

Circuit Breakers BZM



Product Information

Circuit Breaker BZM1(16 to 125 A)

Circuit Breaker BZM2 (125 to 250A)

Circuit Breaker BZM3 (250 to 400A)

BZM1 & BZM2 & BZM3 Accessories



Powering Business Worldwide

Optimum and Efficient Protection for Every Application



Compact

Simple

Safe

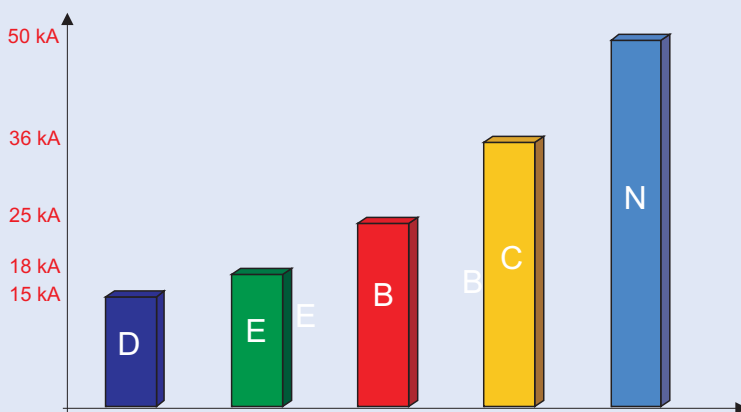
The new BZM

Eaton is a synonym for innovation, product quality, reliability and decades of experience in the electrical engineering industry. Our products comply with the latest national and international standards and regulations.

Our Circuit Breaker Division takes pride in expanding the range of circuit breakers by adding the new BZM series designed for the lower LV segment and featuring factory-set thermal and magnetic tripping values. With our new BZM series we offer compact circuit breakers and a wide range of accessories for your business applications in all kinds of trade and industry. Easy handling, enhanced capacities and proven quality in the attractive Moeller design are additional features of this product.

With the BZM1 for up to 125 A, the BZM2 for up to 250 A and the BZM3 for up to 400 A. Eaton now also completes its range of products in the segment of circuit breakers, allowing us to cover all kinds of applications and requirements.

Protect your electrical system and cables with our new BZM!



Three Advantages for Your Benefit

- **Compact**

Unbeatable when it comes to saving space: In the range of circuit breakers, the BZM1, BZM2 and BZM3 are among the slimmest in their class and can therefore use the valuable distribution space most efficiently, regardless of whether they are used for energy sub-distribution or as a protection for incoming power in residential or functional buildings.

- **Simple**

Easy to handle:

For a fast starting are thermal and magnetic tripping values already fixed.

The BZM series is absolutely easy to handle and allows for quick installation when executing your jobs.

- **Safe**

Eaton's switchgears have a worldwide reputation for being the benchmark in low-voltage power distribution.

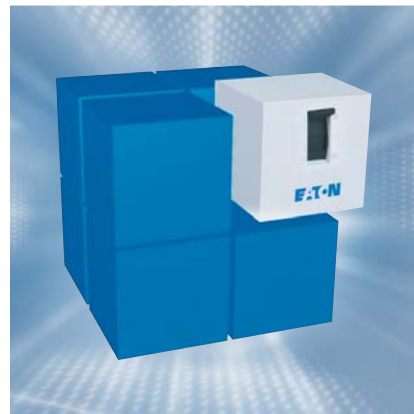
Eaton's quality protects people and assets against short-circuits and overload, with the BZM series being designed for the 16 to 400 A range in sub-distribution.

Standards

In complying with the IEC/EN 60947-2 standards and pollution degree III (IEC/EN 60947) we not only ensure the material but also the immaterial values of the BZM circuit breaker series. And with our BZM series, we also show consideration for the environment as these circuit breakers conform to the RoHS directives and can be recycled to a large extent. And last but not least - the stylish outfit of the BZM series in the distinctive Eaton design makes these products attractive not only from a technical but also from an aesthetic point of view.

For more information please turn to page 20.
(technical data page).

Compact



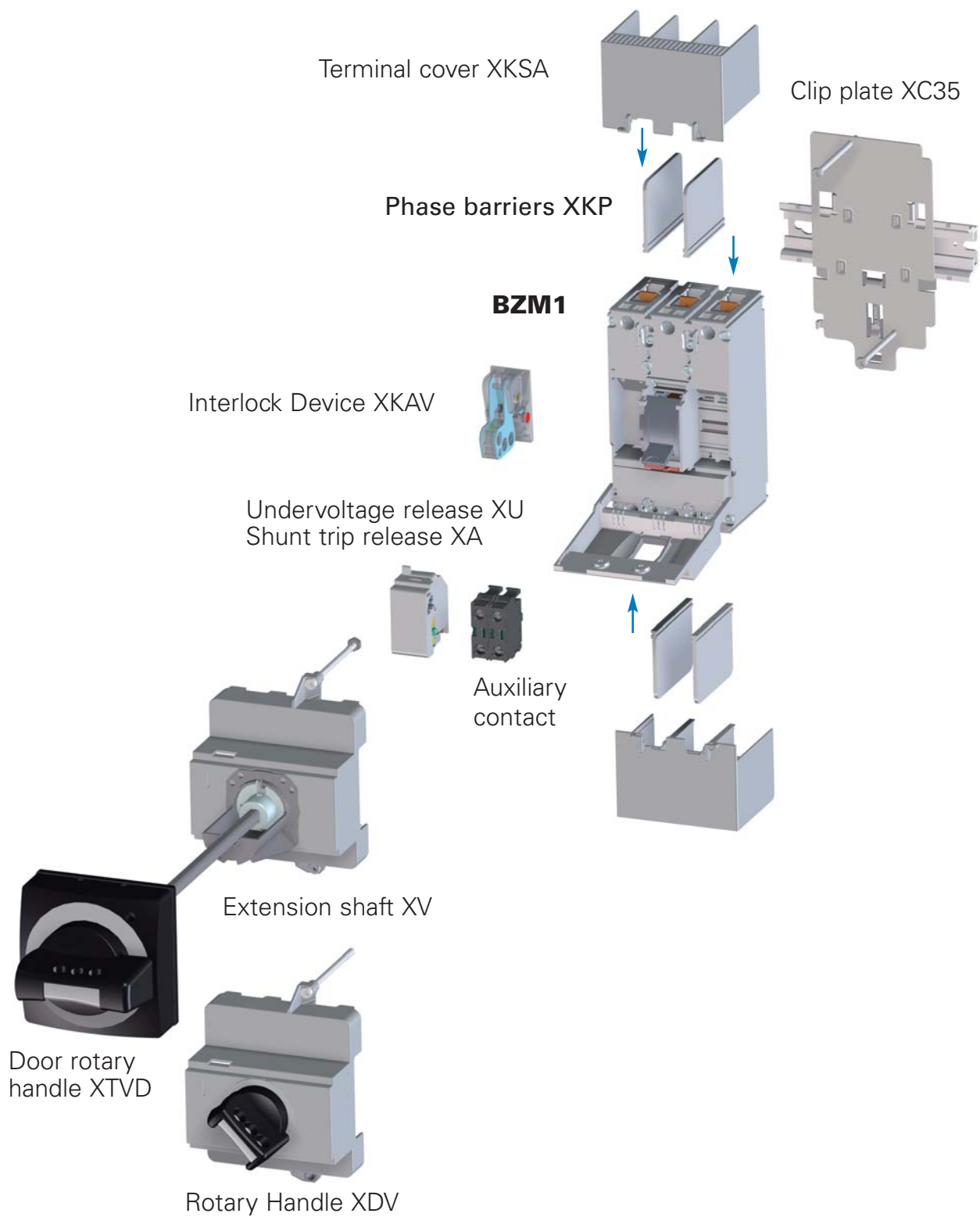
Simple



Safe



Range Overview BZM1



BZM1 - Small is Powerful

- **Concentrated technology with a long lifespan**

The BZM1 provides protection with rated currents **up to 125 A** and **36 kA** breaking capacity, despite its light weight and slim width of only 25 mm per pole. The star within the circuit breaker family, is available as a **2, 3 or 4-pole** device. For a fast starting are thermal and magnetic tripping values already fixed by Eaton. And it has an extremely long lifespan of up to 10,000 mechanical operating cycles. In addition, thanks to its terminal cover, the BZM1 features an IP 10 degree of protection.

- **Multiple mounting options**

Upside-down or horizontal? It is up to you how you wish to mount the BZM1. But regardless of the mounting position and the side you choose for the supply of power, it will always provide the full protective function.

- **Cable Fixing: Cable lug and box terminal**

The proven **cable lug** with M6 screws **and the box terminal technology** for quick and easy mounting (BZM...-BT): both are included in the **standard range** of products.

- **Solutions made to measure**

Remote tripping, signalling the switching status or under-voltage releasing in case of security relevant applications - all of this is easy to manage for the BZM1. Thanks to the comprehensive range of accessories, the BZM1 will not only be the perfect match for standard applications, but also the ideal solution for individual handling requirements.

Upon request the BZM1 is also available with a rotary handle (for direct mounting or door coupling).

- **Characteristics / Features**

Rated current: 16 A up to 125 A
Breaking Capacity: 15, 18, 25, 36 kA
Cable fixing: Cable lug M6 or Box Terminal (BZM...-BT)
Available poles: 2pole, 3pole, 4poles
Rated Voltage: 400/415V, 50/60Hz
3-Position lever: Off - Trip - ON
Electrical Supply: Line or Load-Side

