

Circuit breakers BZM

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EATON

Powering Business Worldwide

Optimum and efficient protection for every application



Compact

Simple

Safe

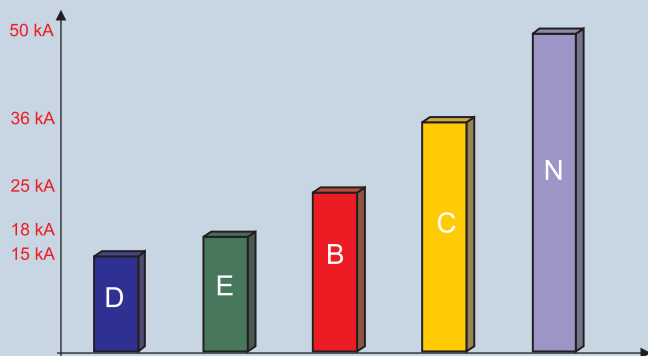
The new BZM

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.

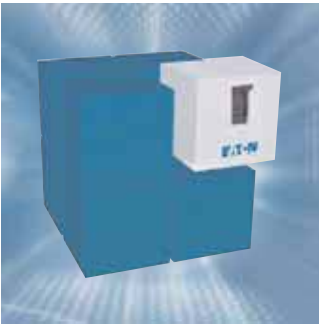
Our Circuit Breaker Division takes pride in expanding the range of circuit breakers by adding the new BZM series designed for the lower LV segment and featuring factory-set thermal and magnetic tripping values. With our new BZM series we offer compact circuit breakers and a wide range of accessories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

With the BZM1 for up to 125 A and the BZM2 for up to 250 A and the BZM3 for up to 400A, 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

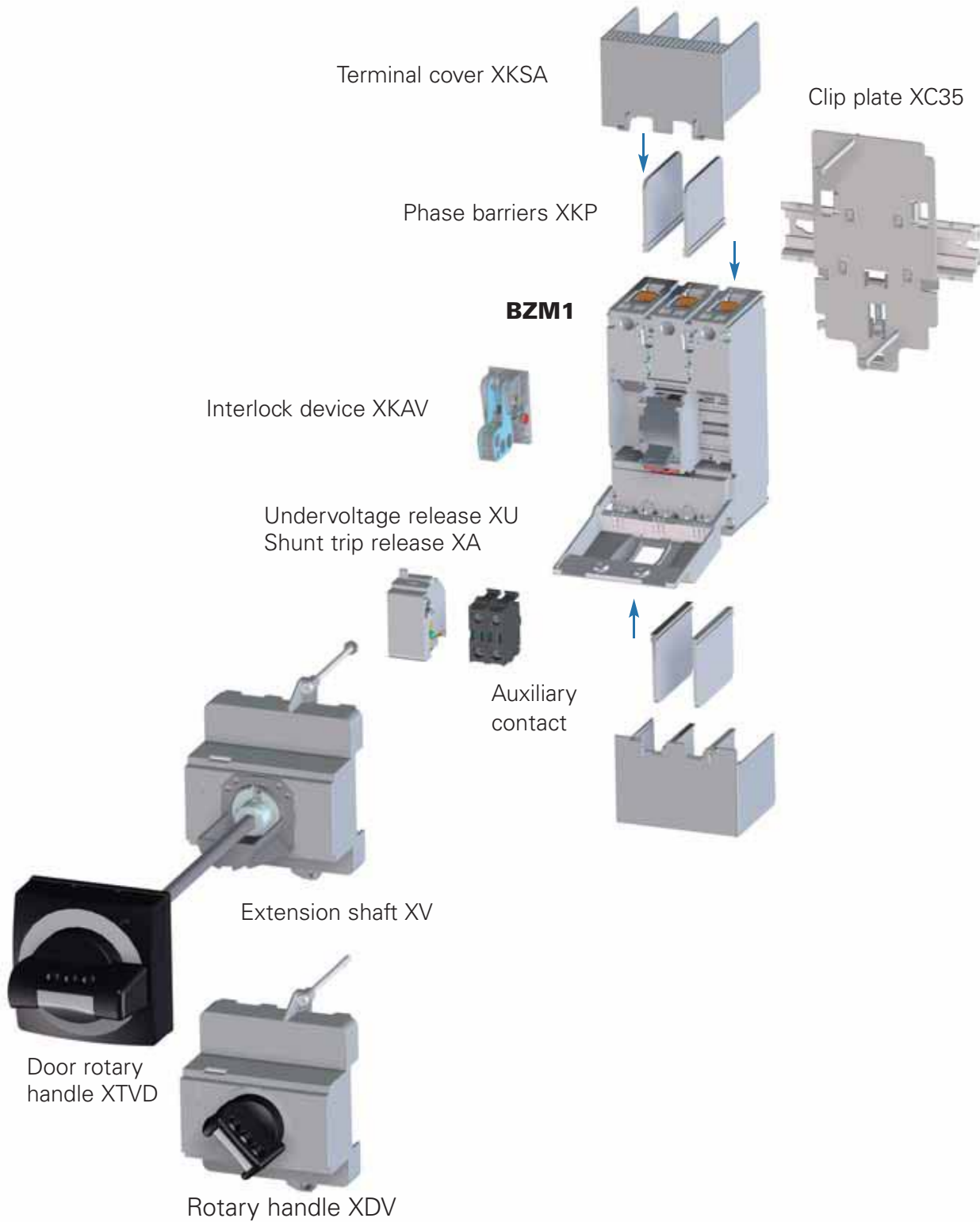
Eaton's switchgears have a worldwide reputation for being the benchmark in low-voltage power distribution. Eaton's quality protects people and assets against shortcircuits and overload, with the BZM series being designed for the 16 to 400 A range in sub-distribution.

