1	4 097 63	100	1.5
1	4 097 64	125	1.5
		3-pole - 400 V~	
1	4 097 79	6	3
1	4 097 80	10	3
1	4 097 81	16	3
1	4 097 82	20	3
1	4 097 83	25	3
1	4 097 84	32	4.5
1	4 097 85	40	4.5
1	4 097 86	50	4.5
1	4 097 87	63	4.5
1	4 097 88	80	4.5
1	4 097 89	100	4.5
1	4 097 90	125	4.5

NEW

MCBs DX³ - 36 kA

thermal magnetic MCBs from 6 A to 63 A



Red marking = 36 kA

4 100 12



4 100 27



Dimensions see **p. 145**
Technical characteristics **p. 152**

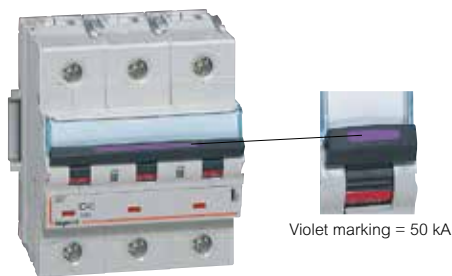
Breaking capacity:
36 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	MCBs DX ³ - 36 kA - C curve	
		2-pole 230 V~	
		C curve	
		Nominal rating I _n (A)	Number of modules
1	4 100 07	6	1.5
1	4 100 08	10	1.5
1	4 100 09	16	1.5
1	4 100 10	20	1.5
1	4 100 11	25	1.5
1	4 100 12	32	1.5
1	4 100 13	40	1.5
1	4 100 14	50	1.5
1	4 100 15	63	1.5
		3-pole - 400 V~	
1	4 100 20	6	4.5
1	4 100 21	10	4.5
1	4 100 22	16	4.5
1	4 100 23	20	4.5
1	4 100 24	25	4.5
1	4 100 25	32	4.5
1	4 100 26	40	4.5
1	4 100 27	50	4.5
1	4 100 28	63	4.5

NEW

MCBs DX³ - 50 kA

thermal magnetic MCBs from 10 A to 63 A



Violet marking = 50 kA

4 101 65

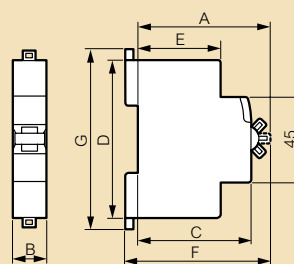


Dimensions see **p. 145**
Technical characteristics **p. 152**

Breaking capacity:
50 kA - IEC 60947-2 - 400 V~
Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	MCBs DX³ - 50 kA - C curve	
		Single pole 230/400 V~	
		C curve	Nominal rating I _n (A)
			Number of modules
1	4 101 34	10	1.5
1	4 101 35	16	1.5
1	4 101 36	20	1.5
1	4 101 37	25	1.5
1	4 101 38	32	1.5
1	4 101 39	40	1.5
1	4 101 40	50	1.5
1	4 101 41	63	1.5
		3-pole - 400 V~	
1	4 101 60	10	4.5
1	4 101 61	16	4.5
1	4 101 62	20	4.5
1	4 101 63	25	4.5
1	4 101 64	32	4.5
1	4 101 65	40	4.5
1	4 101 66	50	4.5
1	4 101 67	63	4.5

dimensions of din-rail equipment



	A	B					C	D	E	F	G
		1-pole	1-pole + N	2-pole	3-pole	4-pole					
Thermal-magnetic MCBs											
DX ³ 1 module per pole	70		17.7	35.4	53.1	70.5	60	83	44	76	94
DX ³ 25/36/50 kA	70	26.7		53.4	80.1	106.8	60	100	44	76	103
Add-on modules DX³											
up to 63 A	70			35.6	53.4	53.4	60	93	44	76	99
from 80 to 125 A	70			71.1	107.2	107.2	60	88	44	76	89
RCCBs 1P+N	70	17.7	35.6				60	83	44	76	94
4-pole RCCBs with 4 modules	70					71.2	60	83	44	76	94
RCCBs (DX³-ID)											
2-pole	70			35.6			60	83	44	76	94
4-pole	71.5					71.2	60	83	44	77.5	94
Fuse carriers	67	17.7	17.7	35.6	53.4	71.2	60	83	44	73	94
Auxiliary contacts											
Cat.Nos 4 062 58/60/62	70			8.7			60	83	44	76	83
Cat.No 4 062 66	70			17.7			60	83	44	76	83
Control auxiliaries	70			17.7			60	83	44	76	83
STOP & GO	74			54			74	83	44	80.5	102
DX³-IS isolating switches											
4 064 31/32/34/36/38/39/57/59/77/79	70.2			17.8	35.6	35.6	60.9	83	44.2	76.4	94.8
4 064 00/01/03/04/06/11/12/23/40/41/60/61/80/81	70.2	17.7		35.4	53.1	70.8	60.9	83	44.2	76.4	94.8
4 064 49/50/69/70/89/90	70.2	17.7		35.4	53.1	70.8	60.9	83	44.2	76.4	94.8
Changeover switches											
Cat.Nos 043 82/85	68			17.7			60	83	44	74	94
Cat.Nos 043 83/86	68			35.6			60	83	44	74	94
Voltage surge protectors											
039 20 to 23	60	17.7		35.6	53.4	71.2	60	86	44	68	91
039 30 to 33	60	17.7		35.6	53.4	71.2	60	86	44	68	91
039 40/41/43	60	17.7		35.6		71.2	60	86	44	68	91
038 28/29	60	17.7					60	86	44	68	91

RCCBs - DX³-ID

residual current devices 16 A to 80 A - AC and A types



4 115 25



4 117 05



4 117 60



Auxiliaries, accessories and remote control **p. 150**



Dimensions see **p. 145**
Technical characteristics **p. 153**

Conform to IEC 61008 - 1

- AC type : detect AC component faults
- A type : detect AC and DC component faults

Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	2-pole - 230 V~	
		AC Type 30 mA	
		Nominal rating I _n (A)	Number of modules
1	4 115 04	25	2
1	4 115 05	40	2
1	4 115 06	63	2
1	4 115 07	80	2
		AC Type 100 mA	
1	4 115 14	25	2
1	4 115 15	40	2
		AC Type 300 mA	
1	4 115 25	40	2
1	4 115 26	63	2
		A Type 30 mA	
1	4 115 54	25	2
1	4 115 55	40	2
1	4 115 56	63	2
1	4 115 57	80	2
		A Type 300 mA	
1	4 115 70	40	2
1	4 115 71	53	2

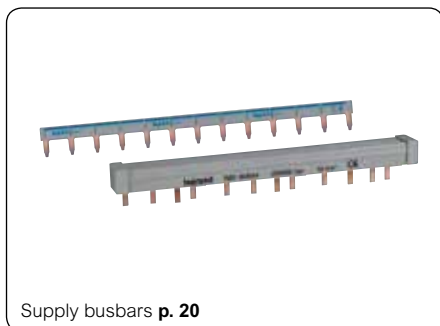
Pack	Cat.No.	4-pole - 400 V~ - neutral on right-hand side	
		AC Type 30 mA	
		Nominal rating I _n (A)	Number of modules
1	4 117 02	25	4
1	4 117 03	40	4
1	4 117 04	63	4
1	4 117 05	80	4
		AC Type 300 mA	
1	4 117 23	40	4
1	4 117 24	63	4
1	4 117 25	80	4
		A Type 30 mA	
1	4 117 59	25	4
1	4 117 60	40	4
1	4 117 61	63	4
1	4 117 62	80	4
		A Type 300 mA	
1	4 117 80	40	4

RCBOs DX™ 10000

residual current circuit breakers from 10 A to 45 A
AC type



6 064 15



Supply busbars p. 20



Dimensions see p. 145
Technical characteristics p. 153

Breaking capacity:

10000 - IEC 61009-1 - for single pole

- AC type : detect AC component faults

Pack	Cat.No.	Single pole - 230 V~		
		Blue neutral lead		
		AC Type 30 mA		
	C curve	Nominal rating I _n (A)		Number of modules
1	6 064 10	10		1
1	6 064 11	16		1
1	6 064 12	20		1
1	6 064 13	25		1
1	6 064 14	32		1
1	6 064 15	45		1

RCBOs DX³ 6000 - 10 kA

residual current circuit breakers from 6 A to 63 A
AC and A types

NEW



4 110 02



4 111 92



Dimensions see p. 145
Technical characteristics p. 153

Conform to IEC 61009-1

Breaking capacity:

6000 - IEC 61009-1 - 10 kA / IEC 60947-2 for single pole + neutral, 2 and 4-pole

- AC type : detect AC component faults
 - A type : detect AC and DC component faults
- Can be equipped with DX³ auxiliaries and accessories (p. 150)

Pack	Cat.No.	Single pole + neutral - 230 V~		
		Neutral on right-hand side		
		AC Type 10 mA		
	C curve	Nominal rating I _n (A)		Number of modules
1	4 109 93	16		2
		AC Type 30 mA		
1	4 109 99	6		2
1	4 110 00	10		2
1	4 110 02	16		2
1	4 110 03	20		2
1	4 110 04	25		2
1	4 110 05	32		2
1	4 110 06	40		2
		A Type 30 mA		
1	4 110 47	6		2
1	4 110 48	10		2
1	4 110 50	16		2
1	4 110 51	20		2
1	4 110 52	25		2
1	4 110 53	32		2
1	4 110 54	40		2

Pack	Cat.No.	4-pole - 400 - 230 V~		
		AC Type 30 mA		
	C curve	Nominal rating I _n (A)		Number of modules
1	4 111 85	10		4
1	4 111 86	16		4
1	4 111 87	20		4
1	4 111 88	25		4
1	4 111 89	32		4
1	4 111 90	40		7
1	4 111 91	50		7
1	4 111 92	63		7
		A Type 30 mA		
1	4 112 33	10		4
1	4 112 34	16		4
1	4 112 35	20		4
1	4 112 36	25		4
1	4 112 37	32		4

add-on modules DX³
for 1 module/pole DX³ MCBs
AC & A types



4 104 01



4 104 71



4 105 12



Technical characteristics **p. 153**

- Conform to IEC 61009-1
- AC type : detect AC components faults
 - A type : detect AC and DC component faults
 - Hpi type  : detect faults with AC and DC components, increased immunity to false tripping
- For mounting on the right-hand side of 1 module per pole DX³ MCBs

Pack	Cat.No.	2-pole - 230 V~	
		AC Type  30 mA	
		Nominal rating In (A)	Number of modules
1	4 104 01	40	2
1	4 104 02	63	2
		AC Type  300 mA	
1	4 104 13	40	2
1	4 104 14	63	2
		A Type  30 mA	
1	4 104 28	40	2
1	4 104 29	63	2

Pack	Cat.No.	4-pole - 400 V~	
		AC Type  30 mA	
		Nominal rating In (A)	Number of modules
1	4 104 99	40	3
1	4 105 00	63	3
		AC Type  300 mA	
1	4 105 11	40	3
1	4 105 12	63	3
		A Type  30 mA	
1	4 105 25	40	3
1	4 105 26	63	3

Pack	Cat.No.	3-pole - 400 V~	
		AC Type  30 mA	
		Nominal rating In (A)	Number of modules
1	4 104 71	40	3
1	4 104 72	63	3
		AC Type  300 mA	
1	4 104 74	40	3
1	4 104 75	63	3
		A Type  30 mA	
1	4 104 80	63	3

NEW

add-on modules DX³

for 1.5 module/pole DX³ MCBs
AC & Hpi types



4 106 43

Conform to IEC 61009-1

- AC type : detect AC components faults
- Hpi type : detect faults with AC and DC components, increased immunity to false tripping

For mounting on the right-hand side of 1.5 module per pole DX³ MCBs

Pack	Cat.No.	2-pole - 230 V~	
1	4 105 68	AC Type 30 mA	
		Nominal rating I _n (A)	Number of modules
		125	4
1	4 105 71	AC Type 300 mA	
		125	4
1	4 105 76	Hpi Type 30 mA	
1	4 105 78	63	2
		125	4
1	4 105 83	Hpi Type adjustable from 300 to 1000 mA	
		63	4

1	4 106 05	3-pole - 400 V~	
		Hpi Type 30 mA	
		Nominal rating I _n (A)	Number of modules
		63	3
1	4 106 11	Hpi Type adjustable from 300 to 1000 mA	
		63	6

1	4 106 25	4-pole - 400 V~	
		AC Type 30 mA	
		Nominal rating I _n (A)	Number of modules
		125	6
1	4 106 29	AC Type 300 mA	
		125	6
1	4 106 36	Hpi Type 30 mA	
1	4 106 38	63	3
		125	6
1	4 106 43	Hpi Type adjustable from 300 to 1000 mA	
		63	6

1	4 106 57	4-pole - 400 V~ - Energy Meter	
		LCD display	
		Measure and display current per phase, instantaneous active power and active energy	
1	4 106 58	Hpi Type with integrated energy meter	
		Nominal rating I _n (A)	Number of modules
		63	7, 5
		125	7, 5

1	4 106 59	4-pole - 400 V~ - Multi-function Metering Unit	
		LCD display	
		Measure and display current and voltage per phase, frequency, active and reactive power and energy harmonics	
		Hpi Type with integrated multi-function metering unit and adjustable sensitivity 30 to 3000 mA	
		Nominal rating I _n (A)	Number of modules
		125	7, 5

add-on modules DX³

Compatibility MCBs/add-on modules

Breaking capacity	Curve	Number of poles	Add-on module for 1 module/pole MCBs	Add-on module for 1.5 module/pole MCBs
6000 / 10 kA	B, C, D	2P, 3P, 4P	All range	-
10000 / 16 kA	B, C, D	2P, 3P, 4P	I _n ≤ 63 A	I _n ≥ 80 A
25 kA	B, C, Z	3P, 4P	I _n ≤ 25 A	I _n ≥ 32 A
		2P	I _n ≤ 32 A	I _n ≥ 40 A
	D	3P, 4P	I _n ≤ 10 A	I _n ≥ 12,5 A
		2P	I _n ≤ 25 A	I _n ≥ 32 A
50 kA	B, C, D	2P, 3P, 4P		All range

Adjustable add-on modules, Hpi type

Easy to access settings on front panel with sealable transparent cover

Sensitivity: 300, 500 and 1000 mA

Time delay: instantaneous, selective (60 ms) or delayed (150 ms)



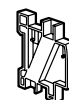
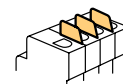
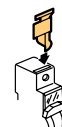
auxiliaries, remote control and accessories DX³



Technical characteristics **p. 152**

Pack	Cat.No.	Auxiliaries	No. of modules
		Mounted on the left-hand side of the devices Possible configuration per device: 3 auxiliaries including 1 control auxiliary Auxiliaries common to MCBs, RCBOs, RCCBs and main switches Allow insertion of the supply busbar	
		Signalling auxiliaries	
1	4 062 58	Auxiliary changeover switch, 6 A - 250 V~ Indicates the position of the contacts of the MCB, RCCB or main switch	0.5
1	4 062 60	Fault signalling changeover switch, 6 A - 250 V~ Indicates opening on a fault	0.5
1	4 062 62	Auxiliary changeover switch, 6 A - 250 V~ Can be changed to a fault signalling changeover switch	0.5
1	4 062 66	Auxiliary changeover switch + fault signalling changeover switch, 6 A - 250 V~ Can be changed to 2 auxiliary changeover switches	1
		Current shunt trips	
		Used for remote tripping of an MCB, RCCB, RCBO or main switch at the supply end	
1	4 062 76	12 to 48 V~/=	1
1	4 062 78	110 to 415 V~	1
		Undervoltage releases	
		Time delay adjustable from 0 to 300 ms	
1	4 062 80	24 to 48 V~/=	1
1	4 062 82	230 V~	1

Pack	Cat.No.	Motorised controls	No. of modules
		For mounting on the left-hand side of 1 module/pole MCBs, RCBOs and RCCBs Enable the products with which they are used to be opened and closed remotely Take one control auxiliary and one signalling auxiliary The signalling auxiliary must be placed between the remote control and the control auxiliary	
		Standard	
		Control voltage	No. of modules
1	4 062 91	230 V~	1
		With integrated automatic resetting	
		Automatically resets the product with which it is used, thus ensuring continuity of service	
1	4 062 93	24-48 V~/=	2
1	4 062 95	230 V~	2
		Accessories	
		Padlocking	
2	4 063 03	Support for one Ø5 or Ø6 mm padlock for DX ³ MCBs and RCCBs or main switches	
		Sealable screw cover - 4 separable poles	
2	4 063 04	For DX ³ MCBs, 1 module per pole	
2	4 063 12	For DX ³ MCBs, 1.5 module per pole	
		Insulating shields	
		For DX ³ MCBs, 1 module per pole	
1	4 063 05	Pole insulating shield (set of 6)	
		Spacing units with feedthrough	
		0.5 module	
10	4 063 07		
		Terminal shields	
		For 1.5 module/pole products (set of 2)	
1	4 063 06		



NEW

STOP&GO automatic resetting for DX³



4 062 88

Pack	Cat.No.	STOP&GO automatic resetting	
		For mounting on the left-hand side of 2 module P+N or 2P RCCBs, MCBs, RCBOs ≤ 63 A Automatically reset the device with which they are used in the event of false tripping after a transient fault (e.g. : lightning) Check the condition of the installation before resetting Indicate any permanent fault (residual current or short-circuit fault) Take one control auxiliary and one signalling auxiliary	
		Standard	
1	4 062 88	Control voltage 230 V~	No. of modules 2
		Self-test unit	
1	4 062 89	With periodic testing of the residual current device with which it is used (sensitivity 30 mA or less) 230 V~	2

STOP&GO automatic resetting for DX³

Temporarily electrical disturbances and other external events can cause unwanted tripping of different devices protecting electrical installation

STOP&GO verifies automatically the state of the installation, before resetting and launches a visual and audible alarm signal in case of permanent fault detection (short-circuit or residual current)

After verifying the state of the installation, STOP&GO automatic resets the associated protection device in order to immediately re-establish power supply and avoid unwanted consequences

STOP&GO does not protect the installation against lightning strikes
For an efficient protection against lightning, use voltage surge protectors (p. 162)