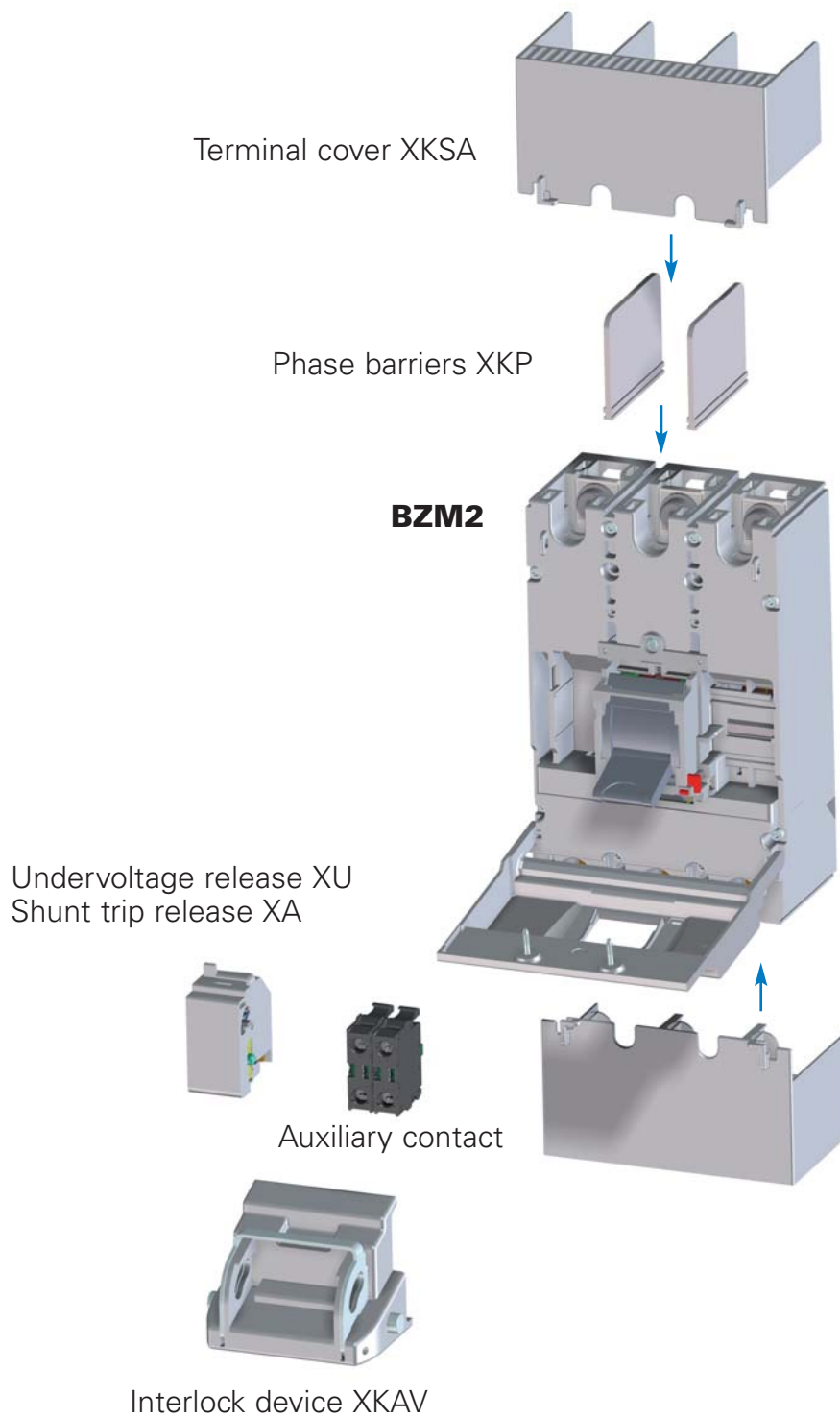
BZM1



BZM1... -BT



Range Overview BZM2



BZM2 - Excellent Protection for High-Rated Current Requirements

- **Technology brought to the point**

Eaton's new BZM2 keeps a watchful eye on **rated currents** ranging from **125 to 250 A** and a breaking capacity of **36 kA**: it impresses especially with its functionality and robust design.

The **3-pole** version (**size W x D x H: 105 x 91.5 x 165 mm**) with a lifespan of 8,000 mechanical operating cycles makes it a powerful protective device in a compact format.

- **Perfect adjustment to any environment**

Standard position, horizontal or upside-down: you can select the mounting position just as freely as the side for the incoming power supply.

- **Conventional connection via cable lug**

In line with the common practice for this type of rated current, the connection is established through a **cable lug** and M8 screws.

- **Accessories in Eaton style**

Upon request and in our usual manner, we provide clever accessories such as auxiliary contacts, shunt trip releases, undervoltage releases; interlock device or terminal covers.

The BZM2 is a specialist in the higher range of rated current and offers everything you could want in terms of reliability, easy handling and compact design!

- **Characteristics / Features**

Rated current: 125 A up to 250 A

Breaking Capacity: 25, 36 kA

Cable fixing: Cable lug M8

Available poles: 3pole

Rated Voltage: 400/415V, 50/60Hz

3-Position lever: Off - Trip - ON

Electrical Supply: Line or Load-Side

BZM2



Range Overview BZM3

Tunnel Terminal XKA2



Tunnel Terminal XKA1



Undervoltage release XU
Shunt trip release XA



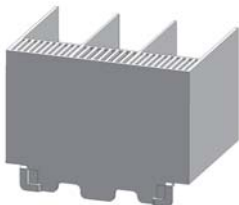
Auxiliary contact
M22



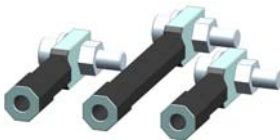
Spreader XKV70KB



Terminal cover XKSA

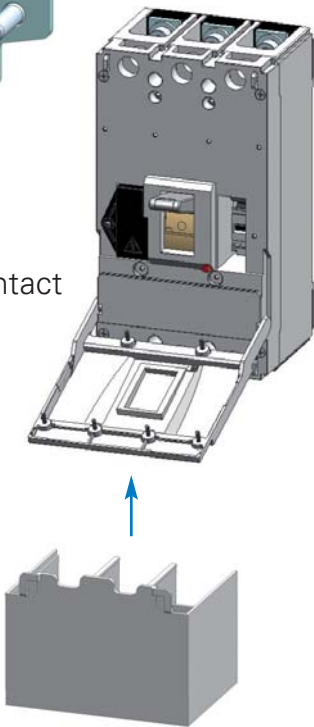


Phase Barriers XKP



Rear connection XKR

BZM3



BZM3 - the perfect high current solution

- **Strong ratings combined with compact dimensions**

The new BZM3 products are the most powerful Circuit Breaker within Eaton's BZM product range. The **rated current** is ranging from **250 up to 400 A** and a maximum breaking capacity **of 50kA / 415VAC** and **36kA / 440VAC**. Eaton's BZM3 products - the perfect solution for your high amp applications with a compact size (size W x D x H: 140 x 149 x 255 mm)

- **Simple to use**

As commonly known from the BZM1 and BZM2 product range, freely place the product - Standard position, horizontal or upside-down. Also the feeding direction can be chosen as required.

- **Cable fixing: it's simple!**

Whether you choose the **standard cable lug** version with M10 screw or the **Tunnel Terminal option** as accessory - the connection of your cable or busbar is quick and simple!

- **The BZM3 - not just Breaker!**

Accessories are very important for the different applications. Therefore also the BZM3 has the perfect accessories range available for you! Not only shunt trip releases, under-voltage releases and auxiliary contacts are part of the accessories range. Also terminal covers, spreaders, tunnel terminals and phase barriers and a rear connection kit is available for this new product range

- **Characteristics / Features**

Rated current: 250 up to 400A

Breaking capacity 25, 36 or 50kA / 415VAC

Cable fixing: Cable lug M10 or Tunnel terminal (accessory)

Rated voltage: 440V, 50/60Hz

3-Position lever: Off - Trip - On

Electrical Supply: Line or Load-Side

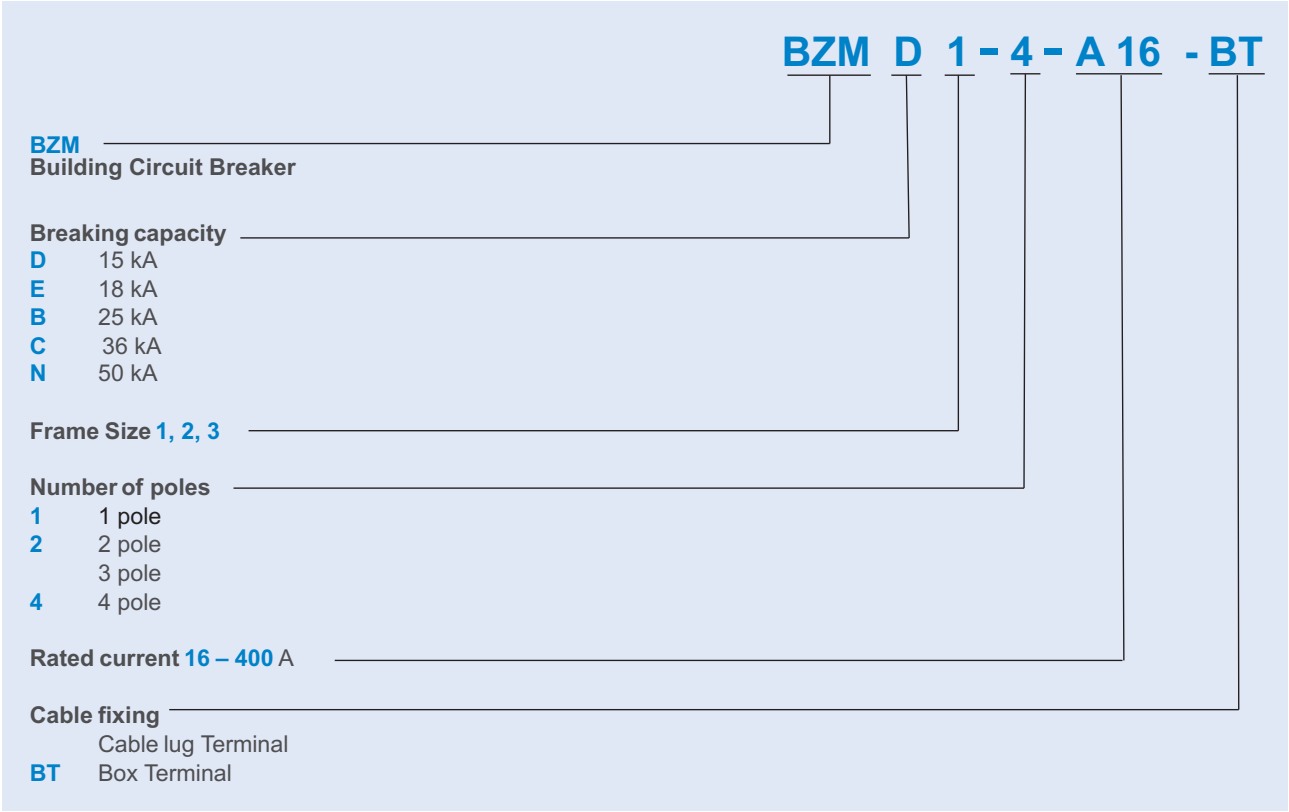
BZM3



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BZM Types Key



Circuit breakers BZM1

2-pole

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Domestic switching capacity 15kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Economy switching capacity 18kA 18kA at 415 V 50/60 Hz Part no. Article no. 1 of each	
Protection of systems and cables					
2-pole					
Cable lug terminal					
	16	256 - 384	BZMD1-2-A16 129805	BZME1-2-A16 129911	
	20	256 - 384	BZMD1-2-A20 129807	BZME1-2-A20 129913	
	25	320 - 480	BZMD1-2-A25 129809	BZME1-2-A25 129915	
	32	320 - 480	BZMD1-2-A32 129881	BZME1-2-A32 129917	
	40	320 - 480	BZMD1-2-A40 129883	BZME1-2-A40 129919	
	50	480 - 720	BZMD1-2-A50 129885	BZME1-2-A50 129921	
	63	480 - 720	BZMD1-2-A63 129887	BZME1-2-A63 129923	
	80	800 - 1200	BZMD1-2-A80 129889	BZME1-2-A80 129925	
	100	800 - 1200	BZMD1-2-A100 129891	BZME1-2-A100 129927	
Box terminal					
	16	256 - 384	BZMD1-2-A16-BT 129893	BZME1-2-A16-BT 129929	
	20	256 - 384	BZMD1-2-A20-BT 129895	BZME1-2-A20-BT 129931	
	25	320 - 480	BZMD1-2-A25-BT 129897	BZME1-2-A25-BT 129933	
	32	320 - 480	BZMD1-2-A32-BT 129899	BZME1-2-A32-BT 129935	
	40	320 - 480	BZMD1-2-A40-BT 129901	BZMB1-2-A40-BT 129937	
	50	480 - 720	BZMD1-2-A50-BT 129903	BZME1-2-A50-BT 129939	
	63	480 - 720	BZMD1-2-A63-BT 129905	BZME1-2-A63-BT 129941	
	80	800 - 1200	BZMD1-2-A80-BT 129907	BZME1-2-A80-BT 129943	
	100	800 - 1200	BZMD1-2-A100-BT 129909	BZME1-2-A100-BT 129945	