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 21. (technical data page).

Range overview BZM1



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 1, 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: 3pole, 4poles

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

3-Position lever: Off - Trip - ON

Electrical Supply: Line or Load-Side

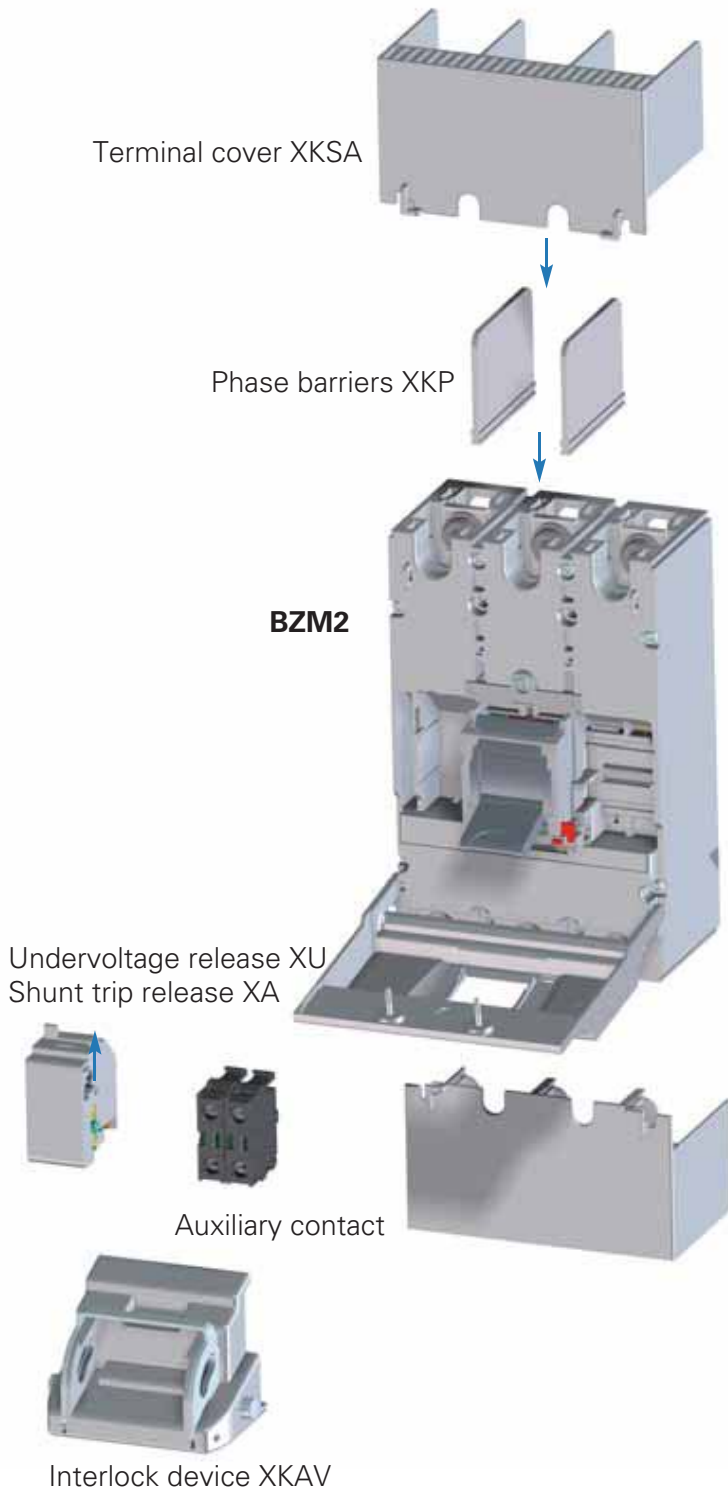
BZM1



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 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: 3 pole