The Autotest version is specially suitable for installations equipped with residual current protection devices (RCCB's and RCBOs)
STOP&GO periodically does an automatic test of the functioning of residual current protection devices. The manual test is no longer needed



Installation without STOP&GO



Installation with STOP&GO

Mains fault due to temporarily electrical disturbances
Electrical devices are not powered anymore

STOP&GO automatic resets the associated protection device in order to immediately re-establish power supply



performance of MCBs and auxiliaries

■ Breaking capacity in IT neutral earthing system

MCB single pole breaking capacity at 400 V according to IEC 60947-2

DX ³ 10000 16 kA	1P/2P/3P/4P	4 kA
DX ³ 25 kA	1P/2P/3P/4P	6.25 kA
DX ³ 36 kA	2P/3P/4P	9 kA
DX ³ 50 kA	1P/2P/3P/4P	12.5 kA

■ Breaking capacity in the event of short-circuit to earth and insulation voltage

	1P/2P/3P/4P 230/400 V~ MCBs			
	DX ³ 10000 16 kA	DX ³ 25 kA	DX ³ 36 kA	DX ³ 50 kA
Icn1	16000 A	25000 A	36000 A	50000 A
Ui	500 V	500 V	500 V	500 V

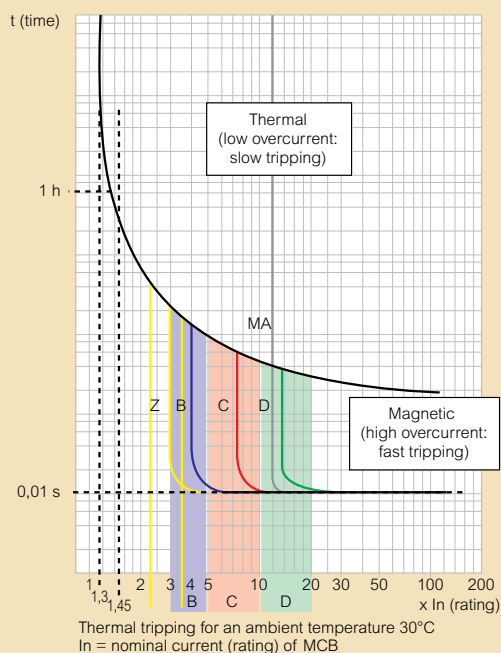
Icn1: Breaking capacity on 1 pole for multipole MCBs in the event of short-circuit to earth

Ui: Rated insulation voltage

■ Terminal connection cross-sections (mm²)

Copper cable	Rigid	Flexible
DX ³ 6000 10 kA	35	25
DX ³ 10000 16 kA		
DX ³ 80 to 125 A		
DX ³ 25 kA	50	35
DX ³ 36 kA, DX ³ 50 kA and add-on modules		
Auxiliaries		

■ MCB tripping curves



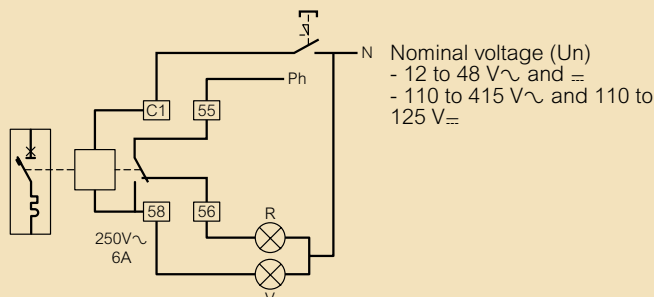
Curves	Magnetic threshold settings
Z ⁽¹⁾	2.4 to 3.6 In
B	3 to 5 In
C	5 to 10 In
D	10 to 14 In (10 to 20 acc. to the stds)
MA ⁽¹⁾	12 to 14 In

1: On request

■ Technical characteristics of auxiliaries

Max. connection cross-section: 2.5 mm²
Operating temperature: - 25°C to + 70°C

Shunt trips



Equipped with a signalling contact which indicates tripping of the shunt trip and automatically breaks the coil.

Min. and max. voltage: 0.7 to 1.1 Un

Tripping time: less than 20 ms

Power consumption: at 1.1 x 48 V = 121 VA
at 1.1 x 415 V = 127 VA

Impedance: 12 to 48 V = 23 Ω
110 to 415 V = 1640 Ω

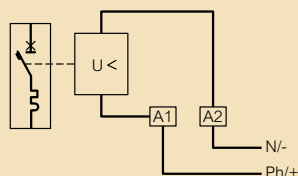
Consumption	Umin.	Umax.
12 to 48 V	522 mA	2610 mA
110 to 415 V	69 mA	259 mA

Undervoltage releases

Pull-in voltage ≥ 0.55 Un

Tripping time: 100 to 400 ms ± 10% (adjustable)

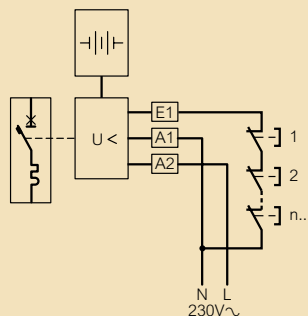
Power consumption: 24 V~ and =: 0.1 VA
48 V~ and =: 0.2 VA
230 V~: 1 VA



Nominal voltage:
24 and 48 V~ and =
230 V~

Stand-alone releases for N/C push-buttons

Min. and max. operating voltage: 196 to 250 V~
Power consumption: 1.4 VA



Signalling auxiliaries

Umin.: 24 V~ and = and Imin.: 5 mA

■ Performance of add-on modules

AC type - Standard applications

Detection of 50-60 Hz AC residual currents

A type - Specific applications: dedicated lines

In addition to the characteristics of AC type add-on modules, A type add-on modules also detect residual currents with DC components. They are used whenever the fault currents are not sinusoidal. They are particularly suitable for the following dedicated line applications:

- On circuits where class 1 equipment may produce fault currents with DC components, such as variable speed drives with frequency inverter, etc.

Hpi type - Special applications

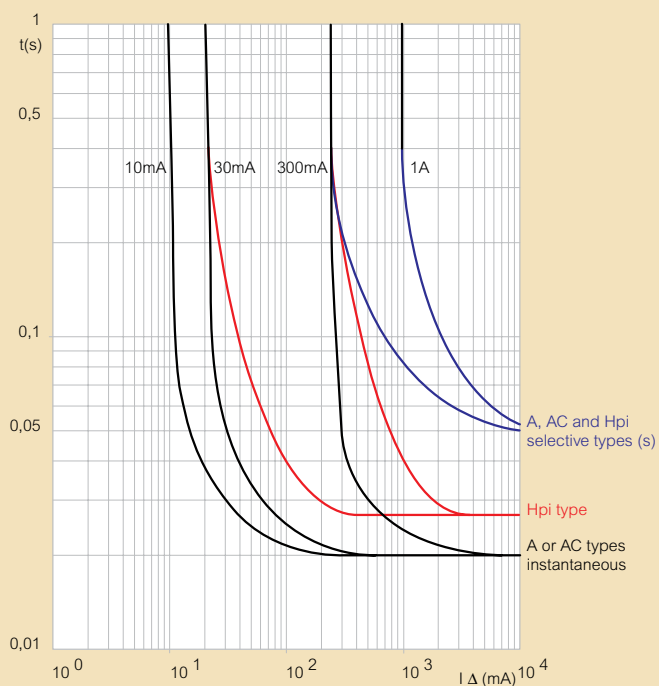
Hpi add-on modules, with additional immunity to false tripping, which is much higher than the level required by the standard, detect residual currents with AC and DC components (A type), operate between - 25°C and + 40°C, and are used in the following special cases:

- When loss of data would be detrimental, such as computer equipment power supply lines (banks, military instrumentation, airline reservation centres, etc.)
- When loss of operation would be detrimental (automated machines, medical instrumentation, freezer lines, etc.)
- In places where there is a high risk of lightning strikes
- On sites with lines subject to considerable interference (use of fluorescent lights, etc)
- On sites with very long lines

Special case of continuity of service

In certain locations where no staff are present and in which continuity of service is particularly important, false tripping of MCBs is not permitted (isolated telephone/TV or radio substations, pumping stations, etc.)
Combining an Hpi RCBO with a motorised control and a STOP & GO recloser provides optimum continuity of service

Average residual current performance curves



■ Residual current breaking capacity of DX³ add-on modules

$I_{\Delta m}$ according to EN 61009-1
AC, A and Hpi add-on modules

DX ³ add-on modules used with an MCB		$I_{\Delta m}$
DX ³ (1 mod./pole)	25 kA $\leq$ 25 A (B, C, Z curves)	6000 A
	25 kA $\leq$ 10 A (D, MA curves)	
DX ³ (1.5 mod./pole)	16 kA (80 to 125 A)	30000 A
	25 kA $\geq$ 32 A (B, C, Z curves)	
	25 kA $\geq$ 12.5 A (D, MA curves)	
	36 kA	
	50 kA	

selectivity tables

MCBs/MCBs (in A)

Downstream MCB	Upstream MCB	DXE ^[6000] - 6 kA DX ³ ^[10000] - 16 kA C curve						
		In (A)	32	40	50	63	80	100
DXE ^[6000] - 6 kA B & C curve		6	240	300	375	472	1300	1600
		10	240	300	375	472	1150	1450
		13	240	300	375	472	1000	1300
		16	240	300	375	472	950	1200
		20	240	300	375	472	900	1100
		25	240	300	375	472	850	1000
		32		300	375	472	750	950
		40			375	472	700	850
		50				472	650	800
DX ³ ^[10000] - 16 kA B & C curve		63					650	800
		≤ 6	240	300	375	472	4000	T
		10	240	300	375	472	3000	5000
		16	240	300	375	472	2000	3600
		20	240	300	375	472	1600	3000
		25	240	300	375	472	1300	2400
		32		300	375	472	1000	1800
		40			375	472	800	1600
		50				472	800	900
		63					650	900
		80						600
DX ³ ^[10000] - 16 kA D curve		100						
		125						
DX ³ 25 kA B & C curve		≤ 6	240	300	375	472	4000	T
		10	240	300	375	472	3000	5000
		16	240	300	375	472	2000	3600
		20	240	300	375	472	1600	3000
		25	240	300	375	472	1300	2400
		32		300	375	472	1000	1800
		40			375	472	800	1600
		50				472	800	900
		63					650	900
		80						600
		100						
DX ³ 36 kA C curve		125						
		≤ 6						
		10						
		16						
		20						
		25						
		32						
		40						
		50						
		63						
		80						
DX ³ 50 kA B & C curve		100						
		125						
		10						
		16						
		20						
		25						
		32						
		40						
		50						
		63						

T: total selectivity, up to downstream circuit breaker breaking capacity according to IEC 60947-2

The magnetic threshold and the nominal rating of the downstream MCB must always be inferior to the ones of the upstream MCB

		DX³ 25 kA / DX³ 36 kA / DX³ 50 kA						
		C curve						
	125	32	40	50	63	80	100	125
	2000	240	300	375	472	1300	1600	2000
	1800	240	300	375	472	1150	1450	1800
	1600	240	300	375	472	1000	1300	1600
	1500	240	300	375	472	950	1200	1500
	1400	240	300	375	472	900	1100	1400
	1300	240	300	375	472	850	1000	1300
	1200		300	375	472	750	950	1200
	1100			375	472	700	850	1100
	1000				472	650	800	1000
	1000					650	800	1000
	T	700	1200	1500	3000	4000	T	T
	T	500	700	1000	1800	3000	5000	T
	5500	300	500	700	1300	2000	3600	5500
	4000	300	400	500	1000	1600	3000	4000
	3300	240	400	500	800	1300	2400	3300
	2700		300	500	600	1000	1800	2700
	2400			400	600	800	1600	2400
	1700				500	800	900	1700
	1200					650	900	1200
	750						600	750
	750							750
	T	700	1200	1500	3000	4000	T	T
	T	500	700	1000	1800	3000	5000	T
	5500	300	500	700	1300	2000	3600	5500
	4000	300	400	500	1000	1600	3000	4000
	3300	240	400	500	800	1300	2400	3300
	2700		300	500	600	1000	1800	2700
	2400			400	600	800	1600	2400
	1700				500	800	900	1700
	1200					650	900	1200
	750						600	750
	750							750
		700	1200	1500	3000	4000	T	T
		500	700	1000	1800	3000	5000	T
		300	500	700	1300	2000	3600	5500
		300	400	500	1000	1600	3000	4000
		240	400	500	800	1300	2400	3300
			300	500	600	1000	1800	2700
				400	600	800	1600	2400
					500	800	900	1700
						650		1200
		500	700	1000	1800	3000		
		300	500	700	1300	2000		
		300	400	500	1000	1600		
		240	400	500	800	1300		
			300	500	600	1000		
				400	600	800		
					500	800		
						650		

back up between MCCBs and MCBs (in kA)

■ In 3 phases networks + N 400/415 V according to IEC 60947-2

MCCBs/MCBs upstream		DX ³ 10000 16 kA curve B, C and D	DX ³ 25 kA curve B, C and D	DX ³ 36 kA curve C	DX ³ 50 kA curve B, C and D	DPX ³ 160				
MCBs downstream		10 to 125 A	10 to 125 A	10 to 80 A	10 to 63 A	16 kA 16 to 160 A	25 kA 16 to 160 A	36 kA 16 to 160 A	50 kA 16 to 160 A	
DX ³ 6000 / 10 kA curve B, C and D	≤ 20 A	16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	25 kA	25 kA	
	25 A	16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	25 kA	25 kA	
	32 A	16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	25 kA	25 kA	
	40 A	16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	25 kA	25 kA	
	50 A	16 kA	25 kA	36 kA	50 kA	16 kA	25 kA	25 kA	25 kA	
	63 A	16 kA	25 kA	36 kA	-	16 kA	25 kA	25 kA	25 kA	
DX ³ 10000 / 16 kA curve B, C and D	≤ 20 A	-	25 kA	36kA	50 kA	-	25 kA	25 kA	25 kA	
	25 A	-	25 kA	36kA	50 kA	-	25 kA	25 kA	25 kA	
	32 A	-	25 kA	36kA	50 kA	-	25 kA	25 kA	25 kA	
	40 A	-	25 kA	36kA	50 kA	-	25 kA	25 kA	25 kA	
	50 A	-	25 kA	36kA	50 kA	-	25 kA	25 kA	25 kA	
	63 A	-	25 kA	36kA	-	-	25 kA	25 kA	25 kA	
	80 and 100 A	-	-	-	-	-	25 kA	25 kA	25 kA	
	125 A	-	-	-	-	-	25 kA	25 kA	25 kA	
DX ³ 25 kA curve B, C	≤ 25 A	-	-	36 kA	50 kA	-	-	36 kA	36 kA	
	32 to 50 A	-	-	36 kA	50 kA	-	-	36 kA	36 kA	
	63 to 80 A	-	-	-	-	-	-	36 kA	36 kA	
	100 and 125 A	-	-	-	-	-	-	36 kA	36 kA	
DX ³ 25 kA curve D	≤ 10 A	-	-	36 kA	50 kA	-	-	36 kA	36 kA	
	16 to 63 A	-	-	36 kA	50 kA	-	-	36 kA	36 kA	
DX ³ 36 kA curve C	10 to 63 A	-	-	-	50 kA	-	-	-	50 kA	
	80 A	-	-	-	-	-	-	-	50 kA	
DX ³ 50 kA curve B, C, D	≤ 63 A	-	-	-	-	-	-	-	-	

■ In 3 phases networks + N 230/240 V according to IEC 60947-2

MCCBs/MCBs upstream		DX ³ 10000 16 kA curve B, C and D		DX ³ 25 kA curve B, C and D		DX ³ 36 kA curve C		DX ³ 50 kA curve B, C		DX ³ 50 kA curve D		
MCBs downstream		≤ 32 A	40 to 125 A	≤ 32 A	40 to 125 A	≤ 32 A	40 to 80 A	≤ 32 A	40 to 63 A	≤ 32 A	40 to 63 A	
DX ³ 10000 16kA curve B, C and D	≤ 20 A	-	-	50 kA	32 kA	50 kA	50 kA	70 kA	70 kA	70 kA	70 kA	
	25 à 40 A	-	-	-	32 kA	-	50 kA	-	70 kA	-	70 kA	
	50 et 63 A	-	-	-	32 kA	-	50 kA	-	-	-	-	
	80 à 125 A	-	-	-	-	-	-	-	-	-	-	
DX ³ 25kA curve B, C	≤ 25 A	-	-	-	-	60 kA	50 kA	70 kA	70 kA	70 kA	70 kA	
	32 à 125 A	-	-	-	-	-	50 kA	-	70 kA	-	70 kA	
DX ³ 25kA curve D	≤ 10 A	-	-	-	-	60 kA	50 kA	70 kA	70 kA	70 kA	70 kA	
	16 à 63 A	-	-	-	-	60 kA	50 kA	70 kA	70 kA	70 kA	70 kA	
DX ³ 36kA curve C	10 à 80 A	-	-	-	-	-	-	85 kA	72 kA	85 kA	72 kA	
DX ³ 50kA curve B, C, D	≤ 63 A	-	-	-	-	-	-	-	-	-	-	

TT or TN neutral earthing systems:

For a 230/400 V supply in order to determine the breaking capacity of a 2P MCB used as P + N (230 V) downstream a 2P or 4P circuit breaker
use values indicated in the table for 230/240 V

	DPX ³ 250				DPX 630	DPX-H 630	DPX 1600 DPX-H 1600
	25 kA 40 to 250 A	36 kA 40 to 250 A	50 kA 40 to 250 A	70 kA 40 to 250 A	36 kA 160 to 630 A	70 kA 160 to 630 A	50 kA and 70 kA 630 to 1600 A
	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	20 kA
	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	15 kA
	25 kA	25 kA	25 kA	25 kA	20 kA	20 kA	15 kA
	25 kA	25 kA	25 kA	25 kA	16 kA	16 kA	12,5 kA
	25 kA	25 kA	25 kA	25 kA	16 kA	16 kA	12,5 kA
	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA
	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	20 kA
	25 kA	25 kA	25 kA	25 kA	25 kA	25 kA	16 kA
	25 kA	25 kA	25 kA	25 kA	20 kA	20 kA	16 kA
	25 kA	25 kA	25 kA	25 kA	20 kA	20 kA	16 kA
	25 kA	25 kA	25 kA	25 kA	20 kA	20 kA	16 kA
	25 kA	25 kA	25 kA	25 kA	16 kA	16 kA	16 kA
	-	36 kA	36 kA	36 kA	30 kA	30 kA	30 kA
	-	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA
	-	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA
	-	36 kA	36 kA	36 kA	30 kA	30 kA	30 kA
	-	36 kA	36 kA	36 kA	30 kA	30 kA	30 kA
	-	36 kA	36 kA	36 kA	36 kA	36 kA	36 kA
	-	-	50 kA	50 kA	-	50 kA	50 kA
	-	-	50 kA	50 kA	-	36 kA	36 kA
	-	-	-	70 kA	-	70 kA	70 kA