Note: 1 piece phase barrier BZM1-XKP included in delivery

Circuit breakers BZM1

3-pole

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Domestic switching capacity 15kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Economy switching capacity 18kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Basic switching capacity 25kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Comfort switching capacity 36kA at 400 V 50/60 Hz Part no. Article no. 1 of each
Protection of systems and cables						
3-pole						
Cable lug terminal						
	16	256 - 384	BZMD1-A16 109706	BZME1-A16 109707	BZMB1-A16 109708	
	20	256 - 384	BZMD1-A20 109709	BZME1-A20 109710	BZMB1-A20 109711	
	25	320 - 480	BZMD1-A25 109712	BZME1-A25 109713	BZMB1-A25 109714	
	32	320 - 480	BZMD1-A32 109715	BZME1-A32 109716	BZMB1-A32 109717	BZMC1-A32 131251
	40	320 - 480	BZMD1-A40 109718	BZME1-A40 109719	BZMB1-A40 109720	BZMC1-A40 131252
	50	480 - 720	BZMD1-A50 109721	BZME1-A50 109722	BZMB1-A50 109723	BZMC1-A50 131253
	63	480 - 720	BZMD1-A63 109724	BZME1-A63 109725	BZMB1-A63 109726	BZMC1-A63 131254
	80	800 - 1200	BZMD1-A80 109727	BZME1-A80 109728	BZMB1-A80 109729	BZMC1-A80 131255
	100	800 - 1200	BZMD1-A100 109730	BZME1-A100 109731	BZMB1-A100 109732	BZMC1-A100 131256
	125	800 - 1200	BZMD1-A125 112490	BZME1-A125 112492		
Box terminal						
	16	256 - 384	BZMD1-A16-BT 109733	BZME1-A16-BT 109734	BZMB1-A16-BT 109735	
	20	256 - 384	BZMD1-A20-BT 109736	BZME1-A20-BT 109737	BZMB1-A20-BT 109738	
	25	320 - 480	BZMD1-A25-BT 109739	BZME1-A25-BT 109740	BZMB1-A25-BT 109741	
	32	320 - 480	BZMD1-A32-BT 109742	BZME1-A32-BT 109743	BZMB1-A32-BT 109744	BZMC1-A32-BT 131259
	40	320 - 480	BZMD1-A40-BT 109745	BZME1-A40-BT 109746	BZMB1-A40-BT 109747	BZMC1-A40-BT 131260
	50	480 - 720	BZMD1-A50-BT 109748	BZME1-A50-BT 109749	BZMB1-A50-BT 109750	BZMC1-A50-BT 131261
	63	480 - 720	BZMD1-A63-BT 109751	BZME1-A63-BT 109752	BZMB1-A63-BT 109753	BZMC1-A63-BT 131262
	80	800 - 1200	BZMD1-A80-BT 109754	BZME1-A80-BT 109755	BZMB1-A80-BT 109756	BZMC1-A80-BT 131263
	100	800 - 1200	BZMD1-A100-BT 109757	BZME1-A100-BT 109758	BZMB1-A100-BT 109759	BZMC1-A100-BT 131264
	125	800 - 1200	BZMD1-A125-BT 112496	BZME1-A125-BT 112498		

Note: 2 pieces phase barriers BZM1-XKP included in delivery

Circuit breakers BZM1

4-pole

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Domestic switching capacity 15kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Economy switching capacity 18kA at 415 V 50/60 Hz Part no. Article no. 1 of each	
Protection of systems and cables					
4-pole					
Cable lug terminal					
	16	256 - 384	BZMD1-4-A16 121775	BZME1-4-A16 112502	
	20	256 - 384	BZMD1-4-A20 121777	BZME1-4-A20 112506	
	25	320 - 480	BZMD1-4-A25 121779	BZME1-4-A25 112510	
	32	320 - 480	BZMD1-4-A32 121941	BZME1-4-A32 112514	
	40	320 - 480	BZMD1-4-A40 121943	BZME1-4-A40 112518	
	50	480 - 720	BZMD1-4-A50 121945	BZME1-4-A50 112522	
	63	480 - 720	BZMD1-4-A63 121947	BZME1-4-A63 112526	
	80	800 - 1200	BZMD1-4-A80 121949	BZME1-4-A80 112530	
	100	800 - 1200	BZMD1-4-A100 121951	BZME1-4-A100 112534	
Box terminal					
	16	256 - 384	BZMD1-4-A16-BT 121955	BZME1-4-A16-BT 112542	
	20	256 - 384	BZMD1-4-A20-BT 121957	BZME1-4-A20-BT 112546	
	25	320 - 480	BZMD1-4-A25-BT 121959	BZME1-4-A25-BT 112550	
	32	320 - 480	BZMD1-4-A32-BT 121961	BZME1-4-A32-BT 112554	
	40	320 - 480	BZMD1-4-A40-BT 121963	BZME1-4-A40-BT 112558	
	50	480 - 720	BZMD1-4-A50-BT 121965	BZME1-4-A50-BT 112562	
	63	480 - 720	BZMD1-4-A63-BT 121967	BZME1-4-A63-BT 112566	
	80	800 - 1200	BZMD1-4-A80-BT 121969	BZME1-4-A80-BT 112570	
	100	800 - 1200	BZMD1-4-A100-BT 121971	BZME1-4-A100-BT 112574	

Note: 3 pieces phase barriers BZM1-XKP included in delivery

Circuit breakers BZM2

3-pole

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Domestic switching capacity 15kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Economy switching capacity 18kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Basic switching capacity 25kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Comfort switching capacity 36kA at 415 V 50/60 Hz Part no. Article no. 1 of each
Protection of systems and cables						
3-pole						
Cable lug terminal						
	125	1400 - 2100	BZMD2-A125 119730	BZME2-A125 119731	BZMB2-A125 119732	BZMC2-A125 121800
	160	1400 - 2100			BZMB2-A160 116970	BZMC2-A160 121801
	200	1400 - 2100			BZMB2-A200 116971	BZMC2-A200 121802
	250	1400 - 2100			BZMB2-A250 116972	BZMC2-A250 121803

Note: 2 pieces phase barriers BZM2-XKP included in delivery

Circuit breakers BZM3

3-pole

	Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Basic switching capacity 25kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Comfort switching capacity 36kA at 415 V 50/60 Hz Part no. Article no. 1 of each	Normal switching capacity 50kA at 415 V 50/60 Hz Part no. Article no. 1 of each
Protection of systems and cables					
3-pole					
Cable lug terminal					
	250	2600-3800	BZMB3-A250 158104	BZMC3-A250 158108	BZMN3-A250 158272
	320	2600-3800	BZMB3-A320 158105	BZMC3-A320 158109	BZMN3-A320 158273
	350	2600-3800	BZMB3-A350 158106	BZMC3-A350 158270	BZMN3-A350 158274
	400	2600-3800	BZMB3-A400 158107	BZMC3-A400 158271	BZMN3-A400 158275

Note: 2 pieces phase barriers BZM3-XKP included in delivery

Accessories BZM1

Description		Part no. Article no.	Std. pack	Description		Part no. Article no.	Std. pack
Auxiliary contacts				Extension axle			
	1 NO	M22-K10 216376	20		Length 400 mm	BZM1-XV4 112486	1
	1 NC	M22-K01 216378	20		Length 600 mm	BZM1-XV6 112487	1
Phase barrier				DIN-rail-adapter			
		BZM1-XKP 109760	1		For 2-pole BZM	BZM1-2-XC35 112489	1
					For 3- a. 4-pole BZM	BZM1-XC35 112488	1
Undervoltage release (only 3 and 4pole)				Cable Lug			
	230-240VAC	BZM1-3-XU230-240VAC 158053	1		35 mm ² / M6	BZM1-XKS35 113609	10
	400-440VAC	BZM1-3-XU400-440VAC 158054	1		50 mm ² / M6	BZM1-XKS50 113750	10
	24VDC	BZM1-3-XU24VDC 158055	1				
Shunt trip release (only 3 and 4pole)				BZM1 Locking Device			
	230-240VAC	BZM1-3-XA230-240VAC 158056	1			BZM1-XKAV 131669	1
	400-440VAC	BZM1-3-XA400-440VAC 158057	1				
	24VDC	BZM1-3-XA24VDC 158058	1				
Terminal cover							
	for 2-pole BZM	BZM1-2-XKSA 112484	1				
	for 3-pole BZM	BZM1-XKSA 112482	1				
	for 4-pole BZM	BZM1-4-XKSA 112483	1				
Rotary handle							
		BZM1-XDV 113168	1				
Door rotary handle							
		BZM1-XTVD 112485	1				

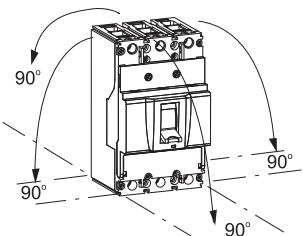
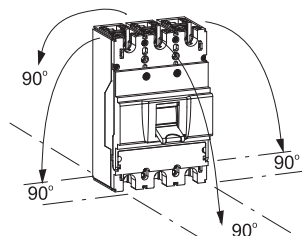
Accessories BZM2

Description		Part no. Article no.	Std. pack
Auxiliary contacts			
	1 NO	M22-K10 216376	20
	1 NC	M22-K01 216378	20
Phase barrier			
		BZM2-XKP 118720	1
Undervoltage release			
	230-240VAC	BZM1-3-XU230-240VAC 158053	1
	400-440VAC	BZM1-3-XU400-440VAC 158054	1
	24VDC	BZM1-3-XU24VDC 158055	1
Shunt trip release			
	230-240VAC	BZM1-3-XA230-240VAC 158056	1
	400-440VAC	BZM1-3-XA400-440VAC 158057	1
	24VDC	BZM1-3-XA24VDC 158058	1
Terminal cover			
		BZM2-XKSA 118727	1
Interlock Device			
		BZM2-XKAV 131669	1