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

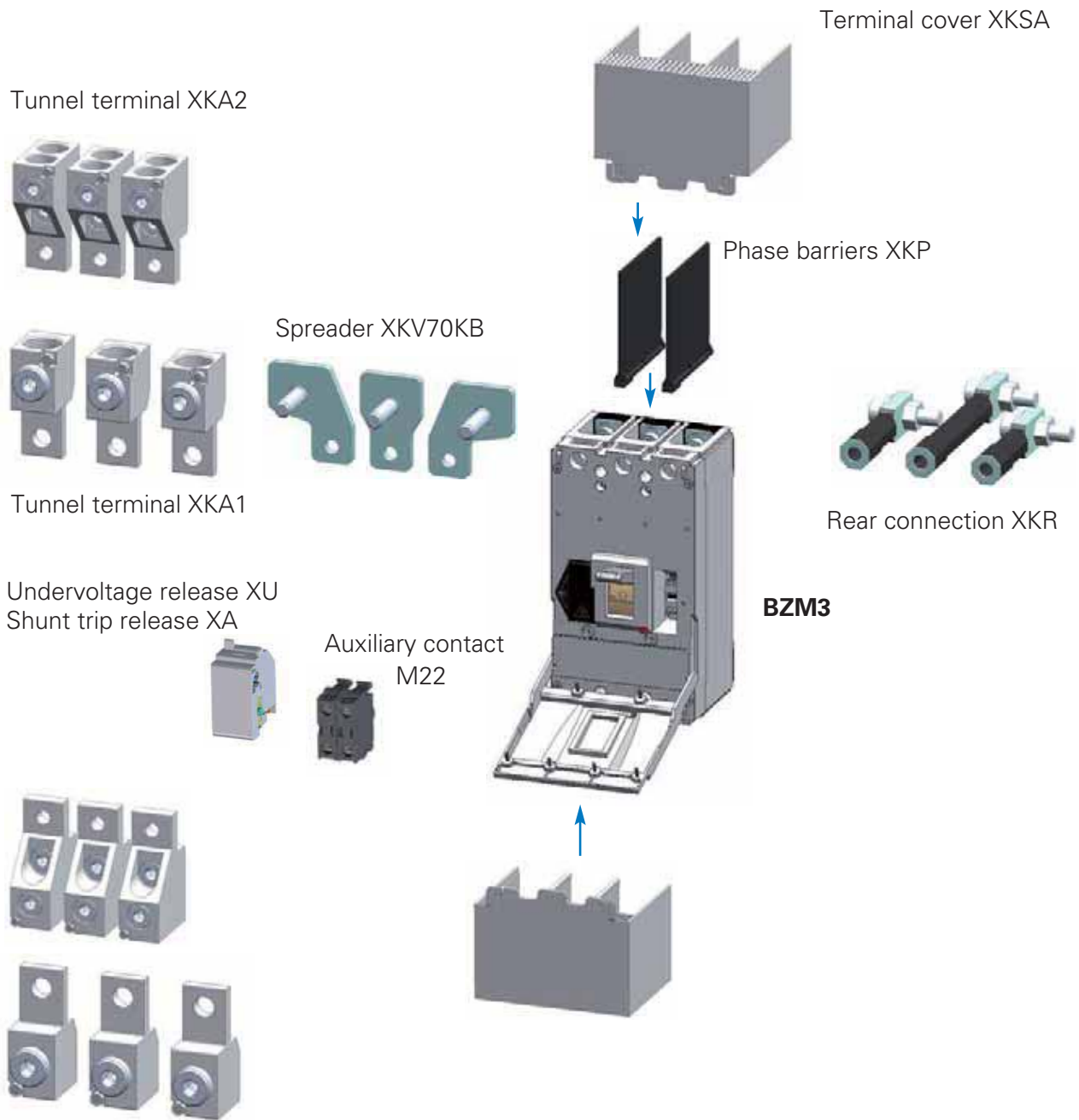
3-Position lever: Off - Trip - ON

Electrical Supply: Line or Load-Side

BZM2



Range overview 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: 140x 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



Circuit breakers BZM



Basic devices

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Accessories BZM3

Auxiliary contacts	20
Phase barrier	20
Undervoltage release.....	20
Shunt trip release	20
Terminal cover	20
Rear connection	20
Spreaders	20
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Cable lug	20