	DPX ³ 160				DPX ³ 250				DPX 630	DPX-H 630	DPX 1600 DPX-H 1600
	16 kA 16 to 160 A	25 kA 16 to 160 A	36 kA 16 to 160 A	50 kA 16 to 160 A	25 kA 40 to 250 A	36 kA 40 to 250 A	50 kA 40 to 250 A	70 kA 40 to 250 A	36 kA 160 to 630 A	70 kA 160 to 630 A	50 kA and 70 kA 630 to 1600 A
	35 kA	40 kA	50 kA	50 kA	40 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	35 kA	40 kA	50 kA	50 kA	40 kA	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
	35 kA	40 kA	50 kA	50 kA	40 kA	50 kA	50 kA	50 kA	36 kA	36 kA	36 kA
	35 kA	40 kA	50 kA	50 kA	40 kA	50 kA	50 kA	50 kA	32 kA	32 kA	32 kA
	-	-	-	55 kA	-	-	60 kA	60 kA	55 kA	60 kA	50 kA
	-	-	-	65 kA	-	-	60 kA	60 kA	55 kA	60 kA	50 kA
	-	-	-	55 kA	-	-	60 kA	60 kA	55 kA	60 kA	50 kA
	-	-	-	65 kA	-	-	60 kA	60 kA	55 kA	60 kA	50 kA
	-	-	-	-	-	-	75 kA	75 kA	-	75 kA	75 kA
	-	-	-	-	-	-	-	120 kA	-	120 kA	120 kA

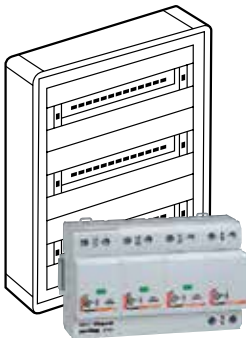
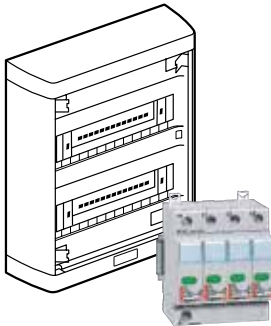
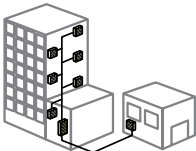
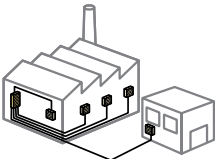
Selectivity tables

MCCBs/MCBs (in kA)

Selectivity table based on arcing fault current as per AS/NZS 3000:2007 Wiring rules	Upstream device	DPX ³ 160 (25kA)						DPX ³ 160 (36kA)						DPX ³ 160 (50kA)						DPX ³ 250 (25kA)				DPX ³ 250 (36kA)				DPX ³ 250 (50kA)				
Downstream device	In (A)	40	63	80	100	125	160	40	63	80	100	125	160	40	63	80	100	125	160	100	160	200	250	100	160	200	250	100	160	200	250	
DX ³ 10 000 B & C curve	≤ 6	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	10	21	21	25	25	25	25	21	21	36	36	36	36	21	21	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	16	18	18	18	25	25	25	18	18	18	36	36	36	18	18	18	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	20	15	15	15	18	25	25	15	15	15	18	36	36	15	15	15	18	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	25	14	14	14	14	25	25	14	14	14	14	26	36	14	14	14	14	26	40	25	25	25	25	36	36	36	36	36	36	36	36	
	32	-	9	12	12	21	25	-	9	12	12	21	30	-	9	12	12	26	30	15	25	25	25	15	36	36	36	15	36	36	36	
	40	-	9	9	9	18	24	-	9	9	9	18	24	-	9	9	9	18	24	15	25	25	25	15	30	30	30	15	30	30	30	
	50	-	-	9	9	17	21	-	-	9	9	17	21	-	-	9	9	17	21	12	25	25	25	12	30	30	30	12	30	30	30	
	63	-	-	9	9	15	18	-	-	9	9	15	18	-	-	9	9	15	18	12	25	25	25	12	30	30	30	12	30	30	30	
	80	-	-	-	-	15	18	-	-	-	-	15	18	-	-	-	-	15	18	12	25	25	25	12	25	25	25	12	25	25	25	
	100	-	-	-	-	-	15	-	-	-	-	-	15	-	-	-	-	-	15	-	25	25	25	-	25	25	25	-	25	25	25	
	125	-	-	-	-	-	9	-	-	-	-	-	9	-	-	-	-	-	9	-	-	25	25	-	-	25	25	-	-	25	25	
DX ³ 10 000 D curve	≤ 6	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	10	21	21	25	25	25	25	21	21	36	36	36	36	21	21	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	16	18	18	18	25	25	25	18	18	18	36	36	36	18	18	18	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	20	15	15	15	18	25	25	15	15	15	18	36	36	15	15	15	18	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	25	11	11	14	14	25	25	11	11	14	14	26	36	11	11	14	14	26	40	25	25	25	25	36	36	36	36	36	36	36	36	
	32	-	9	12	12	21	25	-	9	12	12	21	30	-	9	12	12	21	30	15	25	25	25	15	36	36	36	15	36	36	36	
	40	-	9	9	9	18	24	-	9	9	9	18	24	-	9	9	9	18	24	15	25	25	25	15	36	36	36	15	30	30	30	
	50	-	-	9	9	17	21	-	-	9	9	17	21	-	-	9	9	17	21	12	25	25	25	12	36	36	36	12	30	30	30	
	63	-	-	9	9	15	18	-	-	9	9	15	18	-	-	9	9	15	18	-	25	25	25	-	36	36	36	-	30	30	30	
	80	-	-	-	-	15	18	-	-	-	-	15	18	-	-	-	-	15	18	-	25	25	25	-	25	25	25	-	25	25	25	
	100	-	-	-	-	-	15	-	-	-	-	-	15	-	-	-	-	-	15	-	25	25	25	-	25	25	25	-	25	25	25	
	125	-	-	-	-	-	9	-	-	-	-	-	9	-	-	-	-	-	9	-	-	25	25	-	-	25	25	-	-	25	25	
DX ³ 25kA B & C curve	≤ 6	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	10	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	16	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	20	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	25	25	25	25	25	25	25	36	36	36	36	36	36	36	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	32	-	25	25	25	25	25	-	36	36	36	36	36	-	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	40	-	25	25	25	25	25	-	36	36	36	36	36	-	40	40	40	40	40	25	25	25	25	36	36	36	36	36	36	36	36	
	50	-	12	12	15	25	25	-	12	12	15	30	30	-	12	12	15	30	30	25	25	25	25	36	36	36	36	36	36	36	36	
	63	-	-	9	15	25	25	-	-	9	15	30	30	-	-	9	15	30	30	25	25	25	25	36	36	36	36	36	36	36	36	
	80	-	-	-	-	15	18	-	-	-	-	15	18	-	-	-	-	15	18	12	25	25	25	12	36	36	36	12	36	36	36	
	100	-	-	-	-	-	15	-	-	-	-	-	15	-	-	-	-	-	15	-	25	25	25	-	36	36	36	-	36	36	36	
	125	-	-	-	-	-	9	-	-	-	-	-	9	-	-	-	-	-	9	-	25	25	25	-	36	36	36	-	36	36	36	
DX ³ 36kA C curve	≤ 6	25	25	25	25	25	25	36	36	36	36	36	36	40	40	40	40	40	40	25	25	25	25	36	36	36	36	50	50	50	50	
	10	25	25	25	25	25	25	36	36	36	36	36	36	40	40	40	40	40	40	25	25	25	25	36	36	36	36	50	50	50	50	
	16	25	25	25	25	25	25	36	36	36	36	36	36	40	40	40	40	40	40	25	25	25	25	36	36	36	36	50	50	50	50	
	20	25	25	25	25	25	25	36	36	36	36	36	36	40	40	40	40	40	40	25	25	25	25	36	36	36	36	50	50	50	50	
	25	25	25	25	25	25	25	36	36	36	36	36	36	40	40	40	40	40	40	25	25	25	25	36	36	36	36	50	50	50	50	
	32	-	25	25	25	25	25	-	36	36	36	36	36	-	40	40	40	40	40	25	25	25	25	36	36	36	36	40	40	40	40	
	40	-	25	25	25	25	25	-	36	36	36	36	36	-	40	40	40	40	40	25	25	25	25	36	36	36	36	40	40	40	40	
	50	-	-	12	15	25	25	-	-	12	15	30	30	-	12	12	15	30	30	25	25	25	25	36	36	36	36	40	40	40	40	
	63	-	-	9	15	25	25	-																								

	DPX³ 250 (70kA)				DPX³ 250 (25kA) elec : S2 - Sg Low / High				DPX³ 250 (36kA) elec : S2 - Sg Low / High				DPX³ 250 (50kA) elec : S2 - Sg Low / High				DPX³ 250 (70kA) elec : S2-Sg Low / High				DPX 630 (36kA)		DPX 630 (70/100kA)		DPX 630 (36kA) elec : S1-S2-Sg Low / High		DPX 630 (70/100kA) elec : S1-S2-Sg Low / High						
	100	160	200	250	40	100	160	200	250	40	100	160	200	250	40	100	160	200	250	40	100	160	200	250	400	630	400	630	400	630	400	630	
	36	36	36	36	25	25	25	25	25	36	36	36	36	36	40	40	40	40	40	40	40	40	40	40	36	36	40	40	36	36	40	40	
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	12	30	30	30	-	12	25	25	25	-	12	36	36	36	-	12	36	36	36	-	12	36	36	36	36	36	36	40	40	36	36	40	40
	12	30	30	30	-	12	25	25	25	-	12	36	36	36	-	12	36	36	36	-	12	36	36	36	36	36	36	40	40	36	36	40	40
	12	25	25	25	-	12	25	25	25	-	12	25	25	25	-	12	25	25	25	-	12	25	25	25	16	16	16	16	16	16	16	16	16
	-	25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	16	16	16	16	16	16	16	16	16
	-		25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	16	16	16	16	16	16	16	16	16
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	15	30	30	30	-	15	25	25	25	-	15	36	36	36	-	15	36	36	36		15	36	36	36	36	36	36	40	40	36	36	40	40
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		25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	16	16	16	16	16	16	16	16	16
	-	25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	-	-	25	25	25	16	16	16	16	16	16	16	16	16
	-		25	25	-	-	-	25	25	-	-	-	25	25	-	-	-	25	25	-	-	-	25	25	16	16	16	16	16	16	16	16	16
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	-	36	36	36	-	-	25	25	25	-	-	36	36	36	-	-	36	36	36	-	-	36	36	36	36	36	36	36	36	36	36	36	36
	-	36	36	36	-	-	25	25	25	-	-	36	36	36	-	-	36	36	36	-	-	36	36	36	36	36	36	36	36	36	36	36	36
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	40	40	40	40	-	25	25	25	25	-	36	36	36	36	-	50	50	50	50	-	50	50	50	50	36	36	50	50	36	36			

select your Voltage Surge Protector and its corresponding protection

STEP 1 Define the type of building		STEP 2 Define the risk level and the network type		STEP 3 + 4 Optimize protection against lightning effects (V.S.P. cascading ¹) and Protect the installation against short-circuits and overloads	
				LEVEL 1 MAIN BOARD	LEVEL 2 DISTRIBUTION BOARD
					
RESIDENTIAL BUILDINGS AND SMALL OFFICES	RISK LEVEL	NETWORK TYPE	V.S.P. + CORRESPONDING PROTECTION $I_{cc} \leq 6 \text{ kA}$		V.S.P. + CORRESPONDING PROTECTION $I_{cc} \leq 6 \text{ kA}$
 INDIVIDUAL HOUSES  AND BLOCKS OF FLATS  AND SMALL OFFICES	Very high 	1P	039 40 + 033 87	+	039 40 + 033 87
		2P	2 x 039 40 + 034 34		039 41 + 034 34
		3P	3 x 039 40 + 034 52		3 x 039 40 + 034 52
	High 	2P	039 31 + 034 34	+	039 41 + 034 34
		3P	039 32 + 034 52		3 x 039 40 + 034 52
		4P	039 33 + 034 94		039 43 + 034 94
	Medium 	2P	039 41 + 034 34	+	039 41 + 034 34
		3P	3 x 039 40 + 034 52		3 x 039 40 + 034 52
		4P	039 43 + 034 94		039 43 + 034 94
OFFICES AND INDUSTRIAL BUILDINGS	RISK LEVEL	NETWORK TYPE	V.S.P. + ASSOCIATED PROTECTION $I_{cc} \leq 50 \text{ kA}$		V.S.P. + ASSOCIATED PROTECTION $I_{cc} \leq 25 \text{ kA}$
 OFFICE BUILDINGS AND  INDUSTRIAL BUILDINGS	Very high 	2P	2 x 039 20 + 2 x 173 65 (T1)	+	039 31 + 4 097 69
		3P	039 22 + 3 x 173 65 (T1)		039 32 + 4 097 82
		4P	039 23 + 3 x 173 65 (T1)		039 33 + 4 097 95
	High 	2P	039 21 + 4 101 52	+	039 31 + 4 097 69
		3P	039 22 + 4 101 65		039 32 + 4 097 82
		4P	039 23 + 4 101 78		039 33 + 4 097 95
	Medium 	2P	039 21 + 4 101 52	+	039 31 + 4 097 69
		3P	039 22 + 4 101 65		039 32 + 4 097 82
		4P	039 23 + 4 101 78		039 33 + 4 097 95

1: A correct protection can not be achieved with level 1 V.S.P. only (at least two levels are needed)

select your Voltage Surge Protector and its corresponding protection

For a complete protection all incoming lines (entering into the buildings) should be protected with V.S.P.s (including telephone and data lines)

■ Define the risk level (STEP 2)

Irrespective of the requirements in the standards, the use of a voltage surge protector is strongly recommended in most cases (production losses, safety services, cost of equipment, etc.). Voltage surge protectors can be chosen for any type of installation based on the risk levels, which are defined as follows:

Risk level:



- Very high risk: installation equipped with external lightning conductors (L.P.S.), with a metallic structure higher than surrounding buildings (or any object that can act as a lightning conductor), an installation that is isolated and located at a high point (top of mountains), or an installation that has been subject to previous lightning strikes

IEC 60364: V.S.P. compulsory at the origin of the installation (main board) with L.P.S. (lightning protection system)



- High risk: installation with overhead power supply, in a mountainous area, isolated, at the end of a line, near a body of water, trees, etc.

IEC 60364: V.S.P. compulsory with overhead lines in AQ2 areas (see p. 163)



- Medium risk: other types of installation (installations in urban areas, in low, flat areas and low and medium height mountainous areas, underground power supplies, etc.)

■ Optimize protection (STEP 3)

Protection of an installation against transient overvoltages can only generally be guaranteed with several levels of voltage surge protectors used together in cascade (see e-catalogue). In addition to the energy aspect explained below, 2 or 3 levels of voltage surge protectors are in fact usually necessary in order to limit overvoltages connected with the fact that lightning is a high frequency phenomenon

In order to limit overvoltages as much as possible, a voltage surge protector must always be installed as close as possible to the equipment to be protected. However, proximity protection (Level 3) on its own can only protect the equipment connected to it downstream, and above all, it cannot adequately limit the energy. To do this, a voltage surge protector is necessary at the head of the installation (Level 1) to shunt the majority of the energy to earth

Likewise, a voltage surge protector on its own at the head of the installation (Level 1) cannot protect the whole installation and the equipment connected to it, due to the fact that it allows residual energy to pass and that lightning is a high frequency phenomenon (see e-catalogue)

For these reasons, depending on the scale of the installation and the types of risk (exposure and sensitivity of equipment, criticality of continuity of service), circuit protection (Level 2) is necessary in addition to protection of the head of the installation

■ Protect the installation against short-circuit and overloads (STEP 3)

The supply circuit of the VSP must always be protected against short-circuits and overloads by its associated protection device in accordance with discrimination rules

Select the corresponding MCB with the short-circuit rating adapted to your installation requirements

V.S.P. Cat.No	039 10/20/21/22/23			039 30/31/32/33/40/41/43		
Type	2P	3P	4P	2P	3P	4P
Caliber	40 A	40 A	40 A	20 A	20 A	20 A
≤ 6 kA	034 37	034 55	034 97	034 34	034 52	034 94
≤ 10 kA	4 078 04	4 078 63	4 079 32	4 078 01	4 078 60	4 079 29
≤ 16 kA	4 092 06	4 092 58	4 093 40	4 092 03	4 092 55	4 093 37
≤ 25 kA	4 097 72	4 097 85	4 097 98	4 097 69	4 097 82	4 097 95
≤ 50 kA	4 101 52	4 101 65	4 101 78	not allowed	not allowed	not allowed

Associated protection possible with all types of modular MCBs (DX-E and DX³) if rated 20A or 40A as above stated

For association with 36kA MCBs, please consult us

Protection of VSPs can not be done with ACBs or MCCBs (DPX³ or DMX³ for example) and an extra protection

			COMMUNICATION LINES
		LEVEL 3 PROXIMITY	
		Cat.No 0 775 40	
		PROXIMITY V.S.P.	INSIDE COMMUNICATION DISTRIBUTION BOX
		Arteor Programme Cat.No 0 775 40 or Multioutlet extensions (contact Legrand)	Protection of all the lines entering the building is strongly recommended (including communication lines: telephone, data, etc.)
		PROXIMITY V.S.P.	INSIDE COMMUNICATION DISTRIBUTION BOX
		Arteor Programme Cat.No 0 775 40 or Multioutlet extensions (contact Legrand)	Protection of all the lines entering the building is strongly recommended (including communication lines: telephone, data, etc.)

voltage surge protectors low voltage type 2 (class II / C)



039 21


Dimensions see **p. 145**

Type 2 voltage surge protectors (V.S.P.) for main boards, distribution boards and consumer units
Conform to standards IEC 61643-1 and EN 61643-11
3 different impulse discharge ratings
For 230/400 V~ - 50/60 Hz networks

Pack	Cat.No.	Main board protection		
		High protection - H - Class I + II I_{max} = 70 kA		
		Earthing systems: TT, TN, IT		
		Consist of a base and a plug-in replacement module provided with a status indicator		
		• Green: surge protector operational • Orange: module needs replacing		
		Can be equipped with auxiliary contacts for remote monitoring purpose (p. 150)		
		Number of poles	Corresponding protection	Number of modules
1	039 20	1P	40 A - C curve	1
1	039 21	2P	40 A - C curve	2
1	039 22	3P	40 A - C curve	3
1	039 23	4P	40 A - C curve	4

		Distribution board protection		
		For electrical equipments located at more than 10 m from the main distribution board		
		Consist of a base and a plug-in replacement module provided with a status indicator		
		• Green: surge protector operational • Orange: module needs replacing		
		Can be equipped with auxiliary contacts for remote monitoring purpose (p. 150)		
		Increased protection - E - Class II - I_{max} = 40 kA		
		Earthing systems: TT, TN, IT		
		Number of poles	Corresponding protection	Number of modules
1	039 30	1P	20 A - C curve	1
1	039 31	2P	20 A - C curve	2
1	039 32	3P	20 A - C curve	3
1	039 33	3P	20 A - C curve	4
		Increased protection - E - Class II - I_{max} = 15 kA		
		Earthing systems: TT, TN		
		Number of poles	Corresponding protection	Number of modules
1	039 40	1P	20 A - C curve	1
1	039 41	2P	20 A - C curve	2
1	039 43	4P	20 A - C curve	4

		Replacement modules for type 2 V.S.P.	
5	039 28	For V.S.P. Cat.Nos 039 20/21/22/23	
5	039 34	For V.S.P. Cat.Nos 039 30/31/32/33	
5	039 44	For V.S.P. Cat.Nos 039 40/41/43	

voltage surge protectors for telephone lines and accessories for low voltage V.S.P.