Accessories BZM3

Description		Part no. Article no.	Std. pack	Description		Part no.	Std. pack Article no.
Auxiliary contacts				Tunnel Terminal (for one side of the breaker)			
	1 NO	M22-K10 216376	20		185mm²	BZM3-XKA1 158303	1 set
	1 NC	M22-K01 216378	20		240mm²	BZM3-XKA2 158304	1 set
Phase barrier				Cable Lug			
		BZM3-XKP 158300	1		185mm²	NZM3-XKS185 260040	3
					240mm²	NZM3-XKS240 260041	3
Undervoltage release							
	230-240VAC	BZM1-3-XU230-240VAC 158053	1				
	400-440VAC	BZM1-3-XU400-440VAC 158054	1				
	24VDC	BZM1-3-XU24VDC 158055	1				
Shunt trip release							
	230-240VAC	BZM1-3-XA230-240VAC 158056	1				
	400-440VAC	BZM1-3-XA400-440VAC 158057	1				
	24VDC	BZM1-3-XA24VDC 158058	1				
Terminal cover							
		BZM3-XKSA 158305	1				
Rear Connection							
		BZM3-XKR 185301	1				
Spreaders (for one side of the breaker)							
		BZM3-XKV70KB 158302	1 set				

Technical Data BZM1, BZM2

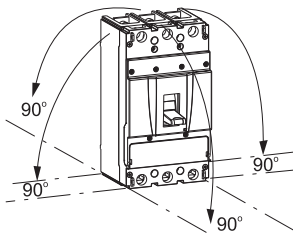
			Rated current max. 125 A BZM1	Rated current max. 250 A BZM2
Mechanical specifications				
Standards			IEC/EN 60947-2	IEC/EN 60947-2
Number of poles			2, 3, 4	3
Device width	mm		2-pole: 50, 3-pole: 75, 4-pole: 100	3-pole: 105
Frame size	mm		45	45
Socket size	mm		130	165
Device depth	mm		84.7	91,5
Terminals			Lift terminal, ring tongue connector	ring tongue connector
Terminal capacity lift terminal	mm ²		rigid (solid/stranded) and flexible wire (2.5 - 50)	—
Terminal capacity ring tongue	mm		Diameter: max. 15	Diameter: max. 24
Busbar thickness	mm			max. 8
Terminal screw			M6 (Pozidriv PZ2)	M8
Terminal torque	Nm		4	14
Degree of Protection (DIN VDE 0470)			Built-in behind panel IP40	Built-in behind panel IP40
Climatic conditions			acc. to IEC 68-2 (25..55°C / 90..95% RH)	acc. to IEC 68-2 (25..55°C / 90..95% RH)
Ambient temperature				
Storage	°C		-35 ... +85	-35 ... +85
Operation	°C		-25 ... +70	-25 ... +70
Mounting positions			Vertical and 90° in all directions	Vertical and 90° in all directions
				
Protection System				
Enclosures			With insulating surround: IP40	With insulating surround: IP40
Number of mechanical operating cycles			> 10.000	> 8.000
Pollution degree			3	3
Electrical specifications				
Rated operational voltage	U _e	V AC	400 / 415, 50/60 Hz	400 / 415, 50/60 Hz
Rated current	I _n	A	16, 20, 25, 32, 40, 50, 63, 80, 100, 125	125, 160, 200, 250
Rated impulse withstand voltage	U _{imp}	V	6.000 (1.2/50 µsec)	6.000 (1.2/50 µsec)
Overvoltage category			III	III
Rated insulation voltage	U _i	V	690	690
For use in IT electrical power networks		V	400 / 415	400 / 415
Direction of incoming supply			As required	As required
Number of electrical operating cycles			> 1.500	1.000
Tripping characteristic				
Conventional non-tripping current			I _{nt} = 1.05 I _n	I _{nt} = 1.05 I _n
Conventional tripping current			I _t = 1.30 I _n	I _t = 1.30 I _n
Reference temperature		°C	30	30

Technical Data BZM3

Rated current max. 400 A
BZM3

Mechanical specifications

Standards		IEC/EN 60947-2
Number of poles		3
Device width	mm	3-pole: 140
Frame size	mm	95
Socket size	mm	255
Device depth	mm	110
Terminals		
Terminal capacity ring tongue	mm	32
Terminal capacity Tunnel Terminal XKA1	mm ²	max. 350A
Copper Cabel/Aluminium cable:		1 x 16 - 185
Terminal capacity Tunnel Terminal XKA2	mm ²	max. 400A
Copper Cable/Aluminium cable:		1 x 50 - 240 or 2 x 50 - 240
Busbar thickness	mm	as required
Terminal screw		M10
Terminal torque	Nm	30
Degree of Protection (DIN VDE 0470)		Built-in behind panel IP40
Climatic conditions		acc. to IEC 68-2 (25..55°C / 90..95% RH)
Ambient temperature		
Storage	°C	-35 ... +85
Operation	°C	-25 ... +70
Mounting positions		Vertical and 90° in all directions



Protection System		
Enclosures		With insulating around: IP40
Number of mechanical operating cycles		> 5.000
Pollution degree		3

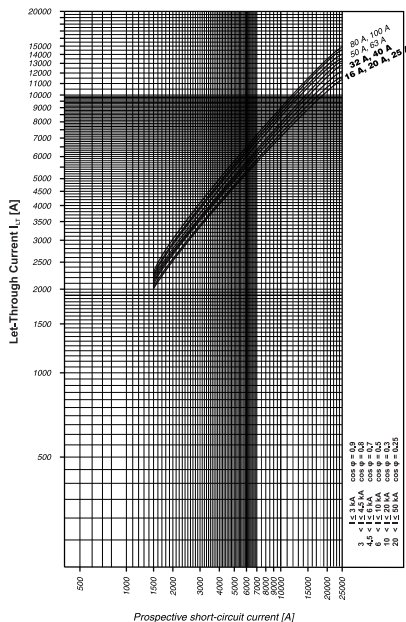
Electrical specifications

Rated operational voltage	U_e	V AC	440, 50/60 Hz
Rated current	I_n	A	250, 320, 350, 400
Rated impulse withstand voltage	U_{imp}	V	8.000 (1.2/50 µsec)
Overvoltage category			III
Rated insulation voltage	U_i	V	690
For use in IT electrical power networks		V	440
Direction of incoming supply			As required
Number of electrical operating cycles			> 1.000
Tripping characteristic			
Conventional non-tripping current			$I_{nt} = 1.05 I_n$
Conventional tripping current			$I_t = 1.30 I_n$
Reference temperature	°C		40

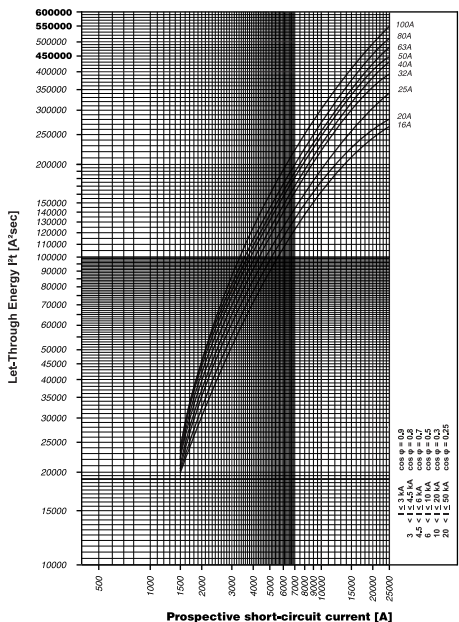
Technical Data BZM1, BZM2, BZM3

			BZMD1	BZME1	BZMB1	BZMC1	BZMB2	BZMC2
Switching capacity								
Rated short-circuit breaking capacity								
I_{cu} to IEC/EN 60947 operating sequence 0-t-CO, 400/415 V 50/60 Hz	I_{cu}	kA	15	18	25	36/400VAC	25	36
I_{cs} to IEC/EN 60947 operating sequence 0-t-CO-t-CO, 400/415 V 50/60 Hz	I_{cs}	kA	7.5	9	12.5	18/9*/400VAC	12.5	9
Utilization category to IEC/EN 60947-2		A	A	A	A	A	A	A
*9kA/400VAC at $I_n=80, 100A$								