Technical data

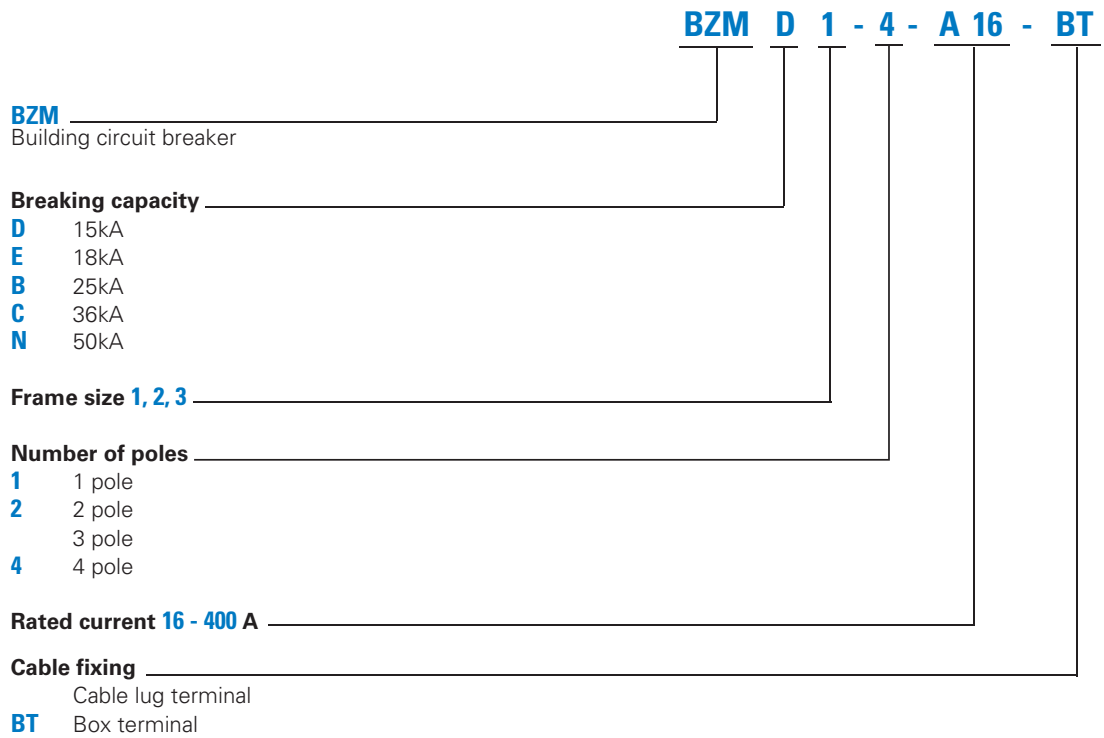
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BZM1, BZM2, BZM3	32
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BZM1, BZM2, BZM3	34
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Circuit breakers BZM1

1-pole

Protection of systems and cables

Rated current
= rated
uninterrupted
current
 $I_n = I_u$
A

Short circuit
releases

/

A



Economy switching capacity
18kA at 240 V 50/60 Hz

Part no.

Article no.

1 of each

Cable lug terminal



16	256 - 384	BZME1-1-A16 166250
20	256 - 384	BZME1-1-A20 166251
25	320 - 480	BZME1-1-A25 166252
32	320 - 480	BZME1-1-A32 166253
40	320 - 480	BZME1-1-A40 166254
50	480 - 720	BZME1-1-A50 166255
63	480 - 720	BZME1-1-A63 166256
80	800 - 1200	BZME1-1-A80 166257
100	800 - 1200	BZME1-1-A100 166258

Box terminal




16	256 - 384	BZME1-1-A16-BT 166259
20	256 - 384	BZME1-1-A20-BT 166260
25	320 - 480	BZME1-1-A25-BT 166261
32	320 - 480	BZME1-1-A32-BT 166262
40	320 - 480	BZME1-1-A40-BT 166263
50	480 - 720	BZME1-1-A50-BT 166264
63	480 - 720	BZME1-1-A63-BT 166265
80	800 - 1200	BZME1-1-A80-BT 166266
100	800 - 1200	BZME1-1-A100-BT 166267

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

2-pole

Protection of systems and cables

Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Domestic switching capacity 15kA at 415 V 50/60 Hz 30kA at 240 V 50/60 Hz Part no. Article no. 1 of each	Economy switching capacity 18kA at 415 V 50/60 Hz 36kA at 240 V 50/60 Hz Part no. Article no. 1 of each	Basic switching capacity 25kA at 415 V 50/60 Hz 50kA at 240 V 50/60 Hz Part no. Article no. 1 of each
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Cable lug terminal



20	256 - 384	BZMD1-2-A20 129808	BZME1-2-A20 129914	BZMB1-2-A20 112585
25	320 - 480	BZMD1-2-A25 129880	BZME1-2-A25 129916	BZMB1-2-A25 112587
32	320 - 480	BZMD1-2-A32 129882	BZME1-2-A32 129918	BZMB1-2-A32 112589
40	320 - 480	BZMD1-2-A40 129884	BZME1-2-A40 129920	BZMB1-2-A40 112591
50	480 - 720	BZMD1-2-A50 129886	BZME1-2-A50 129922	BZMB1-2-A50 112593
63	480 - 720	BZMD1-2-A63 129888	BZME1-2-A63 129924	BZMB1-2-A63 112595
80	800 - 1200	BZMD1-2-A80 129890	BZME1-2-A80 129926	BZMB1-2-A80 112597
100	800 - 1200	BZMD1-2-A100 129892	BZME1-2-A100 129928	BZMB1-2-A100 112599