038 28


Dimensions **see p. 145**

Pack	Cat.No.	Voltage surge protector for telephone and data lines		
		Recommended for complete protection of installations already equipped with low voltage V.S.P. on power lines (standard IEC 60364)		
		For protection of: telephone, fax, modem, etc., connected to the incoming telephone line, against overvoltages of atmospheric origin		
		Installed in a distribution cabinet, especially the ELV/ signal cabinet Cat.No 0 011 95 (please consult us), or terminal shield boxes 1 module		
		Connected in series with the telephone line		
		Provided with a status indicator		
		• green: surge protector operational • orange: surge protector needs replacing		
		Conform to standards EN 61643-21 and IEC 61643-21		
		I _{max} : 10 kA and I _n : 5 kA (8/20)		
			Un (V)	Up (V)
1	038 28	Analogue (RTC and ADSL)	170	260
1	038 29	Digital (signal lines, current loops)	48	100

		Signalling auxiliaries for low voltage V.S.P.	
		With changeover microswitch 2 A - 250 V~	
		Mounted on the backside of the surge protector	
1	039 56	For 2-pole module V.S.P.	
1	039 57	For 3-pole module V.S.P.	
1	039 58	For 4-pole module V.S.P.	

		Decoupling inductors	
		Enable coordination between 2 V.S.P. in the same board, when minimum distance to insure proper V.S.P. coordination can not be respected	
		For multipole voltage surge protectors, each conductor (including the neutral conductor) must be equipped with one decoupling inductor	
			Number of modules
1	039 62	Module for circuit 35 A - 500 V~	2
1	039 63	Module for circuit 63 A - 500 V~	4

voltage surge protectors

■ Protection against lightning effects

Lightning directly or indirectly generates the following effects:

- thermal (blow-outs, fire)
- electrodynamic (loosening of terminals)
- rise in earth voltage (risk of electrocution)
- overvoltages of several thousand volts and destructive induced currents (damage to electrical and electronic equipment, interruption of operation)

Protection against the effects of lightning is based essentially on:

- catching and discharging the current to earth
- the use of voltage surge protectors
- the passive protection of the installation

Passive protection (poor, good) designates the part of the protection provided by the structure and the configuration of the installation itself (neutral earthing system, area, level of equipotentiality, etc.)

■ Voltage surge protectors and regulation

Voltage surge protector enable:

- protect sensitive devices against direct and indirect effects of lightning
- to limit harmful consequences on person security
- to insure the continuity of work

1 - Product standards EN 61643-11 and IEC 61643-1

Voltage surge protectors are mainly classified in two levels (types):

EN 61643-11	Type 1 (T1)	Type 2 (T2)
IEC 61643-1	Class I (T1)	Class II (T2)
VDE 0675-6 ⁽¹⁾	Class B	Class C
Type of wave	10/350 μ s	8/20 μ s
Main characteristics	Iimp (10/350) In (8/20)	In, Imax

1: German standard VDE replaced by European standard EN 61643-11

The V.S.P. Cat.No 0 039 20/21/22/23 are classified in both levels, also called T1+T2 or B+C

2 - Installation standards: IEC 60364 (or equivalent electric national standards)

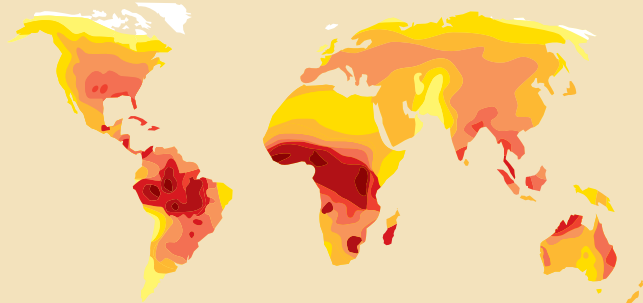
According to articles 443 and 534, the use of VSPs is required in new or renovated buildings in the following cases:

- buildings equipped with lightning conductors: type 1 VSPs
- buildings with overhead power supply in class AQ2 geographic zones (see map below: red zones): type 2 VSPs with $I_n \geq 5$ kA
- buildings with medical services or equipped with safety systems (fire, etc.) in class AQ2 geographic zones: type 2 VSPs with $I_n \geq 5$ kA

The use of VSPs is also strongly recommended in mountain areas, close to reaches of water or dominating structures (buildings, trees, etc.), in the cases of line end installations or installations located less than 50 m from buildings equipped with lightning conductors⁽²⁾. When VSPs are present on the power circuit, it is strongly advised to install a VSP on the communication circuits (telephone or data lines...)

2: Lightning conductors: external protection of buildings against direct lightning impacts

■ Choice of the level lightning protection



The annual average of stormy days (Nk)

- 0 - 1
- 2 - 4
- 5 - 9
- 10 - 19
- 20 - 39
- 40 - 59
- 60 - 79
- 80 - 99
- 100 - 139
- 140 - 200 +

AQ2 areas : $N_k > 25$
IEC 60364 : V.S.P. mandatory
for installations supplied with
overhead low voltage lines
and located in AQ2 areas

Simplify your work

A wide range of accessories, to adapt your enclosures to the requirements of all your sites, simplify your work and save you time

Q DISCOVER THE RANGES

Connection, marking and wiring management

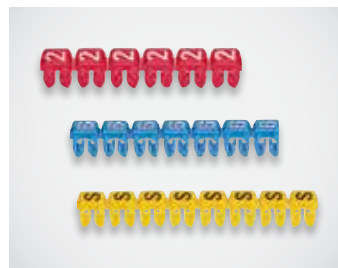
- Marking systems, cable ties, cable ducting: different solutions for perfect identification & wiring management of enclosures
- Viking 3 terminal blocks with screw or automatic terminals, the warranty of a safe & reliable connection



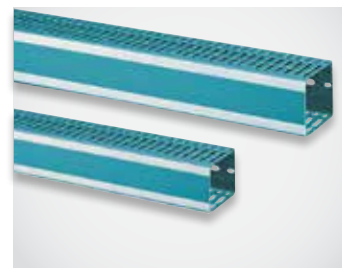
▶▶▶ Viking 3 terminal blocks



▶▶▶ Starfix ferrules



▶▶▶ CAB 3 marking system



▶▶▶ Lina 25 cable ducting

+ MORE INFORMATION

Get detailed information from many digital or printed materials, or contact your Legrand Area Manager

domestic fuse carriers



058 11

058 14

058 21

058 24



Dimensions see p. 145

With label-holders
With insulated carrier class II, padlockable
Coupling via supply busbars
Shielded terminals capacity 2 x 10 mm²
Possibility to signal indicator blown fuse
Fuse not supplied

Pack	Cat.No.	For domestic cylindrical cartridge fuses		
		Conform to EN 60269-1 and IEC 60269-1,3		
		Single pole		
		For domestic cartridges	Cartridge dimensions (mm)	Number of modules
10	058 10	10 A - 230 V~	8.5 x 23	1
10	058 11	16 A	10.3 x 25.8	1
10	058 12	20 A - 400 V~	8.5 x 31.5	1
10	058 13	25 A	10.3 x 31.5	1
10	058 14	32 A	10.3 x 38	1
		Single pole + neutral		
10	058 20	10 A - 230 V~	8.5 x 23	1
10	058 21	16 A	10.3 x 25.8	1
10	058 22	20 A - 400 V~	8.5 x 31.5	1
10	058 24	32 A	10.3 x 38	1

		For miniature cylindrical cartridge fuses		
		Conform to EN 60127-6 and IEC 60127-6 To protect sensitive equipment: transformers, electronic equipment, etc.		
		Single pole		
		Cartridge dimensions (mm)	Voltage	Number of modules
5	058 00	5 x 20	250 V~	1

domestic cartridge fuses



102 63

103 06

113 10

116 16

123 20

126 25

133 32

Pack	Cat.No.	Miniature type 5 x 20		
		Instant reaction fuse - Ceramic body Conform to EN/IEC 60127-2 High rupture capacity (A) For use with dimmers, Viking terminal blocks and emergency lightning units, transformers		
		Rating (Amps)	Voltage ~ (Volts)	Breaking capacity (Amps)
10	102 02	0.2		
10	102 05	0.5		
10	102 06	0.63		
10	102 10	1		
10	102 20	2	250	1500
10	102 30	3.15		
10	102 50	5		
10	102 63	6.3		
10	102 96 ¹	10	250	500

		Cylindrical				
		6.3 x 23				
		Without indicator	Rating (Amps)	Voltage ~ (Volts)	Rupture capacity (Amps) Copper	Protected section (mm ²)
10	103 06 ²	6	230	6000	1.5	
		8.5 x 23				
10	113 10	10	230	6000	1.5	
		10.3 x 25.8				
10	116 10 ²	10	230	6000		
10	116 16 ²	16			2.5	
		8.5 x 31.5				
10	123 20	20	400	20000	2.5	
		10.3 x 31.5				
10	126 16	16				
10	126 20	20	400	20000		
10	126 25	25			4	
		10.3 x 38				
10	133 32	32	400	20000		

		Neutral links	
10	123 00	8 x 32 (previously 8.5 x 31.5)	
10	133 00	10 x 38	

1: Overrating not described by standards
2: Conform to BS 1361 (1971)

isolating fuse carriers



058 06

058 28

058 48

043 83



Dimensions see p. 145

For industrial cylindrical cartridge fuses type aM or gG

Conform to standard IEC 60269-2
Isolators conform to IEC 60947-3
Icc:
- 20 kA with 8.5 x 31.5 cartridge fuse
- 100 kA with 10 x 38 cartridge fuse
Fuse not supplied (see opposite)

Single pole

Cartridge dimensions (mm)	Voltage	Number of modules
8.5 x 32	400 V~	1
10 x 38	500 V~	1

Single pole + neutral

10 x 38	500 V~	1
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2-pole

10 x 38	500 V~	2
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3-pole

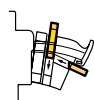
10 x 38	500 V~	3
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3-pole + neutral

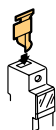
10 x 38	500 V~	4
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Accessories

10	057 90	Blow-out indicator 250 V~
1	057 96	Early break N/O + N/C contact auxiliary 5 A - 250 V~ (0.5 module)
2	044 44	Sealable screw cover (4 separable poles)



Blow-out indicator



Sealable screw cover

changeover switches



Dimensions see p. 145

Conform to standard IEC 60669-1
Breaking capacity AC 22 A according to IEC 60947-3

Changeover switches

Pack	Cat.No.	Nominal rating (A)	Connection	Number of modules
10	043 82	20	Two-way - 250 V~	1
5	043 83	20	Double two-way - 400 V~	2
10	043 85	20	Two-way with centre point - 250 V~	1
5	043 86	20	Double two-way with centre point - 400 V~	2

pulse operated latching relays



4 124 01



4 124 12



0 491 20



4 124 29



4 124 36



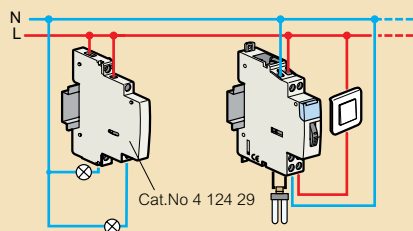
Dimensions see p. 176

Pack	Cat.No.	Noiseless pulse operated latching relay			
		Conform to standard EN 60669-2-2			
		Single pole - 16 A - 250 V~			
		Control voltage	Type of contact	Connection	Number of modules
1	4 124 00	230 V	1 N/O		1
		Delayed noiseless pulse operated latching relay			
		Conform to standard EN 60669-2-2			
		Single pole - 16 A - 250 V~			
		Control voltage	Type of contact	Connection	Number of modules
1	4 124 01	230 V	1 N/O		1
		Standard pulse operated latching relays			
		Conform to standard EN 60669-2-2			
		Maximum 2 auxiliary devices per latching relay			
		Single pole - 16 A - 250 V~			
		Control voltage	Type of contact	Connection	Number of modules
1	4 124 04	12 V	1 N/O		1
1	4 124 05	24 V	1 N/O		1
10	4 124 08	230 V	1 N/O		1
		2-pole - 16 A - 250 V~			
		Control voltage	Type of contact	Connection	Number of modules
1	4 124 10	24 V	2 N/O		1
1	4 124 11	48 V	2 N/O		1
1	4 124 12	230 V	2 N/O		1
		4-pole - 16 A - 250 V~			
		Can be used for 3-pole assembly			
		Control voltage	Type of contact	Connection	Number of modules
1	4 124 14	24 V	4 N/O		2
1	4 124 16	230 V	4 N/O		2
		Surface mounting pulse operated latching relays			
		10 A - 230 V~ - 50/60 Hz			
		Suitable for new installations or retrofitting of existing ones			
		Compatible with electronic ballasts and fluocompact lamps			
		Mounting on plate or in flush-mounting boxes Ø 67 mm			
		Equipped with automatic terminals for flexible or rigid wires (max. 2.5 mm)			
		Power : min. 7 W / max. 2300 W			
		IP 20 - IK 04			
		Dimensions: 49 x 46 x 26 mm			
		Maximum current when used with illuminated push-buttons : 50 mA			
		Noiseless			
10	0 491 20	Single pole			
10	0 491 21	Single pole with timer			
		Enables energy savings by switching off lighting after a specified period			
		Time delay adjustment from 1 to 60 min.			
		Switch-off pre-warning function (can be disabled)			
Pack	Cat.No.	Signalling auxiliary pulse operated latching relay			
		Fitted on left-hand side of latching relay (equipped or not with control auxiliary)			
		Maximum 2 auxiliaries per latching relay			
		Used to signal the status of the contacts on the associated product			
		Auxiliary changeover switch			
		I max.	Voltage	Contact	Number of modules
1	4 124 29	5 A	250 V~	N/C + N/O	0.5
		Control auxiliary			
		Fitted on left-hand side of latching relay			
		Maximum 1 control auxiliary per latching relay			
		Compatible with signalling auxiliary Cat.No 4 124 29			
		Auxiliary device for centralized control			
		For a centralized control of different latching relays from one single point			
					Number of modules
1	4 124 33	For latching relays 24 V~ to 48 V~			0.5
1	4 124 34	For latching relays 230 V~			0.5
		Auxiliary device for general centralized control			
		For simultaneous control of different groups of latching relays, already fitted with auxiliary device for centralised control 230 V~			
		Cat.No 4 124 34			
		Auxiliary device for maintained contact			
		Allows the control of a latching relay via one maintained contact (i.e. time switches)			
1	4 124 37				0.5
		Compensator module			
		Used to control 230 V~ - 50 Hz pulse operated latching relays via illuminated push-buttons without malfunctions			
		Connects to the terminals of the pulse operated latching relay coil			
		Compensation:			
		- 1 compensator module for a total consumption of 3 to 6 mA (example: 6 to 11 illuminated push-buttons consuming 0.55 mA each)			
		- 2 compensators modules for a total consumption of 6 to 9 mA (example: 12 to 17 illuminated push-buttons with consuming 0.5 mA each)			
					Number of modules
1	4 124 39	Impedance compensator for 230 V~ pulse operated latching relays			1

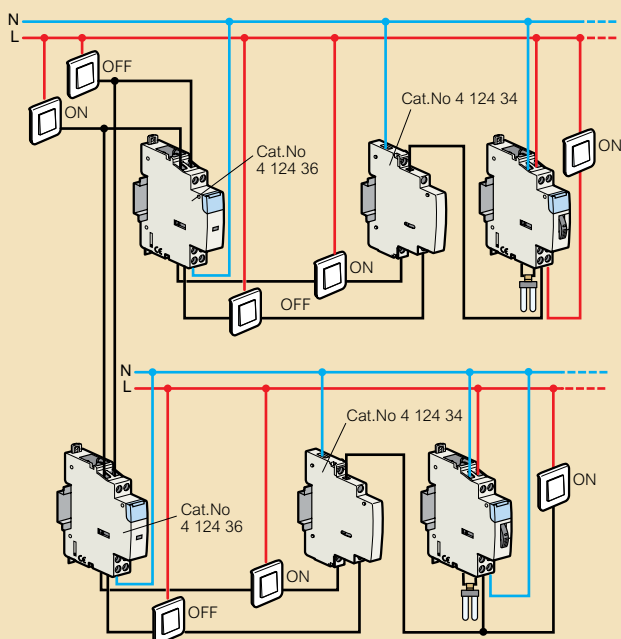
pulse operated latching relays

■ Schemas

Signalling with auxiliary Cat.No 4 124 29

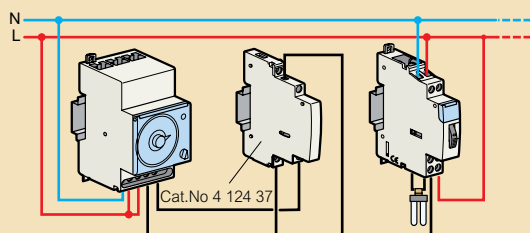


Centralized control at one point using auxiliary devices Cat.Nos 4 124 34 and 4 124 36