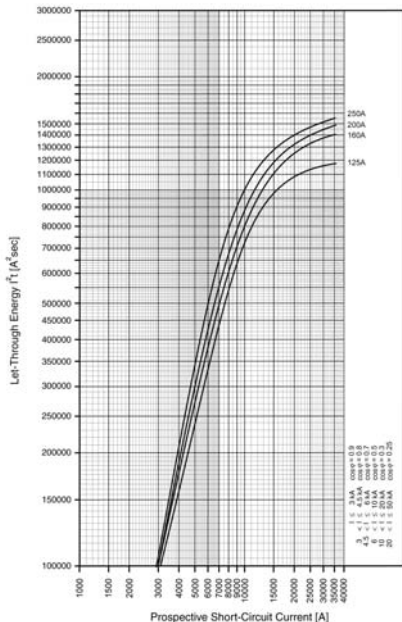
Let-through energy BZM1



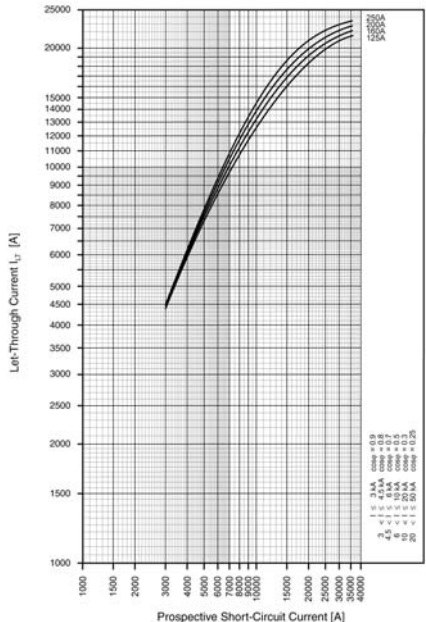
Let-through current BZM1



Let-through energy BZM2



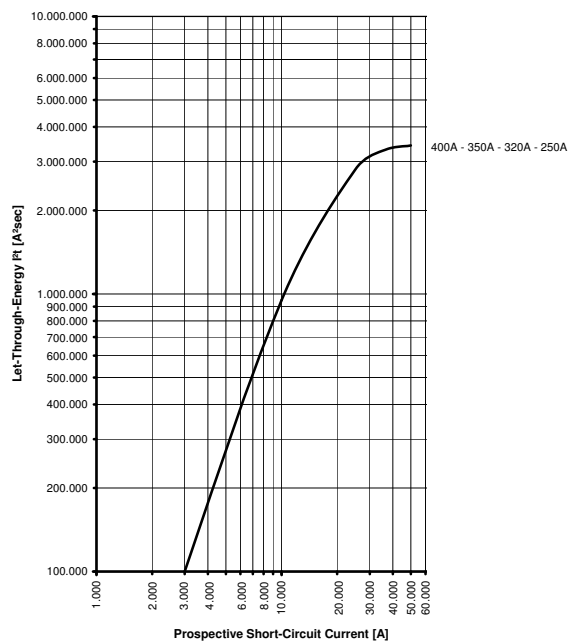
Let-through current BZM2



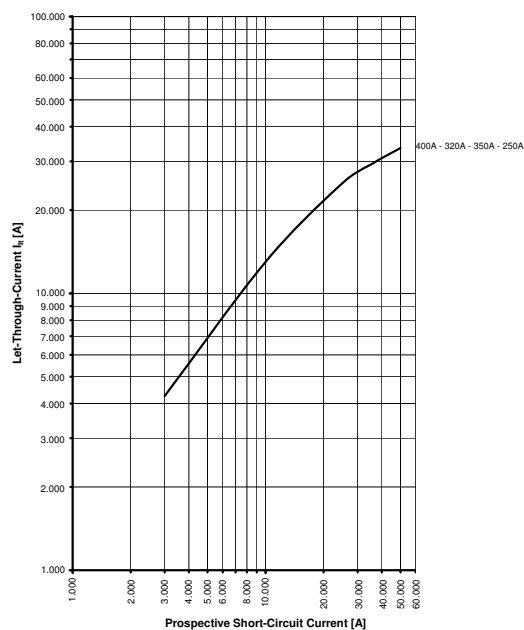
Technical Data BZM3

			BZMB3	BZMC3	BZMN3
Switching capacity					
Rated short-circuit breaking capacity					
Icu to IEC/EN 60947 operating sequence					
0-t-CO, 240 V 50/ 60 Hz	Icu	kA	50	85	100
0-t-CO, 400/415 V 50/60 Hz	Icu	kA	25	36	50
0-t-CO, 440 V 50/ 60 Hz	Icu	kA	20	25	36
Ics to IEC/EN 60947 operating sequence					
0-t-CO, 240 V 50/ 60 Hz	Icu	kA	25	42,5	50
0-t-CO-t-CO, 400/415 V 50/60 Hz	Ics	kA	12.5	18	25
0-t-CO, 440 V 50/ 60 Hz	Icu	kA	10	12,5	18
Utilization category to IEC/EN 60947-2			A	A	A

Let-through energy BZM3



Let-through current BZM3



Backup protection

between incoming circuit-breaker NZM (B)(C)(N)(H) and outgoing circuit-breaker BZM (D)(E)(B)(C)

			Incoming circuit-breaker							
			NZM1				NZM2			
			up to 160 A				up to 250 A			
			25kA	36kA	50kA	100kA	25kA	36kA	50kA	150kA
Outgoing Circuit Breaker										
I_n										
I_{cu} (415 V)										
BZMD1	15 kA	up to 125 A	18	25	36	40	18	25	36	50
BZME1	18 kA	up to 125 A	20	30	40	50	20	30	40	70
BZMB1	25 kA	up to 125 A	25	36	50	70	25	36	50	100
BZMC1*	36 kA*	up to 100 A*	25*	36*	50*	70*	25*	36*	50*	100*
BZME2	18 kA	up to 250 A	-	-	-	-	20	30	40	70
BZMB2	25 kA	up to 250 A	-	-	-	-	-	36	50	100
BZMC2	36 kA	up to 250 A	-	-	-	-	-	-	50	100

* I_{cu} (400 V)

Back-up Protection PLHT / BZM(B)(C)(D)(E)1

PLHT-I _n /1(2,3,4)/B(C)(D) + BZMB1	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	18 kA (BZMB1-A125) 25 kA (BZMB1-A16...-A100)
25	
32	
40	
50	
63	
80	
100	
125	

PLHT-I _n /1(2,3,4)/B(C)(D) + BZMD1	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	15 kA
25	
32	
40	
50	
63	
80	
100	
125	

PLHT-I _n /1(2,3,4)/B(C)(D) + BZMC1	
I _n [A]	U _e = 230/400 V
20	36 kA
25	
32	
40	
50	
63	
80	
100	

PLHT-I _n /1(2,3,4)/B(C)(D) + BZME1	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	18 kA
25	
32	
40	
50	
63	
80	
100	
125	

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U_e = 400/415V: I_{CU} (BZMD1) = 15 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZME1) = 18 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZMB1) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 400V: I_{CU} (BZMC1) = 36 kA (acc. to IEC/EN 60947-2)

U_e = 240/415V: I_{CU} (PLHT-20..63/1..4/B,C,D) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 240/415V: I_{CU} (PLHT-80/1..4/B,C,D, PLHT-100/1..4/B,C) = 20 kA (acc. to IEC/EN 60947-2)
U_e = 240/415V: I_{CU} (PLHT-100/1..4/D, PLHT-125/1..4/B,C) = 15 kA (acc. to IEC/EN 60947-2)

Back-up tests acc. to IEC/EN 60947-2, App. A.6: U = 1.05*U_e (0 - t - CO)

Back-up Protection PLHT / BZM(B)(C)(D)(E)2

PLHT-I _n /1(2,3,4)/B(C)(D) + BZMB2	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	25 kA
25	
32	
40	
50	
63	
80	
100	
125	

PLHT-I _n /1(2,3,4)/B(C)(D) + BZMD2	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	15 kA
25	
32	
40	
50	
63	
80	
100	
125	

PLHT-I _n /1(2,3,4)/B(C)(D) + BZMC2	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	25 kA
25	
32	
40	
50	
63	
80	
100	
125	

PLHT-I _n /1(2,3,4)/B(C)(D) + BZME2	
I _n [A]	U _e = 230/400 V, U _e = 240/415 V
20	18 kA
25	
32	
40	
50	
63	
80	
100	
125	

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U_e = 400/415V: I_{CU} (BZMD2) = 15 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZME2) = 18 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZMB2) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZMC2) = 36 kA (acc. to IEC/EN 60947-2)

U_e = 240/415V: I_{CU} (PLHT-20..63/1..4/B,C,D) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 240/415V: I_{CU} (PLHT-80/1..4/B,C,D, PLHT-100/1..4/B,C) = 20 kA (acc. to IEC/EN 60947-2)
U_e = 240/415V: I_{CU} (PLHT-100/1..4/D, PLHT-125/1..4/B,C) = 15 kA (acc. to IEC/EN 60947-2)

Back-up tests acc. to IEC/EN 60947-2, App. A.6: U = 1.05*U_e (0 - t - CO)

Back-up Protection FAZ/PLSM / BZM(B)(C)(D)(E)1

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZMB1			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1	25 kA		
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZMC1			
I _n [A]	U _e = 230/400 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1	20 kA		
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZMD1			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1	15 kA		
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZME1			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1	18 kA		
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			

U_e = 400/415V: I_{CU} (BZMD1) = 15 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZME1) = 18 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZMB1) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 400V: I_{CU} (BZMC1) = 36 kA (acc. to IEC/EN 60947-2)

U_e = 240/415V: I_{CU} (PLSM all types except D50, D63) = 15 kA (acc. to IEC/EN 60947-2)
U_e = 240/415V: I_{CU} (PLSM type D50, D63) = 10 kA (acc. to IEC/EN 60947-2)
Back-up tests acc. to IEC/EN 60947-2, App. A.6: U = 1.05*U_e (0 - 1 - CD)

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Back-up Protection FAZ/PLSM / BZM(B)(C)(D)(E)2

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZMB2			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1			
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			18 kA

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZMC2			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1			
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			18 kA

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZMD2			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1			
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			15 kA

FAZ/PLSM-I _n /1(1N,2,3,3N,4)/B(C)(D) + BZME2			
I _n [A]	U _e = 230/400 V, U _e = 240/415 V		
	Type B	Type C	Type D
0.16	x		x
0.25			
0.5			
0.75			x
1			
1.5			
1.6			
2			
2.5			
3			
3.5			
4			
5			
6			
8			
10			
12			
13			
15			
16			
20			
25			
32			
40			
50			
63			18 kA

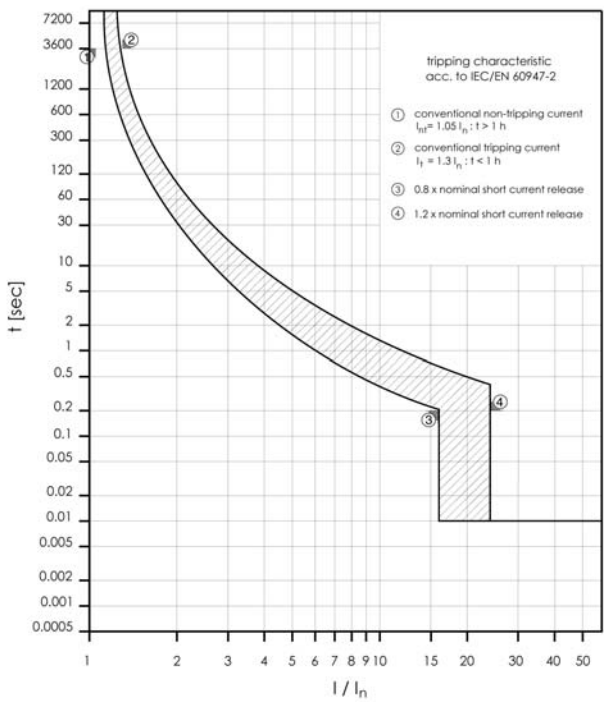
U_e = 400/415V: I_{CU} (BZMD2) = 15 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZME2) = 18 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZMB2) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{CU} (BZMC2) = 36 kA (acc. to IEC/EN 60947-2)

U_e = 240/415V: I_{CU} (PLSM all types except D50, D63) = 15 kA (acc. to IEC/EN 60947-2)
U_e = 240/415V: I_{CU} (PLSM type D50, D63) = 10 kA (acc. to IEC/EN 60947-2)
Back-up tests acc. to IEC/EN 60947-2, App. A.6: U = 1.05*U_e (0 - t - CD)