Box terminal



20	256 - 384	BZMD1-2-A20-BT 129896	BZME1-2-A20-BT 129932	BZMB1-2-A20-BT 112605
25	320 - 480	BZMD1-2-A25-BT 129898	BZME1-2-A25-BT 129934	BZMB1-2-A25-BT 112607
32	320 - 480	BZMD1-2-A32-BT 129900	BZME1-2-A32-BT 129936	BZMB1-2-A32-BT 112609
40	320 - 480	BZMD1-2-A40-BT 129902	BZME1-2-A40-BT 129938	BZMB1-2-A40-BT 112611
50	480 - 720	BZMD1-2-A50-BT 129904	BZME1-2-A50-BT 129940	BZMB1-2-A50-BT 112613
63	480 - 720	BZMD1-2-A63-BT 129906	BZME1-2-A63-BT 129942	BZMB1-2-A63-BT 112615
80	800 - 1200	BZMD1-2-A80-BT 129908	BZME1-2-A80-BT 129944	BZMB1-2-A80-BT 112617
100	800 - 1200	BZMD1-2-A100-BT 129910	BZME1-2-A100-BT 129946	BZMB1-2-A100-BT 112619

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

Circuit breakers BZM1

3-pole

Protection of systems and cables

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

Cable lug terminal



16	256 - 384	BZMD1-A16 111526	BZME1-A16 111527	BZMB1-A16 111528	
20	256 - 384	BZMD1-A20 111529	BZME1-A20 111530	BZMB1-A20 111531	
25	320 - 480	BZMD1-A25 111532	BZME1-A25 111533	BZMB1-A25 111534	
32	320 - 480	BZMD1-A32 111535	BZME1-A32 111536	BZMB1-A32 111537	BZMC1-A32 131268
40	320 - 480	BZMD1-A40 111538	BZME1-A40 111539	BZMB1-A40 111540	BZMC1-A40 131269
50	480 - 720	BZMD1-A50 111541	BZME1-A50 111542	BZMB1-A50 111543	BZMC1-A50 131270
63	480 - 720	BZMD1-A63 111544	BZME1-A63 111545	BZMB1-A63 111546	BZMC1-A63 131271
80	800 - 1200	BZMD1-A80 111547	BZME1-A80 111548	BZMB1-A80 111549	BZMC1-A80 131272
100	800 - 1200	BZMD1-A100 111550	BZME1-A100 111551	BZMB1-A100 111552	BZMC1-A100 131273
125	800 - 1200	BZMD1-A125 112491	BZME1-A125 112493		
16	256 - 384	BZMD1-A16-BT 111553	BZME1-A16-BT 111554	BZMB1-A16-BT 111555	
20	256 - 384	BZMD1-A20-BT 111556	BZME1-A20-BT 111557	BZMB1-A20-BT 111558	
25	320 - 480	BZMD1-A25-BT 111559	BZME1-A25-BT 111560	BZMB1-A25-BT 111561	
32	320 - 480	BZMD1-A32-BT 111562	BZME1-A32-BT 111563	BZMB1-A32-BT 111564	BZMC1-A32-BT 131276
40	320 - 480	BZMD1-A40-BT 111565	BZME1-A40-BT 111566	BZMB1-A40-BT 111567	BZMC1-A40-BT 131277
50	480 - 720	BZMD1-A50-BT 111568	BZME1-A50-BT 111569	BZMB1-A50-BT 111570	BZMC1-A50-BT 131278
63	480 - 720	BZMD1-A63-BT 111571	BZME1-A63-BT 111572	BZMB1-A63-BT 111573	BZMC1-A63-BT 131279
80	800 - 1200	BZMD1-A80-BT 111574	BZME1-A80-BT 111575	BZMB1-A80-BT 111576	BZMC1-A80-BT 131280
100	800 - 1200	BZMD1-A100-BT 111577	BZME1-A100-BT 111578	BZMB1-A100-BT 111579	BZMC1-A100-BT 131281
125	800 - 1200	BZMD1-A125-BT 112497	BZME1-A125-BT 112499		