Use only non illuminated push-buttons

Control via maintained contact using auxiliary device Cat.No 4 124 37 and time switch



■ Technical characteristics

Power consumption

Cat.Nos	4 124 00 4 124 01	4 124 04	4 124 05 4 124 10	4 124 14	4 124 11	4 124 08 4 124 12	4 124 16
Control voltage	230 V~	12 V~	24 V~	24 V~	48 V~	230 V~	230 V~
Nominal current	16 A	16 A	16 A	16 A	16 A	16 A	16 A
Connection	1 N/O	1 N/O	1 N/O 2 N/O	4 N/O	2 N/O	1 N/O 2 N/O	4 N/O
Number of modules	1	1	1	1	1	1	2
Holding	-	670 mA	280 mA	570 mA	170 mA	30 mA	50 mA
Inrush	-	2500 mA	1200 mA	2500 mA	700 mA	130 mA	250 mA

Connection cross section mm²

Type of conductors	Cross section
Rigid	1 x 6 mm ² or 2 x 2.5 mm ²
Flexible	1 x 6 mm ² or 2 x 2.5 mm ²
Flexible with single ferrule	6 mm ²
Flexible with double ferrule	2 x 4 mm ²

Cross reference list old range/new range

Old range Cat.No	New range Cat.No	Designation
041 60	4 124 04	16 A - 12 V - 1 N/O
041 61	4 124 05	16 A - 24 V - 1 N/O
041 62	4 124 08	16 A - 230 V - 1 N/O
041 65	4 124 10	16 A - 24 V - 2 N/O
041 66	4 124 11	16 A - 48 V - 2 N/O
041 68	4 124 12	16 A - 230 V - 2 N/O
041 71	4 124 16	16 A - 230 V - 4 N/O
041 85	4 124 29	Auxiliary changeover switch
041 86	4 124 33	Auxiliary devices for centralized control 24 V~ - 48 V~
041 87	4 124 34	Auxiliary devices for centralized control 230 V~
041 89	4 124 39	Compensation module
041 88	4 124 36	Auxiliary device for general centralized control
041 84	4 124 37	Auxiliary device for maintained contact

CX³ contactors with handle from 16 A to 63 A



4 125 44



4 125 56



Dimensions see **p. 176**
Technical characteristics **p. 170**

Conform to IEC/EN 61095
Space for power supply busbar on top (up to 25 A)

Pack	Cat.No.	Power contactors with 24 V~ coil and handle				Pack	Cat.No.	Power contactors with 230 V~ coil and handle			
		Manual override for test and repair function, carried out via the handle Permanent "ON" or "OFF" without automatic reset						Manual override for test and repair function, carried out via the handle Permanent "ON" or "OFF" without automatic closing of the contactor			
		2-pole - 250 V~						2-pole - 250 V~			
		I max	Connection	Type of contact	Number of modules			I max	Connection	Type of contact	Number of modules
1	4 125 14	25 A		2 N/O	1	4	4 125 44	25 A		2 N/O	1
1	4 125 15 ¹	40 A		2 N/O	2	1	4 125 45 ¹	40 A		2 N/O	2
1	4 125 16 ¹	63 A		2 N/O	2	1	4 125 47 ¹	63 A		2 N/O	2
		4-pole - 400 V~						4-pole - 400 V~			
1	4 125 17	25 A		4 N/O	2	1	4 125 48 ¹	63 A		2 N/C	2
1	4 125 18 ¹	40 A		4 N/O	3						
1	4 125 19 ¹	63 A		4 N/O	3						
		Low noise power contactors with 230 V~ coil and handle						3-pole - 400 V~			
		2-pole - 250 V~						3-pole - 400 V~			
		I max	Connection	Type of contact	Number of modules	1	4 125 49 ¹	40 A		3 N/O	3
						1	4 125 50 ¹	63 A		3 N/O	3
		4-pole - 400 V~						4-pole - 400 V~			
1	4 125 58	25 A		2 N/O	1	2	4 125 51	25 A		4 N/O	2
1	4 125 59 ¹	40 A		2 N/O	2	1	4 125 53 ¹	40 A		4 N/O	3
1	4 125 60 ¹	63 A		2 N/O	2	1	4 125 56 ¹	63 A		4 N/O	3
		4-pole - 400 V~						4-pole - 400 V~			
1	4 125 61	25 A		4 N/O	1	1	4 125 57 ¹	63 A		4 N/C	3
1	4 125 62 ¹	40 A		4 N/O	2						
1	4 125 63 ¹	63 A		4 N/O	2						

1: Handle can be accessed after removing blanking plate

NEW

CX³ contactors without handle from 16 A to 63 A

Auxiliaries for CX³ contactors



4 125 23



4 125 35



4 124 29



4 124 31



Dimensions see p. 176
Technical characteristics p. 170

Conform to IEC/EN 61095
Space for power supply busbar on top (up to 25 A)

Pack	Cat.No.	Power contactors with 230 V~ coil			
2-pole - 250 V~					
		I max	Connection	Type of contact	Number of modules
4	4 125 21	16 A		N/C + N/O	1
10	4 125 23	25 A		2 N/O	1
1	4 125 27	63 A		2 N/O	2
1	4 125 24	25 A		2 N/C	1
4-pole - 400 V~					
5	4 125 35	25 A		4 N/O	2
1	4 125 41	63 A		4 N/O	3
1	4 125 36	25 A		4 N/C	2
1	4 125 33	25 A		2 N/C + 2 N/O	2

Pack	Cat.No.	Signalling auxiliaries for contactors			
		Auxiliary changeover switch Used to signal the position status of the contacts on the product to which it is connected			
		For 1 module contactors 16 A to 25 A			
		I max	Voltage	contact	Number of modules
1	4 124 29	5 A	250 V~	N/C + N/O	0.5
		For 2 module contactors 25 A			
		Maximum 2 auxiliary devices per contactor Fitted on left-hand side of contactor			
1	4 124 30	5 A	250 V~	N/C + N/O	0.5
		For 40 and 63 A contactors			
		Maximum 1 auxiliary device per contactor Fitted on left-hand side of contactor			
1	4 124 31	5 A	250 V~	N/C + N/O	0.5

CX³ contactors

■ Technical characteristics

- Rated impulse withstand voltage (Uimp): 4 kV
- Mechanical endurance (no. of operating cycles): 10⁶ cycles
- Operating temperatures: - 25 °C to + 40 °C
- Storage temperatures: - 40 °C to + 70 °C

Contactors protection against short circuits according to standard EN 61095, conditional short-circuit current:

- I_q = 6 kA for 16 to 25 A contactors
- I_q = 3 kA for 40 to 63 A contactors

Circuit breaker or gG fuse rated:

- ≤ 16 A for 16 A rating • ≤ 40 A for 40 A rating
- ≤ 25 A for 25 A rating • ≤ 63 A for 63 A rating

• Consumption of a contactor control coil

16 A and 25 A power contactors					
Coil voltage	24 V~		230 V~ low noise	230 V~	
Current	16 A and 25 A	25 A	25 A	16 A and 25 A	16 A and 25 A
Type of contact	NC + NO 2 NO	4 NO	2 NO	NC + NO 2 NO 2 NC	2 NC + 2 NO 4 NO 4 NC
Dimensions	1 mod.	2 mod.	1 mod.	1 mod.	2 mod.
Holding current	200 mA	300 mA	12 mA	20 mA	20 mA
Inrush current	970 mA	2500 mA	60 mA	90 mA	200 mA

40 A and 63 A power contactors				
Coil voltage	24 V~		230 V~	
Current	40 A and 63 A	40 A and 63 A	40 A and 63 A	40 A and 63 A
Type of contact	2 NO	4 NO	2 NO 2 NC	3 NO 4 NO 4 NC
Dimensions	2 mod.	3 mod.	2 mod.	3 mod.
Holding current	250 mA	270 mA	15 mA	30 mA
Inrush current	1750 mA	1500 mA	150 mA	200 mA

• Recommendations

Insert a spacing module (Cat.No. 4 063 07 p. 150):

- every two contactors when the ambient temperature is below 40 °C
- every contactor when the ambient temperature is between 40 and 60 °C

Contactor rating	40 °C	50 °C	60 °C
I_e = 16 A	16 A	14 A	12 A
I_e = 25 A	25 A	22 A	20 A
I_e = 40 A	40 A	36 A	32 A
I_e = 63 A	63 A	57 A	50 A

• Max. connection cross-section in mm²

Conductor type	Ratings ≤ 25 A	Ratings 40 & 63 A
Rigid	6 ² or 2 x 2,5 ²	25 ² or 2 x 10 ²
Flexible	6 ² or 2 x 2,5 ²	25 ² or 2 x 10 ²
Flexible with single end cap	6 ²	16 ²
Flexible with double end cap	2 x 4 ²	2 x 16 ²

■ Contactor selection charts

• Incandescent lamps

Tungsten and halogen filaments 230 V~								
Nominal wattage	40 W	60 W	75 W	100 W	150 W	200 W	500 W	1000 W
16 A	45	30	24	19	13	10	4	2
25 A	60	48	38	30	20	15	6	3
40 A	96	77	61	48	32	24	10	5
63 A	154	123	97	77	51	38	15	8

ELV halogen bulbs with ferromagnetic ballast							ELV halogen bulbs with electronic ballast					
Nominal wattage	20 W	35 W	50 W	75 W	100 W	150 W	20 W	35 W	50 W	75 W	100 W	150 W
16 A	32	20	15	12	9	6	60	40	28	18	14	9
25 A	52	30	24	16	12	8	80	50	40	26	20	13
40 A	68	39	31	21	16	10	112	70	56	36	28	18
63 A	88	51	41	27	20	14	157	98	78	51	39	25

■ Contactor selection charts (continued)

• Fluorescent tubes with ferromagnetic ballast

Single parallel compensated fluorescent						Double series compensated fluorescent				
Nominal wattage	18 W	20 W	36 W	58 W	115 W	2 x 20 W	2 x 36 W	2 x 40 W	2 x 58 W	2 x 140 W
16 A	24	24	16	11	5	30	24	22	15	6
25 A	33	30	25	17	9	45	38	35	24	10
40 A	43	39	33	22	12	68	57	53	36	15
63 A	56	51	42	29	15	101	86	79	54	23

Quadruple series compensated fluorescent					Compact fluorescent with built-in starter			
Nominal wattage	4 x 18 W				7 W	10 W	18 W	26 W
16 A	16				50	40	28	19
25 A	24				60	50	42	28
40 A	36				78	65	55	36
63 A	54				101	85	71	47

• Fluorescent tubes with electronic ballast

Single fluorescent					Double fluorescent		
Nominal wattage	18 W	30 W	36 W	58 W	2 x 18 W	2 x 36 W	2 x 58 W
16 A	72	42	36	22	36	20	12
25 A	110	68	58	36	56	30	19
40 A	165	102	87	54	84	45	29
63 A	248	153	131	81	126	68	43

Triple fluorescent (series compensated)			Quadruple fluorescent (series compensated)	
Nominal wattage	3 x 14 W	3 x 18 W	4 x 14 W	4 x 18 W
16 A	34	26	26	20
25 A	46	38	37	28
40 A	62	51	52	39
63 A	84	69	73	55

Compact fluorescent with built-in electronic power supply					
Nominal wattage	7 W	11 W	15 W	20 W	23 W
16 A	120	80	64	50	43
25 A	200	125	90	70	60
40 A	280	175	126	98	84
63 A	392	245	176	137	118

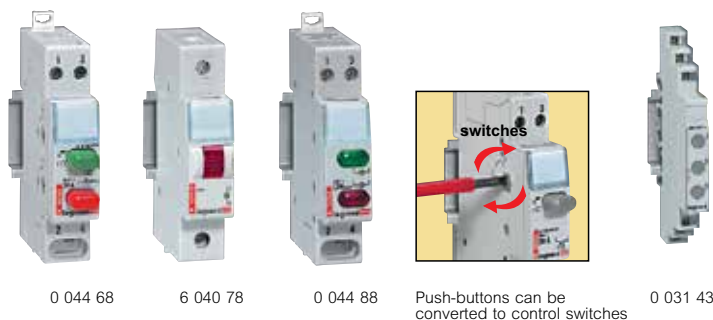
• Discharge lamps with compensation

Metal halogenide							Low pressure sodium vapour					
Nominal wattage	35 W	70 W	100 W	150 W	250 W	400 W	18 W	35 W	55 W	90 W	135 W	180 W
16 A	10	6	5	3	2	1	12	6	5	3	2	2
25 A	15	9	7	5	3	2	20	10	7	5	3	3
40 A	23	14	11	8	5	3	30	15	11	8	5	5
63 A	34	20	16	11	7	5	45	23	16	11	7	7

High pressure sodium vapour						High pressure mercury vapour				
Nominal wattage	70 W	150 W	250 W	400 W	1000 W	50 W	80 W	125 W	250 W	400 W
16 A	8	7	5	3	1	11	8	6	3	2
25 A	10	9	6	4	2	15	10	8	4	3
40 A	15	14	9	6	3	21	14	11	6	4
63 A	23	20	14	9	5	29	20	16	8	6

High pressure mixed				
Nominal wattage	100 W	160 W	250 W	400 W
16 A	9	6	4	2
25 A	11	7	5	3
40 A	14	9	7	4
63 A	19	12	8	5

Push-buttons, indicators and control switches



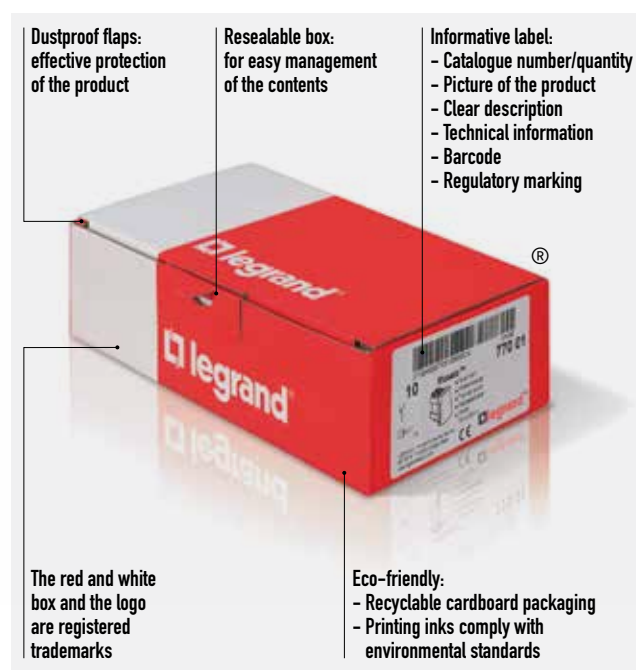
Dimensions see p. 176

Pack	Cat.No.	Push-buttons and control switches 20 A - 250 V~		
		Accept insertion of supply busbars Conform to IEC 60669-1 Breaking capacity AC 12 A according to IEC 60947-5-1 Supplied in push-button position Can be converted to control switches		
		Single function		Number of modules
10	0 044 53	1 N/O		1
10	0 044 54	1 N/C		1
10	0 044 55	2 N/O		1
10	0 044 58	1 N/O + N/C		1
		Dual functions		
10	0 044 63 ¹	1 N/O + green indicator		1
10	0 044 64 ¹	1 N/C + red indicator		1
10	0 044 68	1 N/O (green) + 1 N/C (red)		1
		Indicators - 250 V~		
		One piece indicator - single		
		Supplied with 230 V~ lamps		
		non replaceable		Number of modules
12	6 040 77	Green		1
12	6 040 78	Red		1
12	6 040 79	Orange		1
		Double		
		Supplied with diffuser and replaceable lamp E 10 - 230 V~		
10	0 044 88	Green + red		1
		Three-phase voltage indicator		
		Supplied with lamps 230/400 V~ non replaceable		
2	0 031 43	3 neon lamps colourless		0.5
		Accessories		
		Replacement lamps E 10 - 1.2 W		
10	0 044 33	24 V incandescent		
10	0 044 36	230 V neon		
10	0 044 37	230 V fluo for blue and green diffusers		

Practical and eco-friendly

Legrand packaging – your assistance of a certified original product which is factory inspected, protected and clearly identifiable

LEGRAND PACKAGING





Digital time switches

DIN mounting



037 05

4 126 31

4 126 30

047 70



Dimensions see p. 176

For switching an electric circuit (lighting, heating) ON or OFF at selected times during a pre-programmed time period
Temporary (automatic return) or permanent (forced switching ON or OFF) override on output