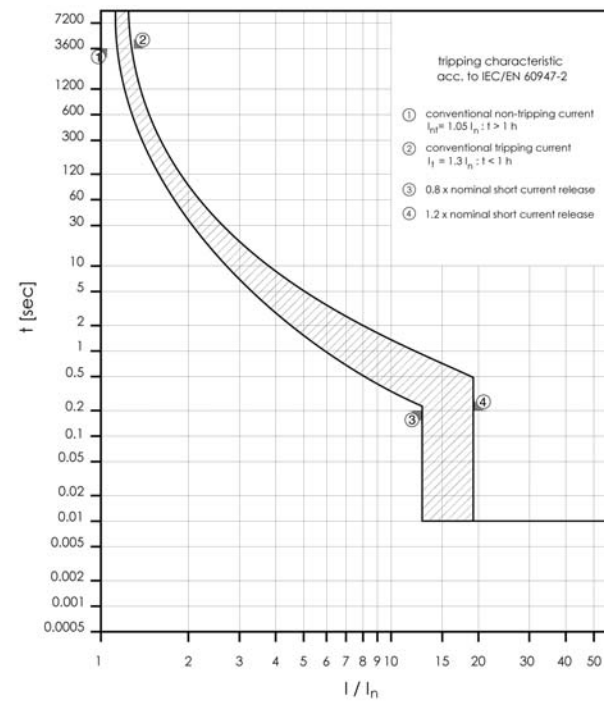
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Tripping Current Curves BZM1