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

4-pole

Protection of systems and cables

Rated current
= rated
uninterrupted
current
 $I_n = I_u$
A

Short circuit
releases

I

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

Cable lug terminal



16	256 - 384	BZMD1-4-A16 121776	BZME1-4-A16 112503	BZMB1-4-A16 112505
20	256 - 384	BZMD1-4-A20 121778	BZME1-4-A20 112507	BZMB1-4-A20 112509
25	320 - 480	BZMD1-4-A25 121940	BZME1-4-A25 112511	BZMB1-4-A25 112513
32	320 - 480	BZMD1-4-A32 121942	BZME1-4-A32 112515	BZMB1-4-A32 112517
40	320 - 480	BZMD1-4-A40 121944	BZME1-4-A40 112519	BZMB1-4-A40 112521
50	480 - 720	BZMD1-4-A50 121946	BZME1-4-A50 112523	BZMB1-4-A50 112525
63	480 - 720	BZMD1-4-A63 121948	BZME1-4-A63 112527	BZMB1-4-A63 112529
80	800 - 1200	BZMD1-4-A80 121950	BZME1-4-A80 112531	BZMB1-4-A80 112533
100	800 - 1200	BZMD1-4-A100 121952	BZME1-4-A100 112535	BZMB1-4-A100 112537
16	256 - 384	BZMD1-4-A16-BT 121956	BZME1-4-A16-BT 112543	BZMB1-4-A16-BT 112545
20	256 - 384	BZMD1-4-A20-BT 121958	BZME1-4-A20-BT 112547	BZMB1-4-A20-BT 112549
25	320 - 480	BZMD1-4-A25-BT 121960	BZME1-4-A25-BT 112551	BZMB1-4-A25-BT 112553
32	320 - 480	BZMD1-4-A32-BT 121962	BZME1-4-A32-BT 112555	BZMB1-4-A32-BT 112557
40	320 - 480	BZMD1-4-A40-BT 121964	BZME1-4-A40-BT 112559	BZMB1-4-A40-BT 112561
50	480 - 720	BZMD1-4-A50-BT 121966	BZME1-4-A50-BT 112563	BZMB1-4-A50-BT 112565
63	480 - 720	BZMD1-4-A63-BT 121968	BZME1-4-A63-BT 112567	BZMB1-4-A63-BT 112569
80	800 - 1200	BZMD1-4-A80-BT 121970	BZME1-4-A80-BT 112571	BZMB1-4-A80-BT 112573
100	800 - 1200	BZMD1-4-A100-BT 121972	BZME1-4-A100-BT 112575	BZMB1-4-A100-BT 112577

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


Box terminal



Circuit breakers BZM2

3-pole

Protection of systems and cables

Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases / A 	Basic switching capacity 25kA at 415 V 50/60 Hz	Comfort switching capacity 36kA at 415 V 50/60 Hz
		Part no. Article no. 1 of each	Part no. Article no. 1 of each

Cable lug terminal



125	1400 - 2100	BZMB2-A125 119735	BZMC2-A125 121804
160	1400 - 2100	BZMB2-A160 116973	BZMC2-A160 121805
200	1400 - 2100	BZMB2-A200 116974	BZMC2-A200 121806
250	1400 - 2100	BZMB2-A250 116975	BZMC2-A250 121807

Cable lug terminal (without overload release)



250	1400 - 2100	BZMB2-S250 131668	
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
Note: 2 pieces phase barriers BZM2-XKP included in delivery

Cable lug terminal



3-pole

Protection of systems and cables

Rated current = rated uninterrupted current $I_n = I_u$ A	Short circuit releases I A 	Basic switching capacity 25kA at 415 V 50/60 Hz	Comfort switching capacity 36kA at 415 V 50/60 Hz	Normal switching capacity 50kA at 415 V 50/60 Hz
		Part no. Article no. 1 of each	Part no. Article no. 1 of each	Part no. Article no. 1 of each

250	2600-3800	BZMB3-A250 158276	BZMC3-A250 158280	BZMN3-A250 158284
320	2600-3800	BZMB3-A320 158277	BZMC3-A320 158281	BZMN3-A320 158285
350	2600-3800	BZMB3-A350 158278	BZMC3-A350 158282	BZMN3-A350 158286
400	2600-3800	BZMB3-A400 158279	BZMC3-A400 158283	BZMN3-A400 158287

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

Accessories BZM1



Auxiliary contacts (only for 2, 3 and 4pole)

Description	Part no. Article no.	Std.pack
1 NO	M22-K10 216376	20
1 NC	M22-K01 216378	20



Phase barrier

Description	Part no. Article no.	Std.pack
	BZM1-XKP 109760	1



Undervoltage release (only 3 and 4pole)

Description	Part no. Article no.	Std.pack
230-240VAC	BZM1-XU230-240VAC 158053	1
400-440VAC	BZM1-XU400-415VAC 158054	1
24VDC	BZM1-XU24VDC 158055	1



Shunt trip release (only 3 and 4pole)

Description	Part no. Article no.	Std.pack
230-240VAC	BZM1-XA230-240VAC 158056	1
400-440VAC	BZM1-XA400-415VAC 158057	1
24VDC	BZM1-XA24VDC 158058	1



Terminal cover (only for 1pole BZM)

Description	Part no. Article no.	Std.pack
for 1pole BZM	BZM1-1-XKSA 166268	1
for 2pole BZM	BZM1-2-XKSA 112484	1
for 3pole BZM	BZM1-XKSA 112482	1
for 4pole BZM	BZM1-4-XKSA 112483	1



Rotary handle (only for 2, 3 and 4pole)

Description	Part no. Article no.	Std.pack
	BZM1-XDV 113168	1



Door rotary handle (only for 2, 3 and 4pole)

Description	Part no. Article no.	Std.pack
	BZM1-XTVD 112485	1



Extension axle (only for XTVD)

Description	Part no. Article no.	Std.pack
Length 400 mm	BZM1-XV4 112486	1
Length 600 mm	BZM1-XV6 112487	1