Pack	Cat.No.				Pack	Cat.No.			
		Standard - daily or weekly program with 6 year clock battery reserve					Multiple functions annual program		
		Compatible with alternative renewable energy systems such as photovoltaic panels Automatic summer/winter changeover Clock precision: ± 1 sec per day Minimum programme setting: 1 min 28 programmes					Annual programme		Number of modules
		Power supply 120/230 V~ - 50/60 Hz		Number of modules			High precision clock: ± 0.2 sec per day For programming periods throughout the year 28 programmes per channel possible: - weekly / astronomical programmes - yearly programmes - exceptional programmes Manual override (switch on and off) for every channel on the front of the switch Programmed directly on keypad, or using programme transfer key supplied		
1	037 05	1 output 16 A - 250 V~ $\mu \cos \varphi = 1$ per 1 inverter contact Low consumption: 0.1 W		1	1	4 126 30	2 outputs - 230 V~ - 50/60 Hz		2
		Multiple functions - daily or weekly program with 6 year clock battery reserve			1	047 70	4 outputs - 120/230 V~ - 50/60 Hz		6
		Programme settings: on daily or weekly basis 15 languages A programme consists of a on and off time and their assignement to certain days Option to suspend the programme for a specific period to set-up with start and date Minimum programme setting: 1 s. High precision clock: ± 0.1 sec per day Particularly suited to irregular cycles: - security installations (access point, alarms, etc.), - industrial installations (pump stations, etc.) Programmed directly on keypad, or using program transfer key Cat.No. 4 128 72 Additional functions including random (irregular cycles), hour counters			1	047 82	Battery Working reserve 5 years for Cat.No. 047 70		
		Power supply 230 V~ - 50/60 Hz		Number of modules			Programming software		
1	4 126 31	1 output 16 A - 250 V~ 56 programmes $\mu \cos \varphi = 1$ per 1 inverter contact 84 impulses max.		2	1	4 128 73	Can be used to create, save and transfer program settings for multifunction and multi-program time switches, Cat.No. 047 70, 4 126 31/32/33/41 and 4 126 54 Data is transferred to the program transfer key Cat.No. 4 128 72, using the data loader connected to the USB port of the PC Kit comprising software on CD-ROM, data loader and transfer key Windows Vista compatible		
1	4 126 41	2 output 16 A - 250 V~ 2 x 28 programmes $\mu \cos \varphi = 1$ per 2 inverters contacts		2			For outdoor illuminations		
		Programming transfer key					Astronomical		
1	4 128 72	Can be used to store programme settings made: - Directly on a multifunction and multi-programme time switch Cat. No. 4 126 31/33/41 (loading on device) - with the programming software installed on a PC running Windows (loading on data loader)					For autonomous control of outdoor illuminations Automatic programming: simply initialise the products for the location with no need to install a photoelectric cell Programmed directly on keypad, or using programme transfer key Cat.No. 4 128 27 High precision clock: ± 0.2 sec per day		
		Power supply 230 V~ - 50/60 Hz		Number of modules			Power supply 230 V~ - 50/60 Hz		
1	4 126 54	1 output 16 A - 250 V~ 28 programmes		2	1	4 126 54	1 output 16 A - 250 V~ 28 programmes		2
1	4 126 57	2 output 16 A - 250 V~ 2 x 14 programmes		2	1	4 126 57	2 output 16 A - 250 V~ 2 x 14 programmes		2

Analogue time switches

DIN mounting

NEW



4 127 90

4 127 95



Dimensions see p. 176

Programmed via captive segment
 1-module device: min. 1 segment
 3-module device: min. 2 segments
 Power supply: 230 V~ - 50/60 Hz
 3-position override switch "ON-AUTO-OFF" on front panel
 Manual changeover to summer/winter time
 1 outlet 16 A - 250 V~ - $\mu \cos \varphi = 1$

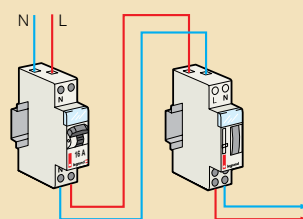
Pack	Cat.No.	Daily programme	
		1 segment = 15 minutes Accuracy: ± 5 minutes	
		Vertical dial	
		Minimum switching time: 15 minutes N/O contact	Number of modules
1	4 127 80	Without battery reserve	1
1	4 127 90	With 100 h battery reserve	1
		Horizontal dial	
		Minimum switching time: 15 minutes Changeover switch	
1	4 128 12	Without battery reserve	3
1	4 128 13	With 100 h battery reserve	3
		Weekly programme	
		1 segment = 2 hours Accuracy: ± 30 minutes	
		Vertical dial	
		Minimum switching time: 2 hours N/O contact	Number of modules
1	4 127 94	With 100 h battery reserve	1
		Horizontal dial	
		Minimum switching time: 4 hours Changeover switch	
1	4 127 95	With 100 h battery reserve	3

programmable time switches

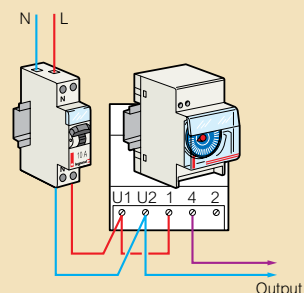
with analogue and digital dial

■ Diagrams

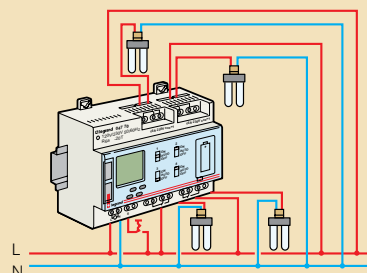
Cat.No. 4 127 80/90/94



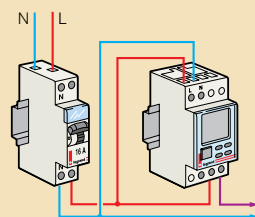
Cat.No. 4 128 12/13 and 4 12795



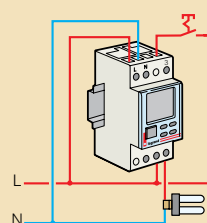
Cat.No. 047 70



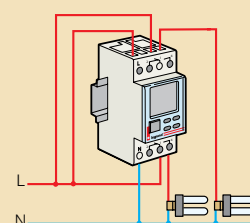
Cat.No. 4 126 31



Cat.No. 4 126 54



Cat.No. 4 126 57



Output closing and breaking times are calculated based on the date, the actual time when the device was switched and on geographical coordinates of the actual location

■ Technical characteristics

Cat.No.	Prog. time	Min. programme settings	Working reserve	Summer/winter time	Outputs 16 A	Nb of prog.	Nb of modules
037 05	7 d	1 min	6 years	auto	1	28	1
4 126 31	24 h/7 d	1 s	6 years	auto	1	56	2
4 126 41	24 h/7 d	1 s	6 years	auto	2	2 x 28	2

Cat.No.	Programme	Segment	Min. switching time	Working reserve	16 A output via contact		Nb of modules
					N/O	Chang. S.	
4 128 12	24 h	15 min	30 min	without	-	1	3
4 128 13	24 h	15 min	30 min	100 h	-	1	3
4 127 80	24 h	15 min	15 min	without	1	-	1
4 127 90	24 h	15 min	15 min	100 h	1	-	1
4 127 94	7 d	2 h	2 h	100 h	1	-	1
4 127 95	7 d	2 h	4 h	100 h	-	1	3

Analogue time switches

surface mounting



6 499 14



499 26

Power supply 230 V~
 Override switching "ON" or "OFF" in front face
 Battery reserve: 500 h with quartz controlled motor
 (except Cat.No. 499 26)
 1 output via changeover contact
 (2 changeover contacts for Cat.No. 499 26)

Pack	Cat.No.	Daily programme
1	6 499 14	20 A - 250 V~ - $\mu \cos \varphi = 1$ Shortest switching time: 30 minutes (1 segment = 10 minutes) Switching accuracy: ± 5 minutes
1	497 56	Weekly programme 16 A - 250 V~ - $\mu \cos \varphi = 1$ Shortest switching time: 3 hours (1 segment = 1 hour) Switching accuracy: ± 20 minutes
1	044 09	Adaptor for fixing time switch on rail EN 50022
1	499 26	Defrosting time switch Time switch for short periods for control of defrosting, regularly repeated switching of pumps, feed conveyors, sprinkler systems, periodic lubrication of machines 16 A - 250 V~ $\mu \cos \varphi = 1$ IP 30 Daily programme The timer can repeat one or two settable short programmes within 24 hours Shortest switching sequence 2.5 hours - up to 9 times 1 switching step = 1 segment = 30 min. 50 Hz Defrosting time from 1 to 60 minutes per contact

1	499 83	Econorex M™ 24 hour - 1 channel Programmable for 15 minutes minimum at 15 minute intervals with retained 'pull out' segments Easily programmed, easily read by user Just set actual time to pointer and pull out segments for switch time
1	499 86	Panel mounting (72 x 72mm) MT, no battery reserve Panel mounting (72 x 72mm) MQT, 100H battery reserve

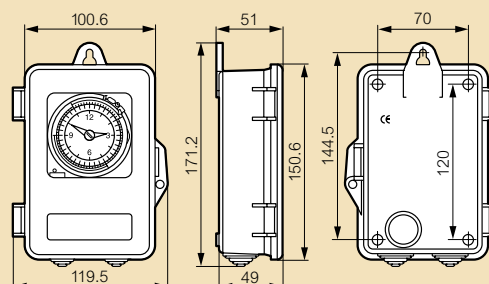
1	046 94	Totalising hour counters Count the operating hours of a machine or an electrical device to determine its exact operating time Counter with numerical display Capacity: 5 digits + 2 decimal places (1 unit = 1 hour) Precision: 1/100th hour Consumption: 0.2 VA
1	046 91	

Number of modules
2
2

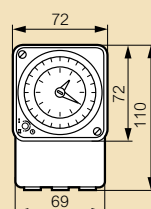
Analogue time switches

■ Dimensions

Cat.No. 6 499 14



Cat.No. 497 56



■ Technical Characteristics

Analogue time switches 20 A

Conform to EN 50022, EN 55014-1, EN 55014-2, IEC 60730-1,
 IEC 60730-2-7, VDE 0631-1 and VDE 0631-2-7

For special applications with heavy loads like controlling:

- the lighting of commercial boards / sign boards
- water heaters
- air conditioners
- hydrochlorinators
- heating / ventilation systems
- street lighting
- blowers
- pool heaters
- electric fences
- filters, pumps and conveyers

Electronic time-lag switches



4 126 02



Space for supply
busbar



0 047 04



Dimensions see p. 176

Designed for supply busbar compatibility
Power supply: 230 V~ - 50/60 Hz
Switches a lighting circuit for a specific time
Self-protection in the event of blocked pushbutton

Pack	Cat.No.	Daily programme	Number of modules
10	4 126 02 	Resettable 230 V~ - 50/60 Hz Timing adjustable from 0.5 sec to 10 min Manual override contact Output 16 A - 250 V~ - $\mu \cos \varphi = 1$ 2000 W incandescent/halogen 2000 W halogen - 230 V~ 1000 VA fluo - series compensated 120 VA fluo - parallel compensated 14 μF 100 VA compact fluorescent 1000 W energy saving lamp automatic 3-wire or 4-wire connection	1

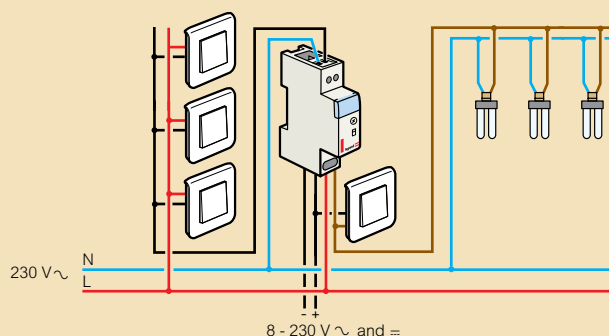
Pack	Cat.No.	Daily programme	Number of modules
10	0 047 04 	Resettable 230 V~ - 50/60 Hz Timing adjustable from 0.5 sec to 12 min Operation with 3 or 4 wires automatically recognised by the time-lag switch - Inputs for separate control 8-230 V (presence detection, lighting control by door entry system etc.) - Switch-off pre-warning function, display of time-lag end - Long duration function (1 hour) and manual switch-off Output 16 A - 250 V~ - $\mu \cos \varphi = 1$ 3680 W incandescent/halogen 2000 W halogen 230 V~ 1000 VA fluo - parallel compensated $\leq 100 \mu F$ 2000 VA compact fluorescent 500 W halogen lamp + ferromagnetic transformer 2000 W halogen lamp + electronic transformer - Specially suited to energy saving lamps 1000 W energy saving lamp	1

Pack	Cat.No.	Automatic staircase time-lag switch for wall mounting 230 V - 50 Hz	Type of delay adjustable	Type
1	0 497 83 	Switches a lighting circuit during a determined period Controlled by illuminated push-button 50 mA max Output : 1 contact Contact rating 10 A - 250 V~ - $\cos \varphi = 1$	Electronic 0.5 to 10 min.	Resettable

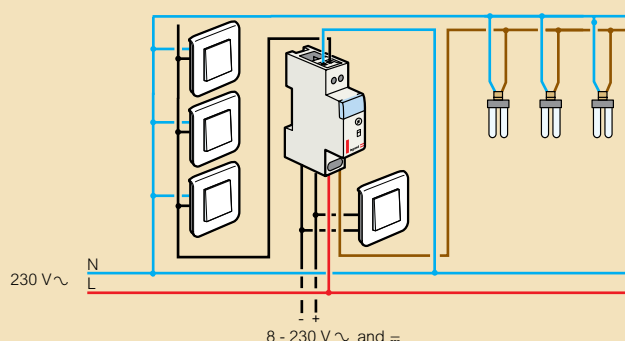
Electronic time-lag switches

Multi-function time-lag switch

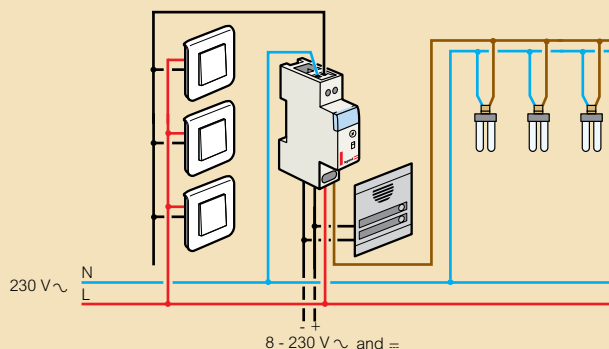
4-wire



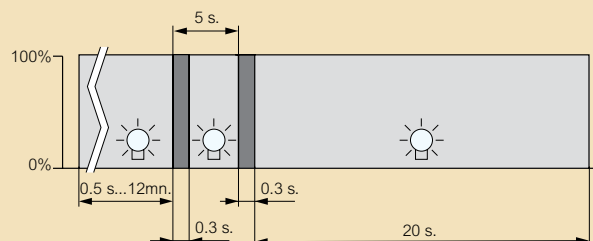
3-wire



Multi-function time-lag switch: lighting control by door entry system



Switch-off pre-warning function



For fluorescent and energy saving lamps the switch-off period is longer than 0.3 s, because of re-starting time required by the lamps

Light sensitive switches



4 126 23

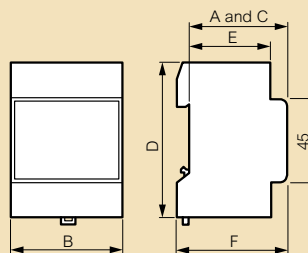


Dimensions see p. 176

Can be used to switch a lighting circuit "ON" and "OFF" based on light conditions (nightfall, daybreak)
Supplied with photoelectric cell
Power supply: 230 V~ - 50/60 Hz

Pack	Cat.No.	Standard
1	4 126 23	Output 16 A - 250 V~ - $\mu \cos \varphi = 1$ 2000 W incandescent 2000 W series compensated fluorescent 1000 W parallel compensated fluorescent 70 μ F 1000 W energy-saving bulb 2000 W halogen bulb + ferromagnetic transformer 2000 W halogen bulb + electronic transformer Automatic timer response Adjustable from 1 to 100 000 lux Number of modules: 1 Supplied with photoelectric cell Cat.No. 4 128 58
1	4 128 58	Replacement photoelectric cell for use with standard light sensitive switch Cat.No. 4 126 23 - IP 55 - IK07
1	4 126 26	Programmable Output 16 A - 250 V~ - $\mu \cos \varphi = 1$ 2000W incandescent 2000W series compensated fluorescent 600W parallel compensated fluorescent 70 μ F 2000W halogen bulb + ferromagnetic transformer 2000W halogen bulb + electronic transformer

Dimensions of din-rail equipment



Description	A	B	C	D	E	F
Push-buttons/control switches	68	17.7	60	83	44	74
Indicators	63	17.7	60	83	44	69
Pulse operated latching relays	64	17.8	17.8	35.6	61	83
Light sensitive switches						
Cat.No. 4 126 23	60	35.6	60	85	37.5	66
Sockets outlets	60	44.5	60	83	44	66
Buzzers/bells	60	17.5	60	76	44	66
Time lag switch 0 047 02/04	60	17.8	60	94	44	66
Time delay relays	60	17.7	60	83	44	66
Programmable 037 05	60	17.8	60	83	44	66
time switches 4 127 80/90/94	60	17.8	60	83	44	66
4 127 95, 4 128 12/13	60	53	60	83	44	66
4 126 31/33/41	60	35.6	60	83	44	66
4 126 54/57	60	35.6	60	83	44	66
047 70	60	90	60	83	44	66
Voltmeters - Ammeters	60	70	60	83	44	66
Contactors - 1 module 16 and 25 A	62	17.8	60	83	44	67.5
Contactors 25, 40 and 63 A						
2 modules	60	35.6	61	83	44	67
3 modules	60	54	61	83	44	67
Contactors 100 A 6 modules	60	90	60	83	44	66
Auxiliaries for contactors and pulse operated latching relays	60	9	60	83	44	66
Transformers and power supplies						
0 042 10/30/31	60	72	60	83	44	66
4 130 91	60	35.8	60	83.5	44	66
4 130 92/93/96	60	71.5	60	83.5	44	66
4 130 98	60	89	60	94	44	66
0 047 91/92	60	105	60	95	44	66
4 131 05/06/07/08	60	89	60	95	44	66
0 047 93	60	70	60	95	44	66
Electrical energy metering						
046 73/74	60	72	60	81	44	66
046 81/72	60	35.5	60	89	44	66
Central measuring unit						
0 046 75/76	64	105	64	89.5	44	69
Residual current relay						
0 260 88	60	35.5	60	89	44	66

Time delay relays

12 to 230 V~ and =



0 047 40



0 047 41



0 047 42



0 047 00



0 047 43



0 047 45

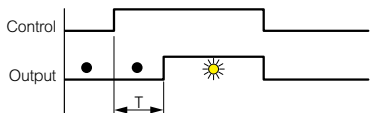
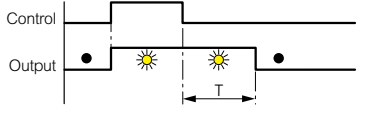
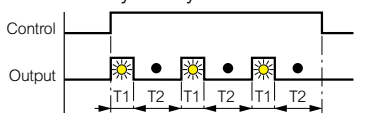
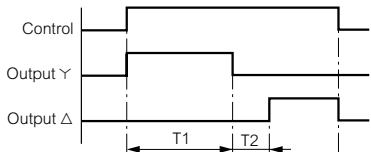