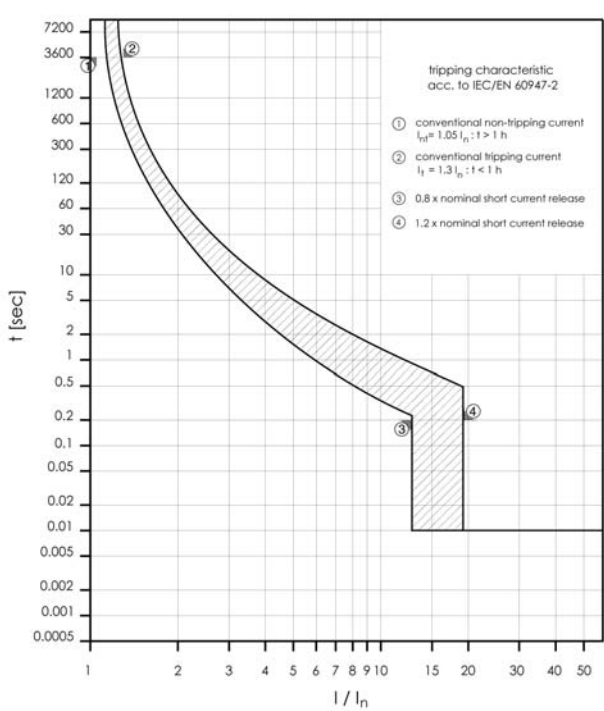
Tripping Curve BZM1 16A, 3-pole



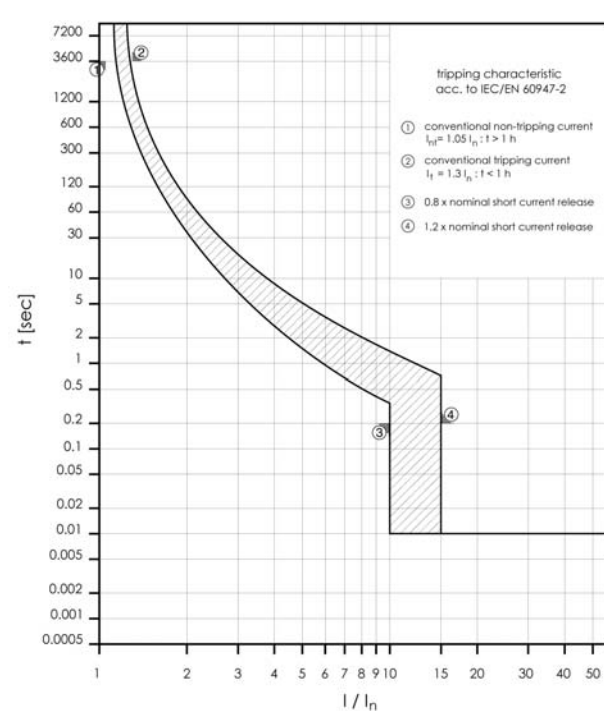
Tripping Curve BZM1 20A, 3-pole



Tripping Curve BZM1 25A, 3-pole

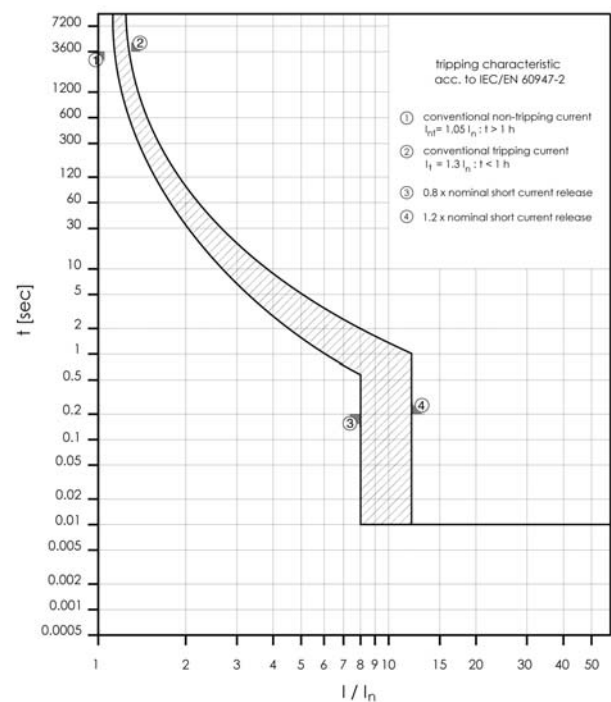


Tripping Curve BZM1 32A, 3-pole

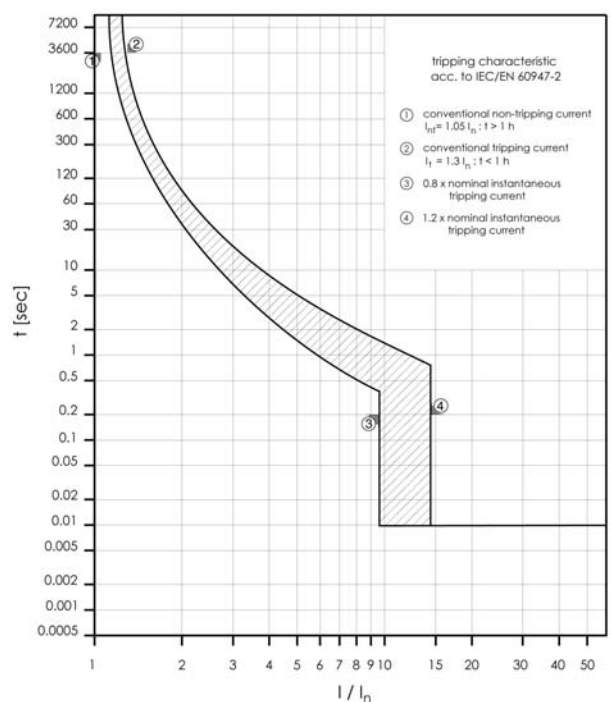


Tripping Current Curves BZM1

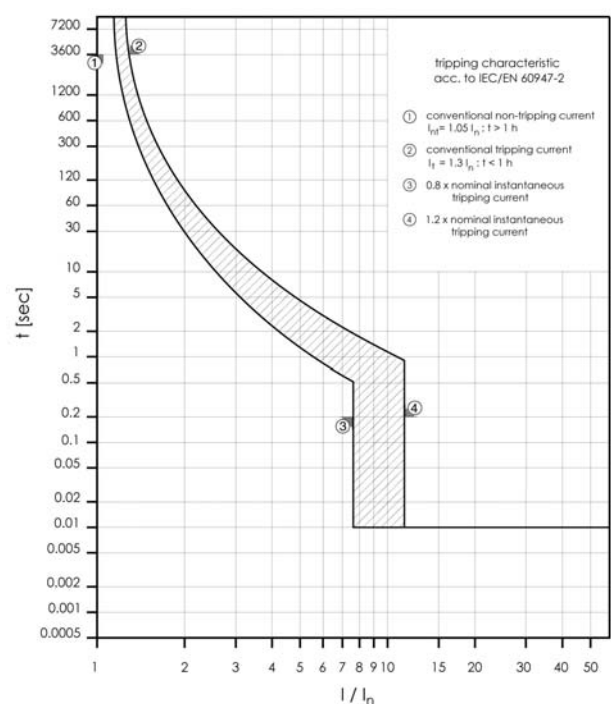
Tripping Curve BZM1 40A, 3-pole



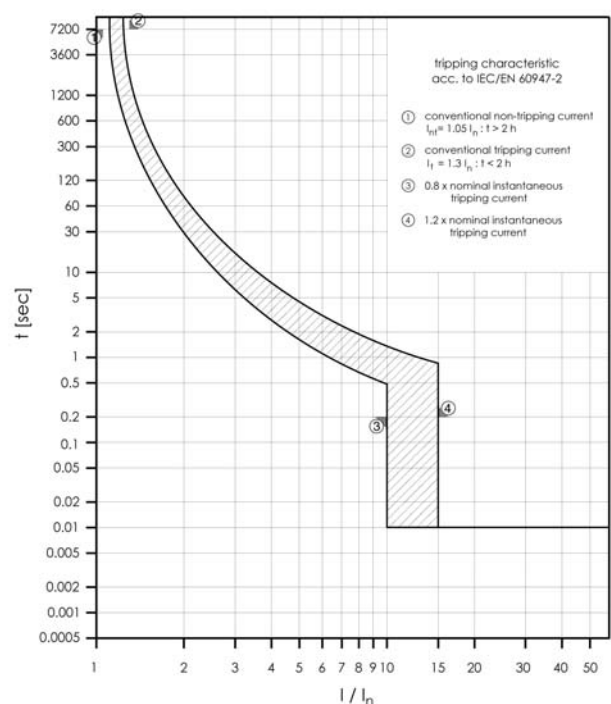
Tripping Curve BZM1 50A, 3-pole



Tripping Curve BZM1 63A, 3-pole

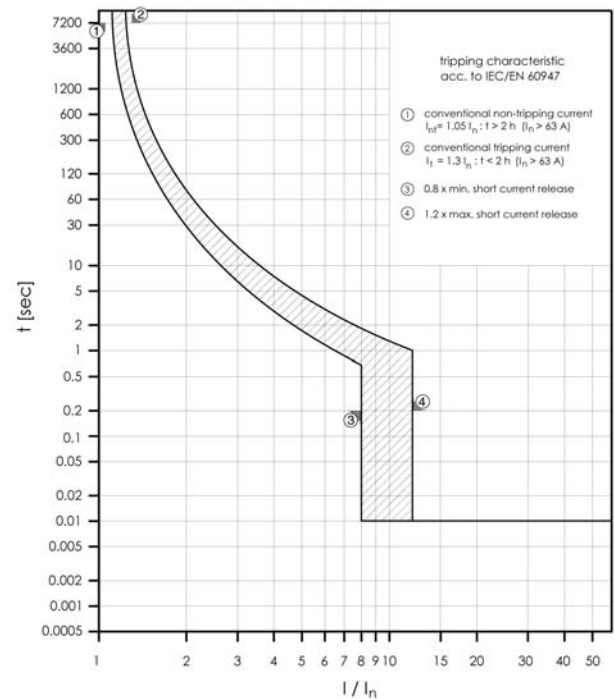


Tripping Curve BZM1 80A, 3-pole

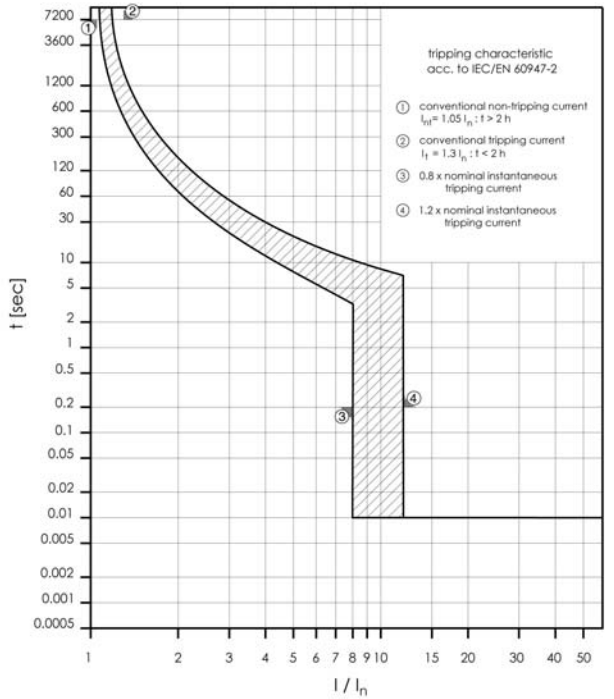


Tripping Current Curves BZM1, BZM2

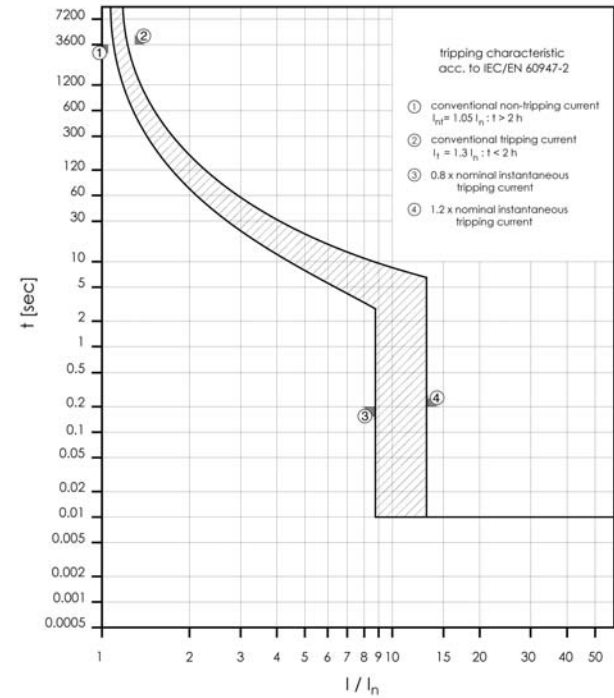
Tripping Curve BZM1 100A, 3-pole



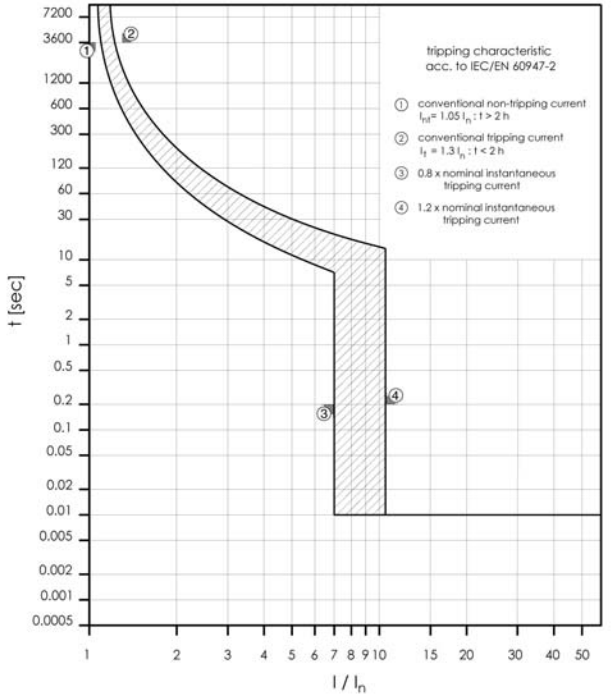
Tripping Curve BZM2 125A



Tripping Curve BZM2 160A

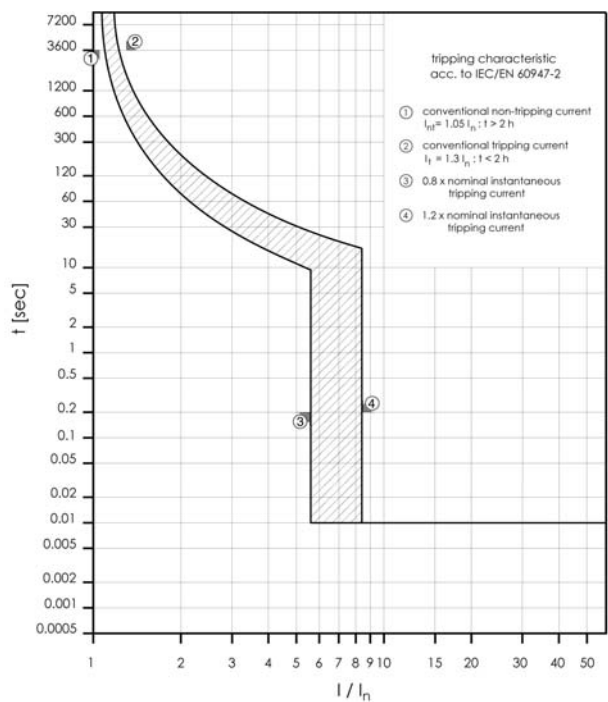