DIN-rail-adaptor

Description	Part no. Article no.	Std.pack
For 2-pole BZM	BZM1-2-XC35 112489	1
For 3- a.4-pole BZM	BZM1-XC35 112488	1



Cable Lug

Description	Part no. Article no.	Std.pack
35 mm ² / M6	BZM1-XKS35 113609	10
50 mm ² / M6	BZM1-XKS50 113750	10



BZM1 Locking Device

Description	Part no. Article no.	Std.pack
	BZM1-XKAV 152899	1



Auxiliary contacts

Description	Part no. Article no.	Std.pack
1 NO	M22-K10 216376	20
1 NC	M22-K01 216378	20



Phase barrier

Description	Part no. Article no.	Std.pack
	BZM2-XKP 118720	1



Undervoltage release

Description	Part no. Article no.	Std.pack
230-240VAC	BZM1-3-XU230-240VAC 158053	1
400-440VAC	BZM1-3-XU400-415VAC 158054	1
24VDC	BZM1-3-XU24VDC 158055	1



Shunt trip release

Description	Part no. Article no.	Std.pack
230-240VAC	BZM1-3-XA230-240VAC 158056	1
400-440VAC	BZM1-3-XA400-440VAC 158057	1
24VDC	BZM1-3-XA24VDC 158058	1



Terminal cover

Description	Part no. Article no.	Std.pack
	BZM2-XKSA 118727	1



Interlock Device

Description	Part no. Article no.	Std.pack
	BZM2-XKAV 131669	1

Accessories BZM3



Auxiliary contacts

Description	Part no. Article no.	Std.pack
1 NO	M22-K10 216376	20
1 NC	M22-K01 216378	20



Tunnel terminal (for one side of the breaker)

Description	Part no. Article no.	Std.pack
185 mm ²	BZM3-XKA1 158303	1
240 mm ²	BZM1-XKA2 158304	1



Phase barrier

Description	Part no. Article no.	Std.pack
	BZM3-XKP 158300	1



Cable lug

Description	Part no. Article no.	Std.pack
185 mm ²	NZM3-XKS185 260040	3
240 mm ²	NZM3-XKS240 260041	3



Undervoltage release

Description	Part no. Article no.	Std.pack
230-240VAC	BZM1-3-XU230-240VAC 158053	1
400-440VAC	BZM1-3-XU400-415VAC 158054	1
24VDC	BZM1-3-XU24VDC 158055	1



Shunt trip release

Description	Part no. Article no.	Std.pack
230-240VAC	BZM1-3-XA230-240VAC 158056	1
400-440VAC	BZM1-3-XA400-440VAC 158057	1
24VDC	BZM1-3-XA24VDC 158058	1



Terminal cover

Description	Part no. Article no.	Std.pack
	BZM3-XKSA 158305	1



Rear connection

Description	Part no. Article no.	Std.pack
	BZM3-XKR 158301	1

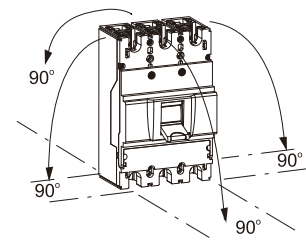
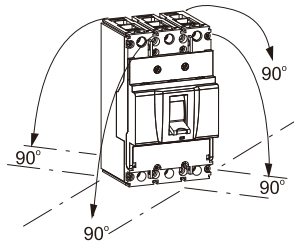


Spreaders (for one side of the breaker)

Description	Part no. Article no.	Std.pack
	BZM3-XKV70KB 158302	1

Mechanical specifications

		Rated current max.125 A BZM1	Rated current max.250 A BZM2
Standards		IEC/EN 60947-2	IEC/EN 60947-2
Number of poles		1, 2, 3, 4	3
Device width	mm	1pole:25, 2pole: 50, 3pole: 75, 4pole: 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	rigid (solid/stranded) and flexible wire (2.5 - 50)	-
Terminal capacity ring tongue	mm ²	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

			1pole	2,3 and 4pole	
Maximum LV h.b.c. fuse	A gG/gL		200	200	315
Rated operational voltage	U_e	V AC	230/240, 50/60 Hz	400/415, 50/60 Hz	400/415, 50/60 Hz
Rated current	I_n	A	16 up to 100	16 up to 125	125, 160, 200, 250
Rated impulse withstand voltage	U_{imp}	V	4.000 (1.2/50 µsec)	6.000 (1.2/50 µsec)	6.000 (1.2/50 µsec)
Overvoltage category			III	III	III
Rated insulation voltage	U_i	V	690	690	690
For use in IT electrical power networks	V		230/240	400/415	400/415
Direction of incoming supply			As required	As required	As required
Number of electrical operating cycles			> 1.500	> 1.500	1.000
Tripping characteristic					
Conventional non-tripping current			$I_{nt} = 1.05 I_n$	$I_{nt} = 1.05 I_n$	$I_{nt} = 1.05 I_n^{1)}$
Conventional tripping current			$I_t = 1.30 I_n$	$I_t = 1.30 I_n$	$I_t = 1.30 I_n$
Reference temperature	°C		40	30	30