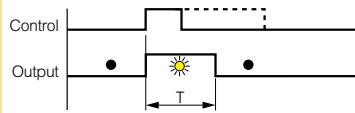
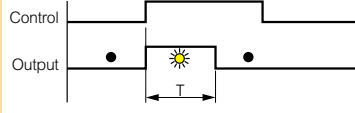
0 047 44



Dimensions **see p.176**

For controlling the switching ON or OFF of a circuit (lighting, ventilation, automation, signalling) in operation for a specific time from 0.1 sec to 100 hrs
Supply voltage: 12 to 230 V~ (50/60 Hz) and =
Output: 8 A - 250 V~ - $\mu \cos \varphi = 1$ per inverter contact

Pack	Cat.No.	Daily programme	Number of modules
1	0 047 40	ON delay Delays load switch-on (alarm, lighting, contactor)  The time period starts when the relay is switched ON. At the end of the time period (T), the load is switched ON	1
1	0 047 41	OFF delay Delays load switch-off (ventilation, etc.)  The time period (T) starts with the opening of the non-illuminated switch or pushbutton. At the end of the time period, the load is switched OFF	1
1	0 047 42	Flashing For switching ON and OFF a load (lighting, sounder) for different times and cyclically  T1 T2 T1 T2 T1 T2	1
1	0 047 00	Motor start (star / delta) For starting a load (motor) in 2 steps Double star-delta timing  T1 T2	1

Pack	Cat.No.	Time delay relays (continued)	Number of modules
1	0 047 43	Timer (pulse) For switching a load ON for a specific time (contactor)  The time period (T) starts with the closing of the non-illuminated switch or pushbutton. At the end of the time period, the load is switched OFF	1
1	0 047 45	Wipe contact flick contactor For switching a load ON for a specific time  The time period (T) starts when the relay is switched ON. At the end of the time period (T), the load is switched OFF	1
1	0 047 44	Multifunction • ON delay • OFF delay • ON/OFF delay • Timer (pulse) • Timer and passing contact • Flashing • Totalizer on delay • Totalizer delay on power-up	1

Additional solutions for specific applications

Atlantic stainless steel cabinets or Marina Glass Reinforced Polyester enclosures are available on request

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▶▶▶ Marina cabinets



▶▶▶ Marina cabinets with glass door

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transformers, buzzers and bells



4 130 91



4 130 98



0 041 07

Dimensions **see p. 176**

Pack	Cat.No.	Bell transformers			
		⚡ Conform to IEC / EN 61558-2-8 Protected against overloads and short circuits. In the event of an overload, switch “OFF” the power supply and allow the transformer to cool down before switching on again With label holders Wall or rail  mounting (for 4 modules) Possibility for supply busbars to run through (Cat.No. 4 130 91)			
		230 V/12 V - 8 V			
		Secondary (V)	Rating (A)	Power (VA)	Number of modules
1	4 130 91	12/8	0.66/1	8	2
1	4 130 92	12/8	2/3	24	4
		230 V/24 V - 12 V			
1	4 130 93	24/12	1/1.5	24 - 18	4

		Safety transformers						
		⚡ Conform to IEC / EN 61558-2-6 Protected against overloads and short circuits. In the event of an overload, switch "OFF" the power supply and allow the transformer to cool down before switching on again Wall or rail mounting (for 4 modules)						
		230 V/12 or 24 V						
		per coupling 2 x 12 V for Cat.No. 4 130 98 Supplied with strip						
		P (VA)	No-load loss (W)	Voltage % drop Cos Φ = 1	Efficiency % Cos Φ = 1	Ucc (%)	I (A) primary loaded	Number of modules
1	4 130 96	25	2.5	29	66	23.3	0.142	4
1	4 130 98	63	4	15.7	75	13.6	0.33	5

		Buzzers and bells				
		50 Hz AC - Connection by screw terminals, with label holder Allow insertion of supply busbars Caution: remove lamps from illuminated push-buttons when used with Cat.No. 0 041 01				
		Bells				
		Voltage (V~)	Power (VA)	Consum. (mA)	Acoustic power ¹ (dB)	Number of modules
10	0 041 01	8/12	4/5	360/420	80/84	1
10	0 041 07	230	6	27	83	1
		Buzzers				
10	0 041 13	230	6	27	73	1

10	0 802 99	Arteor support For mounting Arteor 2-module mechanisms Support width 46.3 mm 2.5 modules					
		Spacing unit Places between two devices which may cause a rise in temperature Enables there to be a whole number of modules and to allow insertion of the supply busbars Enables wires to pass inside of the unit 0.5 module					
10	0 044 40						

single phase power supplies



4 131 05



0 047 93

Dimensions **see p. 176**

For supplying PLCs and their peripherals or any use requiring a voltage of 5 V, 12 V, 15 V or 24 V=
Fixing on rail

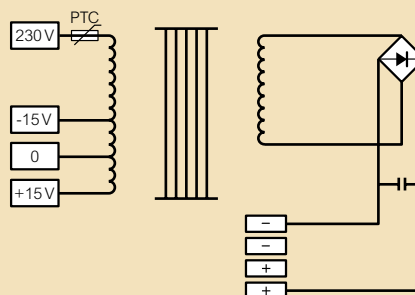
Pack	Cat.No.	Filtered rectified power supplies									
		Conform to standards IEC EN 61558-2-6 For equipment conforming to standards EN 61131-2, EN 60204 and EN 60439-1 Comprising: - A safety transformer with interference filtration - A filter capacitor - Protection by PTC integrated in the primary - Double operating terminals Terminal capacity: 6 mm² flexible Class II after addition of faceplate Ripple factor < 3% Ambient temperature without derating: 60 °C Power supply 230 V ± 15 V~									
		12 V=									
		<table> <tr> <th>Power (W)</th><th>Current (A)</th><th>Number of modules</th></tr> <tr> <td>15</td><td>1.3</td><td>5</td></tr> </table>	Power (W)	Current (A)	Number of modules	15	1.3	5			
Power (W)	Current (A)	Number of modules									
15	1.3	5									
		24 V=									
		<table> <tr> <th>Power (W)</th><th>Current (A)</th><th>Number of modules</th></tr> <tr> <td>12</td><td>0.5</td><td>5</td></tr> <tr> <td>21.5</td><td>0.9</td><td>5</td></tr> </table>	Power (W)	Current (A)	Number of modules	12	0.5	5	21.5	0.9	5
Power (W)	Current (A)	Number of modules									
12	0.5	5									
21.5	0.9	5									

Pack	Cat.No.	Stabilised power supplies						
		Conform to standards NF EN 61204, NF EN 60950 (Low Voltage Directive), EN 55022 (class B), EN 61000-4-2, EN 61000-3-26, ENV 50204 Switching mode Galvanic isolation 4000 V (input/output) With: - Electronic protection (overloads and short-circuits) - Integral fuse protection on input - A green voltage present indicator on output Power supply 115 - 230 V~						
		5 V=						
		<table> <tr> <th>Power (W)</th><th>Current (A)</th><th>Number of modules</th></tr> <tr> <td>12.5</td><td>2.5</td><td>6</td></tr> </table>	Power (W)	Current (A)	Number of modules	12.5	2.5	6
Power (W)	Current (A)	Number of modules						
12.5	2.5	6						
		12 V=						
		<table> <tr> <th>Power (W)</th><th>Current (A)</th><th>Number of modules</th></tr> <tr> <td>30</td><td>2.5</td><td>6</td></tr> </table>	Power (W)	Current (A)	Number of modules	30	2.5	6
Power (W)	Current (A)	Number of modules						
30	2.5	6						
		24 V=						
		<table> <tr> <th>Power (W)</th><th>Current (A)</th><th>Number of modules</th></tr> <tr> <td>24</td><td>1</td><td>4</td></tr> </table>	Power (W)	Current (A)	Number of modules	24	1	4
Power (W)	Current (A)	Number of modules						
24	1	4						

Pack	Cat.No.	Power supplies with battery back-up						
		Conform to standards IEC/EN 61558-2-6, EN 55022 (class B), EN 61000-4-2 With "ON"/"OFF" button, operation indicator, fuse protection Power supply 230 V~						
		12 V=						
		Capacity 280 mA/h						
		<table> <tr> <th>Power (W)</th><th>Current (A)</th><th>Number of modules</th></tr> <tr> <td>6</td><td>0.5</td><td>6</td></tr> </table>	Power (W)	Current (A)	Number of modules	6	0.5	6
Power (W)	Current (A)	Number of modules						
6	0.5	6						

single phase power supplies

Filtered rectified power supplies



Cat.No.	Voltage (V)	Current (A)	Weight (Kg)	I Prim. on load (A) at 230 V
4 131 05	12	1.3	0.95	0.15
4 131 06	15	1	0.95	0.15
4 131 07	24	0.5	0.95	0.13
4 131 08	24	0.9	0.95	0.17

Cat.No.	Voltage of use				No load losses (W)	Total losses at 100% load (W)	Voltage drop cos φ = 1
	A no load (V)	On load (V)	With 100 kA load and prim. voltage + 10%	With nominal load and prim. voltage - 15%			
4 131 05	15.1	11.8	16.3	10.4	3.4	8.7	28.5
4 131 06	18.5	14.6	19.9	12.9	3.4	8.9	26.7
4 131 07	28.9	23.6	30.6	20.7	3.4	7.1	22.3
4 131 08	29.9	22.8	32.0	20.3	3.4	10.4	31.0

Stabilised power supplies

Cat.No.	Secondary		Primary			Max. out current (A)	Power consumption at max. temp. (W)	Efficiency
	Voltage (V)	Current (A)	Voltage (V)	Current consump. max. (A)	Inrush current max. (A)			
0 047 91	5	2.5	109-264	0.15/0.35	16	2.5	12.5	58
0 047 92	12	2.5	109-264	0.3/0.55	11	2.5	30	
0 047 93	24	1	109-264	0.25/0.45	13	1	24	73

Cat.No.	Starting time on energisation (s) 230 V/115 V	Hold time (at 230 V) (ms)	Operating temperature	Residual ripple peak to peak (mVpp)	Line protection		Dim.	Max. weight	Max. operating temperature with derating (°C)
					With fuse (A)	With MCB (A) + type			
0 047 91	2.4/0.8	90	-10/+50	35	1A aM	2A/C	6 modules	0.32	50
0 047 92	10/3.7	115	-10/+50	20	1A aM	2A/C	6 modules	0.32	50
0 047 93	2.6/1	124	-10/+50	80	2A aM	6A/C	4 modules	0.25	50

PTC protection

PTC: Positive temperature coefficient (limitation of overloads and temperature). In the event of an overload switch "off" the power supply and allow the power supplies to cool down before switching on again

A project to optimise quality and energy efficiency must include metering

Metering upstream identifies the critical points and ensures optimum targeting of the actions to be taken, and downstream to monitor the effects and control any drift. Legrand EMDX³ metering range will naturally have a place in distribution boards.



EMDX³ metering control units

All the essential parameters of the installation on DIN rail or on the door:

- Active and reactive energy
- Operating time
- Power factor
- Harmonic distortion
- Programmable alarms



▶▶▶ EMDX³ unit on DIN rail



▶▶▶ EMDX³ unit on door
EMDX³ units on doors provide a large size display and their capacity can be increased with extension modules.

LEGRAND ENERGY EFFICIENCY

Eco-design a voluntary approach

The Legrand group has been taking environmental problems into account since 2001. This approach is based on international standards for the objective measurement of the environmental impacts of products in terms of both consumption of resources and pollution. Legrand publishes these reports in the form of PEP (Product Environmental Profile) sheets.



Remote supervision and viewing

With the Legrand communication interfaces (RS 485, IP), supervision software and Web servers, measurements can be centralised and displayed remotely on a PC, tablet or smartphone.



EMDX³ electricity meter on DIN rail

EMDX³ meters installed in secondary distribution boards can be used to monitor consumption per building, per floor and per application.



►►► Display of 32 measurement points on tablet computers and WEB SERVERS



►►► Electrical energy meters, p. 182

EMDX³ electrical energy meters

└ rail mounting



0 046 70

046 74



Technical characteristics **p. 185 - 187**

Measure the electricity consumed by a single-phase or three-phase circuit downstream of the electricity distribution metering. Display electricity consumption in kWh, as well as other values such as current, active energy, reactive energy and power (depending on the catalogue number).

Conform to standards IEC 62053-21/23, IEC 62052-11 and IEC 61010-1. MID compliance ensures accuracy of the metering with a view to recharging for the electricity used.

Single-phase meters

Pack	Cat.No.		
	Non-MID	MID compliant	Direct connection
1	0 046 70		32 A - 1 module Pulse output
1	046 81		36 A - 2 modules Pulse output
1	046 72	0 046 78	63 A - 2 modules Pulse output
1	0 046 77	0 046 79	63 A - 2 modules RS 485 output

Three-phase meters

	Non-MID	MID compliant	Direct connection
1	046 73	0 046 82	63 A - 4 modules Pulse output
1	0 046 80	0 046 83	63 A - 4 modules RS 485 output
			Connection with CT
1	046 74	0 046 85	5 A - 4 modules pulse output
1	0 046 84	0 046 86	5 A - 4 modules RS 485 and pulse output

Concentrator

1	0 046 87	For collecting and transmitting measurements taken by 7 universal pulse electricity meters. Also collects data from other meters (gas meters, water meters, etc.) RS485 output 4 modules
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EMDX³ multi-function metering units

└ rail mounting



0 046 76



Technical characteristics **p. 185 - 187**

Conform to standards:

- IEC 61557-12
- IEC 62053-22 class 0.5 S
- IEC 62053-23 class 2

Pack	Cat.No.	EMDX ³ modular
		For mounting on 2 rail Width: 4 modules • LCD display • Measurement of currents, voltages, active, reactive and apparent power and internal temperature • Dual tariff metering: - Active energy consumed - Reactive energy consumed - Operating time - Power factor • THD voltages and currents up to order 51 • Programmable alarms on all functions • Outputs for controlling wiring devices, alarm feedback and pulse feedback
1	0 046 75	EMDX³ pulse unit Data transmission via pulses
1	0 046 76	EMDX³ RS 485 unit Data transmission via RS 485 communication interface and pulses

EMDX³ multi-function metering units

for mounting on door or solid faceplate



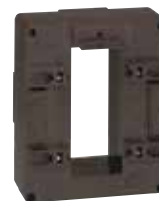
0 146 68



0 146 69



0 146 73



Current transformers (CT)

p. 184



Technical characteristics **p. 185 - 187**

Conform to standards:

- IEC 61557-12
- IEC 62053-22 class 0.5 S
- IEC 62053-23 class 2

Pack	Cat.No.	EMDX³ - Access
1	0 146 68	Multi-function metering unit For mounting on door or solid faceplate Dimensions: 96 x 96 x 60 mm • LCD display • Measurement of currents, voltages, active, reactive and apparent power, internal temperature and power factor • Metering: - Active energy consumed or produced - Reactive energy consumed or produced - Operating time - Pulses • THD voltages and currents up to order 51 • Programmable alarms on all functions Can take 2 optional modules Modules for EMDX³ - Access multi-function metering unit
1	0 146 71	RS485 communication module MODBUS link
1	0 146 72	1-output module Can be assigned to pulse feedback, alarm feedback or control of wiring devices

Pack	Cat.No.	EMDX³ - Premium
1	0 146 69	Multi-function metering units For mounting on door or solid faceplate Dimensions: 96 x 96 x 60 mm • LCD display • Measurement of currents, voltages, active, reactive and apparent power, internal temperature and power factor • Metering: - Active energy consumed or produced - Reactive energy consumed or produced - Operating time - Pulses • Individual harmonics up to order 63 • Programmable alarms on all functions Can take 4 optional modules Modules for EMDX³ - Premium multi-function metering units
1	0 146 73	RS 485 communication module MODBUS link
1	0 146 74	Storage module Storage of active and reactive power over 62 days, the last 10 alarms and the average voltage and frequency values over 60 days max.
1	0 146 75	Module with 2 inputs/2 outputs Up to 3 modules, i.e. 6 inputs/6 outputs, can be installed Outputs can be assigned to monitoring mode, remote control or timed remote control
1	0 146 77	Temperature module Indication of the internal temperature and possibility of connecting 3 sensors for measuring the external temperature

Pack	Cat.No.	Communication and supervision
		Web servers Enable remote viewing, via a web browser on PCs, smartphones, web viewers, tablet computers such as iPads, Archos, etc., of values collected on electricity meters and multi-function metering units
1	0 261 78	For 32 metering points (meters or multi-function metering units)
1	0 261 79	For an unlimited number of metering points (meters or multi-function metering units)
		Legrand software dedicated to measurement For displaying the values collected from electricity meters or multi-function metering units on a PC connected to the network
1	0 261 88	For 32 metering points (supplied on CD)
1	0 261 89	For an unlimited number of metering points (supplied on CD)
		Legrand supervision software - made-to-measure For customised display of the values collected and control of the power installation on a PC
		IP converter For RS485/Ethernet conversion for connecting electricity meters and multi-function metering units to an IP network
1	0 046 88	

1. Please consult Legrand for more information

current transformers CT



047 78

Pack	Cat.No.	Single-phase current transformers (CT)	
		Used with ammeters, electricity meters or multi-function measuring units Provide a 0 to 5 A current at the secondary, proportional to the primary current For fixing on plates, EN 60715 rail Cat.No. 046 31/34/36, or bars Secondary connected by terminals or lugs Precision class 1%	
		For 16 x 12.5 mm bar and Ø21 mm cable	
		Transformation ratio	Output (VA)
1	046 31	50/5	1.25
1	046 34	100/5	2.5
1	046 36	200/5	5.5
		For 40.5 x 10.5 mm bar and Ø35 mm cable	
1	046 38	400/5	12
		For 65 x 32 mm bar	
1	047 76	600/5	12
1	047 77	800/5	15
1	047 78	1000/5	20
		For 127 x 38 mm bar	
1	046 45	1500/5	15
1	046 46	2000/5	20
		For 127 x 54 mm bar	
1	047 80	2500/5	50
1	046 48	4000/5	50

current transformers CT

■ Current transformers (CT)