Tripping Curve BZM2 200A

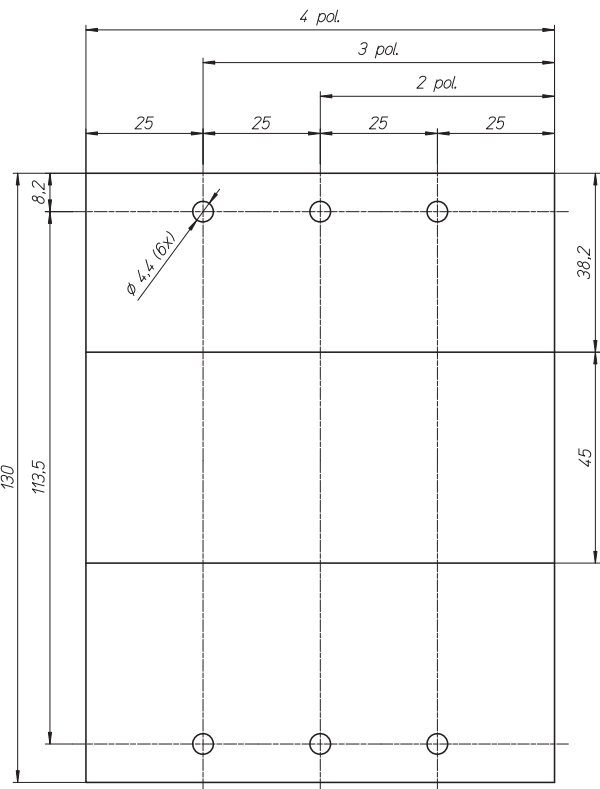


Tripping Current Curves BZM2 Mounting Holes BZM1, BZM2

Tripping Curve BZM2 250A

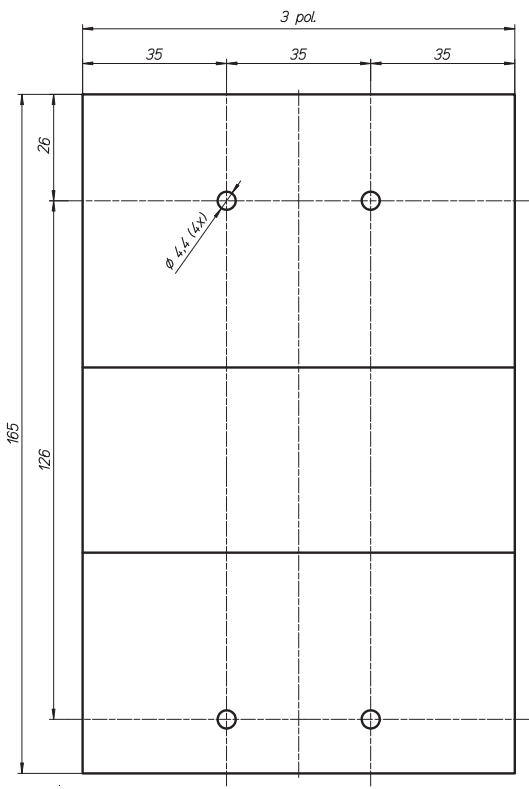


Mounting holes BZM1

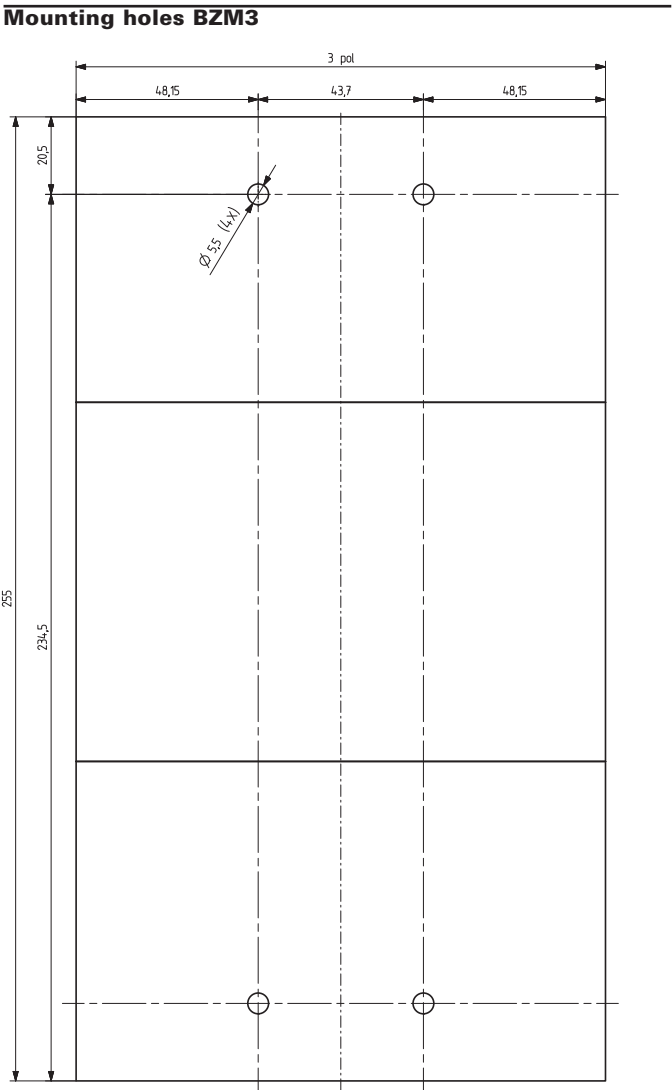


All dimensions in mm

Mounting holes BZM2



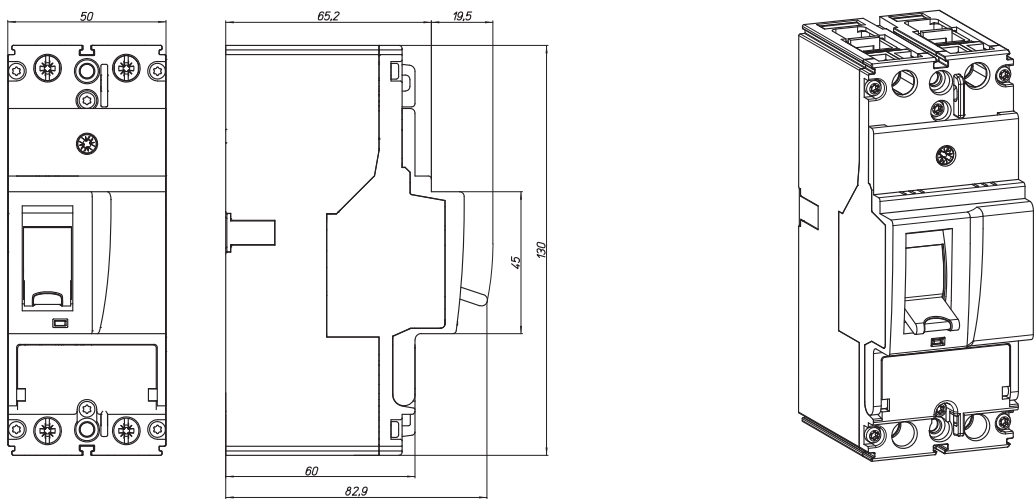
Mounting Holes BZM3



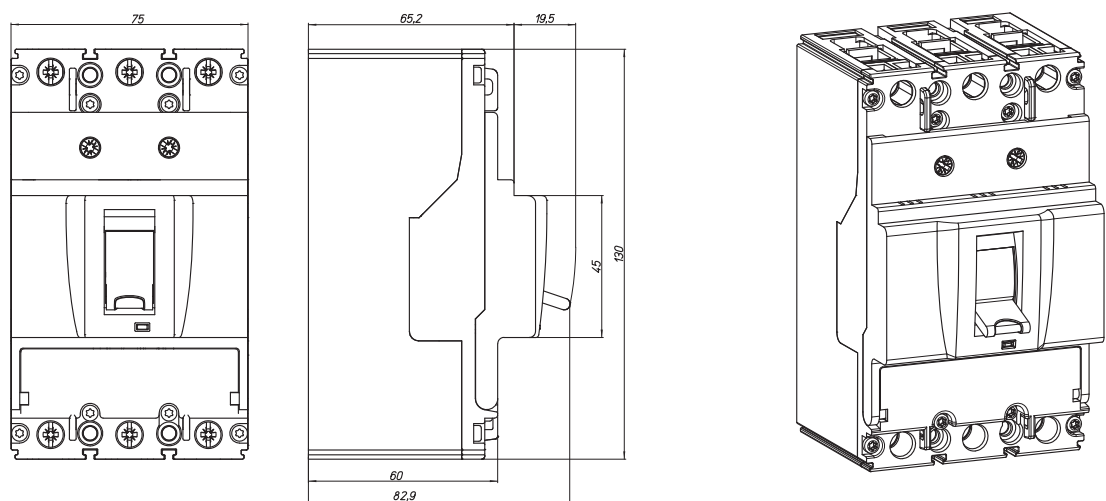
All dimensions in mm

Dimensions BZM1

Circuit breaker BZM1 2-pole



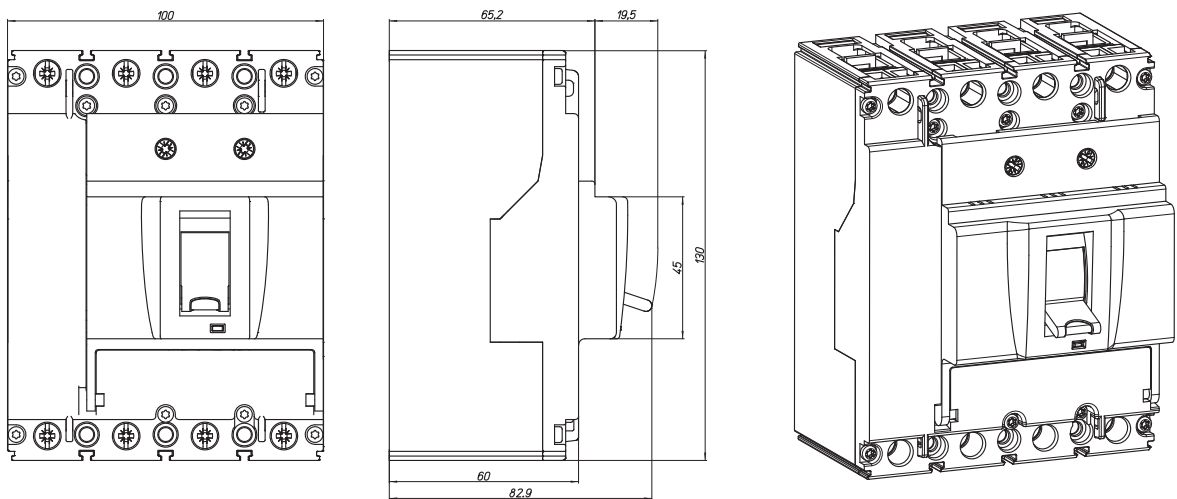
Circuit breaker BZM1 3-pole



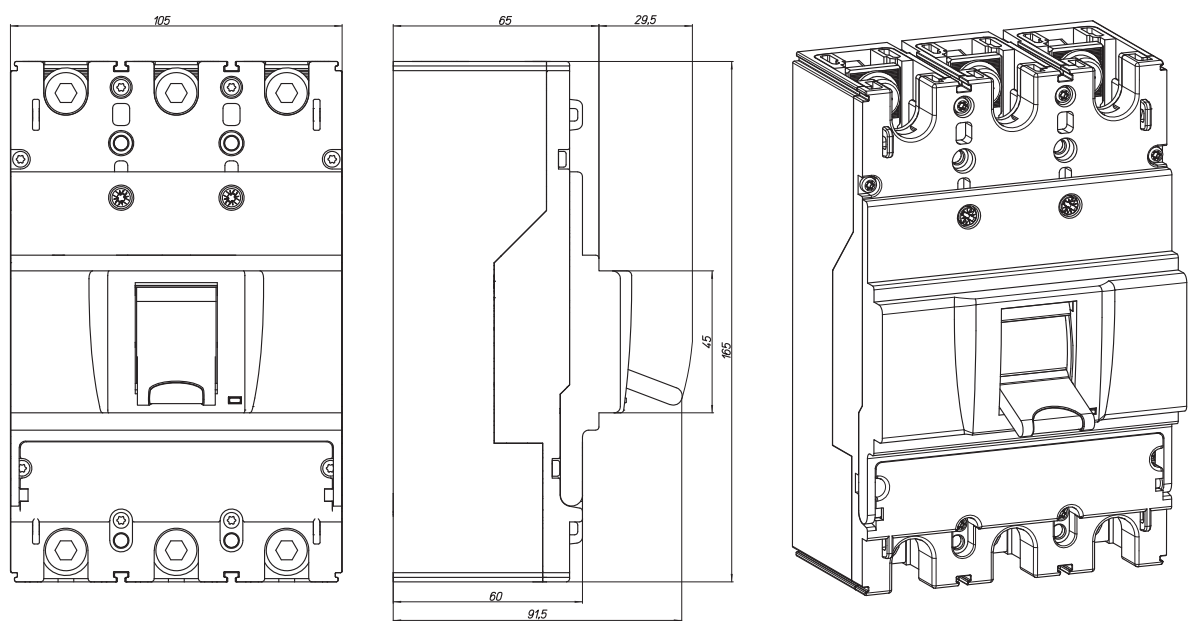
All dimensions in mm

Dimensions BZM1, BZM2

Circuit breaker BZM1 4-pole



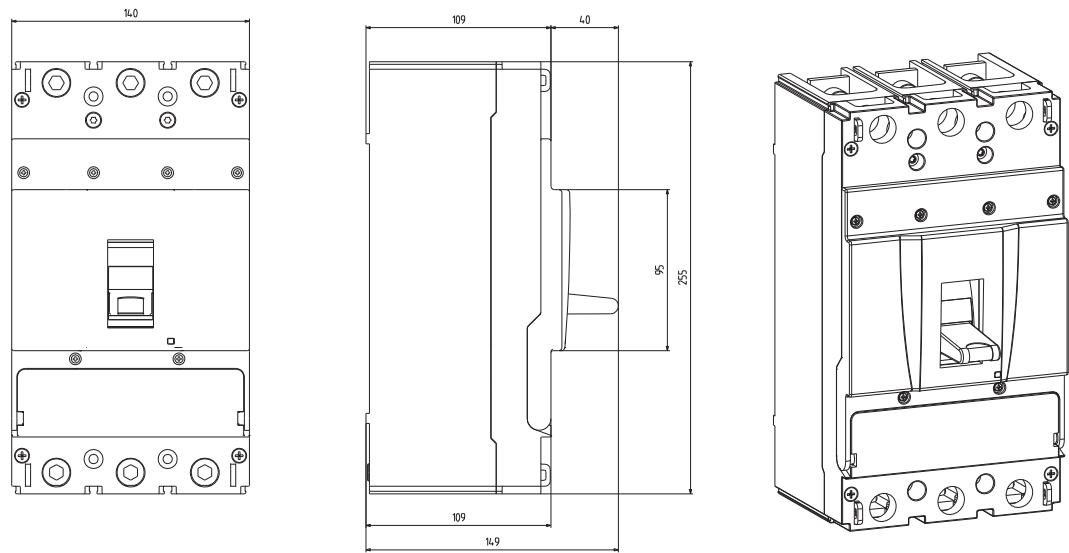
Circuit breaker BZM2 3-pole



All dimensions in mm

Dimensions BZM3

Circuit breaker BZM3 3-pole



All dimensions in mm

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