Technical characteristics

Degree of protection: IP 20

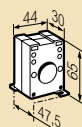
Operating frequency: 50/60 Hz

Dimensions

- Single-phase CTs

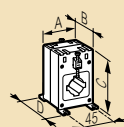
Cat. No. 046 31/34/36 for 16 x 12.5 mm bar and Ø21 mm cable

Fixing on EN 60715 rail



Cat. No. 046 38 for 40.5 x 10.5 mm bar and Ø35 mm cable

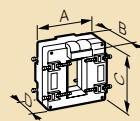
Fixing on EN 60715 rail or on plate



Cat. No.	A	B	C	D	Ø	Fixing centres on plate
046 38	77	46	107	54	35	54 x 45

Cat. No. 047 76/77/78 for 65 x 32 mm bar

Fixing on bar

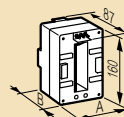


Cat. No.	A	B	C	D
047 76/77/78	90	90	94	40

Cat. No. 046 45/46 for 127 x 38 mm bar

Cat. No. 047 80 and 046 48 for 127 x 54 mm bar

Fixing on bar



Cat. No.	A	B
046 45/46	99	58
046 48/047 80	125	40

Determination of the max. distance between CT and meter

Cat. No.	Max. power of CT	Meter consump. (W)	Max. loss in capac. (VA)	Max. distance bet. CT & meter (m)		
				Wiring 2.5 mm²	Wiring 4 mm²	Wiring 6 mm²
046 31	1.25	0.5	0.75	1.8	2.7	3.9
046 34	2.5	0.5	2	4.9	7.1	10.4
046 36	5.5	0.5	5	12.2	17.8	25.9
046 38 047 76	12	0.5	11.5	28	40.8	59.6
047 77/79 046 45	15	0.5	14.5	35.3	51.5	75.2
046 46 047 78	20	0.5	19.5	47.4	69.3	101.1
047 80 046 48	50	0.5	49.5	120.4	175.8	256.7

EMDX³ electrical energy meters

└ rail mounting

■ Technical characteristics

Single-phase meters Cat. Nos 0 046 70/72/77/78/79/81

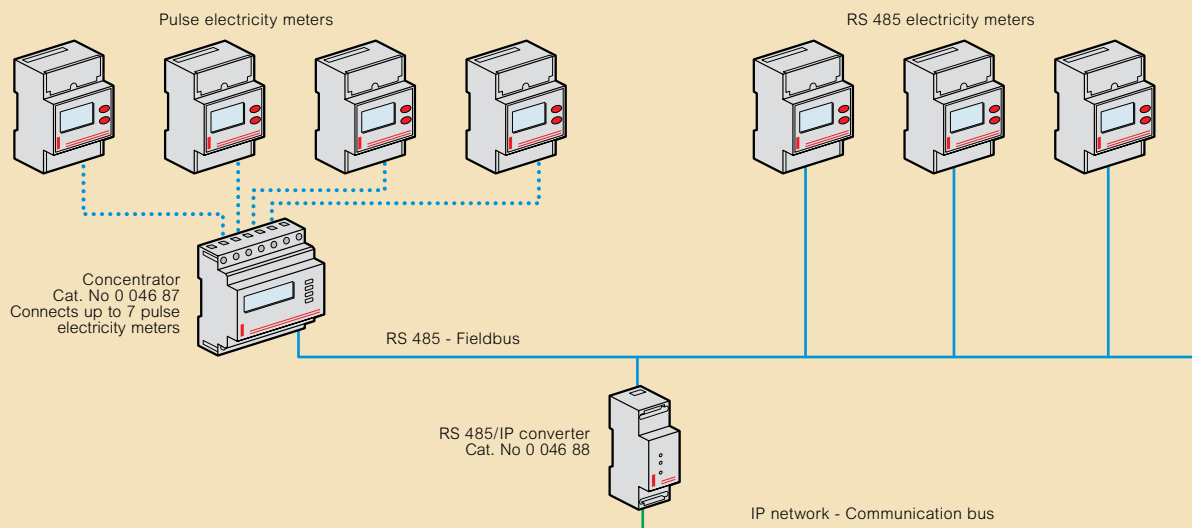
LCD display: 7 digits
Resolution: 0.1 kWh
Maximum indication: 99999.9 kWh
Metrological LED: 1 Wh/pulse (Cat.No. 0 046 70 : 0.5 Wh/pulse)
Accuracy (EN 62053-21): class 1
Reference voltage Un: 230 V-240 V
Reference frequency: 50-60 Hz
Pulse output: 1 pulse/10 Wh
(Cat.No. 0 046 70: 2 pulse/Wh)

Three-phase meters Cat. Nos 0 046 73/74/80/82/83/84/85/86

LCD display: 8 digits
Resolution: 0.01 kWh⁽¹⁾
Maximum indication: 99999.99 kWh⁽¹⁾
Metrological LED: 0.1 Wh/pulse or 1 Wh/pulse
Active energy accuracy (EN 62053-21): class 1
Reactive energy accuracy (EN 62053-23): class 2
Reference voltage Un:
- Single-phase: 230-240 V
- Three-phase: 230(400)-240(415) V
Operating limit range (EN 62053-21, EN 62053-23):
- Single-phase: 110 to 254 V
- Three-phase: 110(190) to 254(440) V
Pulse output: 1 pulse/10 Wh

Cat. No.		0 046 70	046 81	046 72	0 046 77	0 046 78	0 046 79	046 73	0 046 80	0 046 82	0 046 83	046 74	0 046 84	0 046 85	0 046 86
Number of modules		1	2	2	2	2	2	4	4	4	4	4	4	4	4
Connection	Direct	●	●	●	●	●	●	●	●	●	●				
	Via a current transformer											●	●	●	●
	Single-phase	●	●	●	●	●	●					●	●		
	Three-phase							●	●	●	●	●	●	●	●
Max. current		32 A	36 A	63 A	63 A	63 A	63 A	63 A	63 A	63 A	63 A	5 A (CT)	5 A (CT)	5 A (CT)	5 A (CT)
Metering	Total active energy	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Total reactive energy							●	●	●	●	●	●	●	●
	Partial active energy (reset)		●	●	●	●	●	●	●	●	●	●	●	●	●
	Partial reactive energy (reset)							●	●	●	●	●	●	●	●
	Active power			●	●	●	●	●	●	●	●	●	●	●	●
	Reactive power							●	●	●	●	●	●	●	●
	Apparent power							●	●	●	●	●	●	●	●
	Current			●	●	●	●	●	●	●	●	●	●	●	●
	Voltage			●	●	●	●	●	●	●	●	●	●	●	●
	Frequency			●	●			●	●	●	●	●	●	●	●
	Power factor			●	●			●	●	●	●	●	●	●	●
	Time-of-use			●	●										
	Average active power							●	●	●	●	●	●	●	●
	Max. average active power value							●	●	●	●	●	●	●	●
Dual tariff							●								
Communication	Pulse output	●	●	●		●		●		●		●	●	●	●
	RS 485 interface				●		●		●		●		●		●
MID compliant						●	●			●	●			●	●
Operating conditions	Reference temperature	23 °C ± 2 °C													
	Operating temperature	-20 to +55 °C	-10 to +45 °C						-5 to +55 °C						
	Storage temperature	-40 to +70 °C	-25 to +70 °C						-25 to +70 °C						
	Consumption	≤ 8 VA						≤ 4 VA per phase				≤ 1 VA per phase			
	Heat dissipation	≤ 6.5 W						≤ 6 W				≤ 4 W			

■ Interfacing with IP communication network



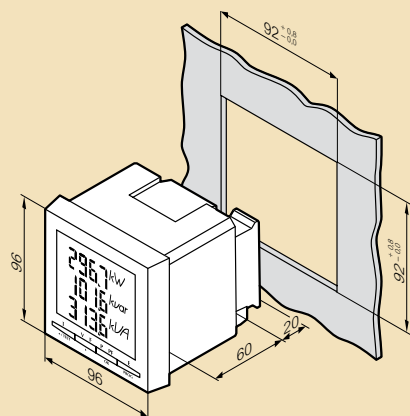
1: For direct connection meters
If connected via transformers, the resolution and maximum indication depend on the transformation ratios of these transformers

EMDX³ multi-function metering units

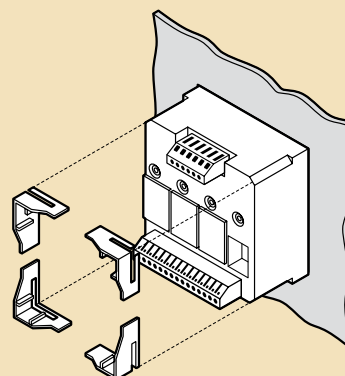
■ Technical characteristics

Cat.No.			0 046 75/76	0 146 68	0 146 69
Connection	Current measurement terminals		4 mm ²	6 mm ²	6 mm ²
	Other terminals		2.5 mm ²	2.5 mm ²	2.5 mm ²
Protection index	Front cover		IP 51	IP 52	IP 52
	Casing		IP 20	IP 30	IP 30
Weight			205/215 g	400 g	400 g
Display			Backlit LCD	Backlit LCD	Backlit LCD
Measurements			3P+N, 3P, 2P, 1P+N	3P+N, 3P, 2P, 1P+N	3P+N, 3P, 2P, 1P+N
Voltage measurement	Direct	Phase/phase	50 to 520 V~	50 to 500 V~	18 to 700 V~
		Phase/neutral	28 to 300 V~	28 to 289 V~	11 to 404 V~
	From a PT	Primary	-	-	≤ 500 kV
		Secondary	-	-	60, 100, 110, 115, 120, 173, 190 V~
	Permanent overload between phases		760 V~	800 V~	760 V~
	Update period		1 s	1 s	1 s
Current measurement	From a CT	Primary	5 to 9999 A	≤ 9999 A	≤ 9995 A
		Secondary	5 A	5 A	1 or 5 A
	Minimum measurement		5 mA	5 mA	10 mA
	Input consumption		< 0.6 VA	< 0.6 VA	< 0.3 VA
	Display		0 to 9999 A	1 to 11 kA	0 to 11 kA
	Permanent overload		6 A	6 A	10 A
	Intermittent overload		60 A/1 s - 120 A/0.5 s	10 In/1 s	10 In/1 s
	Update period		1 s	1 s	1 s
	Max. CT x PT ratio		-	-	10000000
Power measurement	Total		0 to 9999 kW/kvar/kVA	0 to 11 MW/Mvar/MVA	0 to 8000 MW/Mvar/MVA
	Update period		1 s	1 s	1 s
Frequency measurement	Measurement range		45.0 to 65.0 Hz	45.0 to 65.0 Hz	45.0 to 65.0 Hz
	Update period		1 s	1 s	1 s
Auxiliary power supply	50/60 Hz		200 to 277 V~ ±15%	110 to 400 V~ ±10%	110 to 400 V~ ±10%
	DC		-	120 to 350 V= ±20%	120 to 350 V= ±20%
	Consumption		< 5 VA	< 10 VA	< 10 VA
Operating temperature			-10 °C to +55 °C	-10 °C to +55 °C	-10 °C to +55 °C
Storage temperature			-20 °C to +70 °C	-20 °C to +85 °C	-20 °C to +85 °C

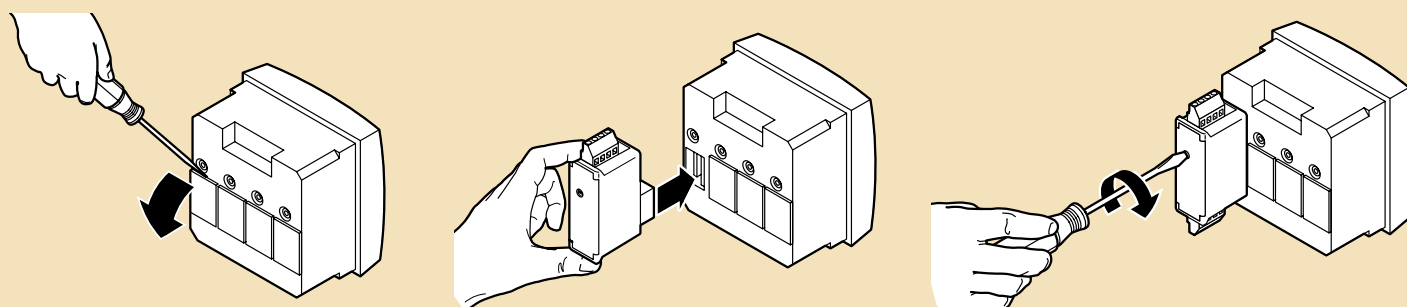
■ Flush-mounting dimensions Cat.No. 0 146 68/69



■ Fixing on door Cat.No. 0 146 68/69

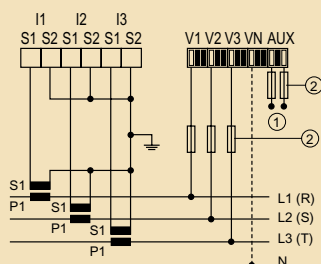


■ Fitting modules Cat.No. 0 146 68/69

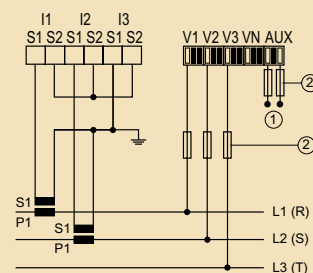
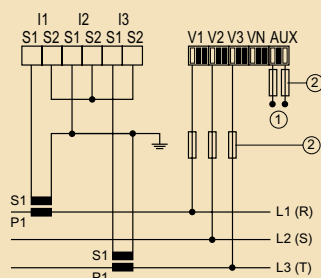


■ Connection solutions

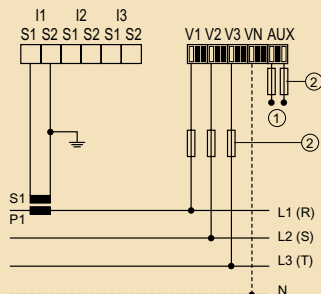
Unbalanced three-phase network (3 or 4-wire)



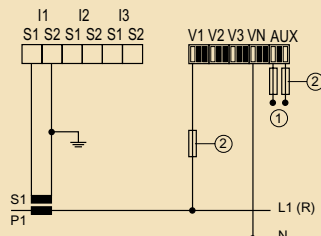
(3-wire)



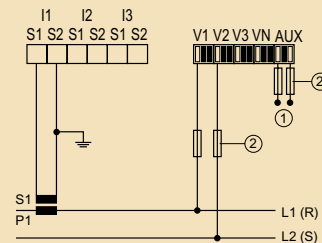
Balanced three-phase network (3 or 4-wire)



Single-phase network (2-wire)

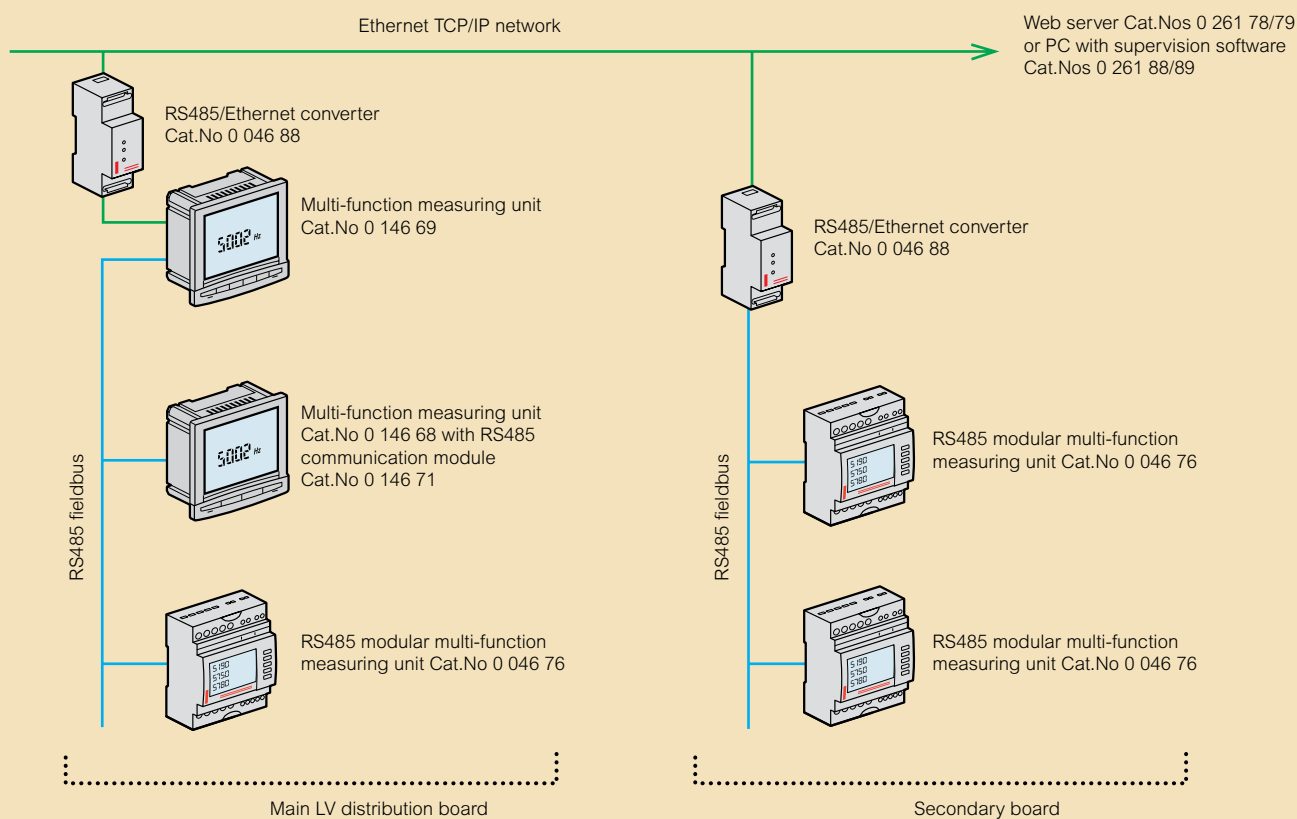


Two-phase network (2-wire)



a Auxiliary power supply: 110 ... 400 VAC/120 ... 350 VDC
b Fuse: 0.5 A gG/BS 88 2A gG/0.5 A class CC

■ Interfacing with IP communication network





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