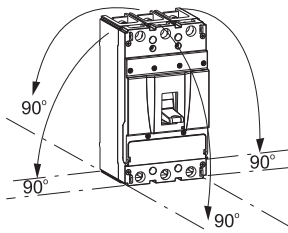
Notes: ¹⁾ not valid for BZMB2-S250

Technical data BZM3

Mechanical specifications

Rated current max. 400 A
BZM3

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		
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

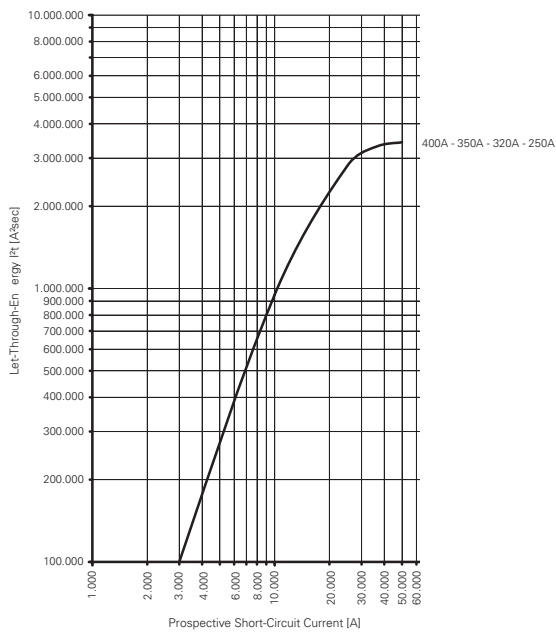
Rated operational voltage	U_b	V AC	440, 50/60 Hz
Rated current	I_n	A	250, 320, 350, 400
Rated impulse withstand voltage	U_{imp}	V	8.000 (1.2/50µsec)
Overvoltage category			III
Rated insulation voltage	U_i	V	690
For use in IT electrical power networks	V		440
Direction of incoming supply	As required		
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 BZM3

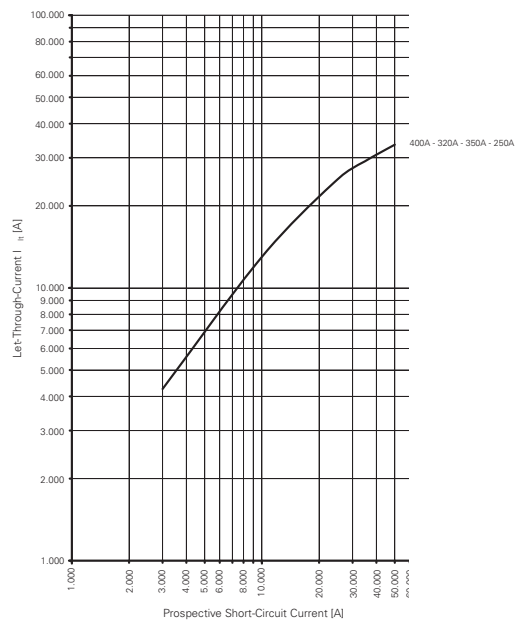
Switching capacity

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

Let-through energy BZM3



Let-through current BZM3



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

		Incoming circuit-breaker								
		NZM1 up to 160A				NZM2 up to 250A				
I_n I_{cu} (415 V)		25k	36k	50k	100k	25k	36k	50k	100k	
Outgoing circuit breaker										
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	-	-	-	-	-	-	60	100

* $I_{cu}(400 V)$

Technical data

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

PLHT-I _n /1(2,3,4)/B(C) + BZMB1	
I _n [A]	U _b = 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) + BZMC1	
I _n [A]	U _b = 230/400 V
20	25 kA
25	
32	
40	
50	
63	
80	
100	

PLHT-I _n /1(2,3,4)/B(C) + BZMD1	
I _n [A]	U _b = 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) + BZME1	
I _n [A]	U _b = 230/400 V, U _e = 240/415 V
20	18 kA
25	
32	
40	
50	
63	
80	
100	
125	

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 - 1 - CO)

Back-up protection PLHT / BZM(B)(C)2

PLHT-I _n /1(2,3,4)/B(C) + BZMB2	
I _n [A]	U _b = 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) + BZMC2	
I _n [A]	U _b = 230/400 V, U _e = 240/415 V
20	25 kA
25	
32	
40	
50	
63	
80	
100	
125	

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 - 1 - 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			
1			x
1.5	25 kA(up to -A100) 18 kA(up to -A125)		
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			
1			x
1.5	20 kA		
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			
1			x
1.5	15 kA		
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			
1			x
1.5	18 kA		
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_n (0 - 1 - CO)

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Technical data

Back-up protection FAZ/PLSM / BZM(B)(C)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	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	18 kA		
63			

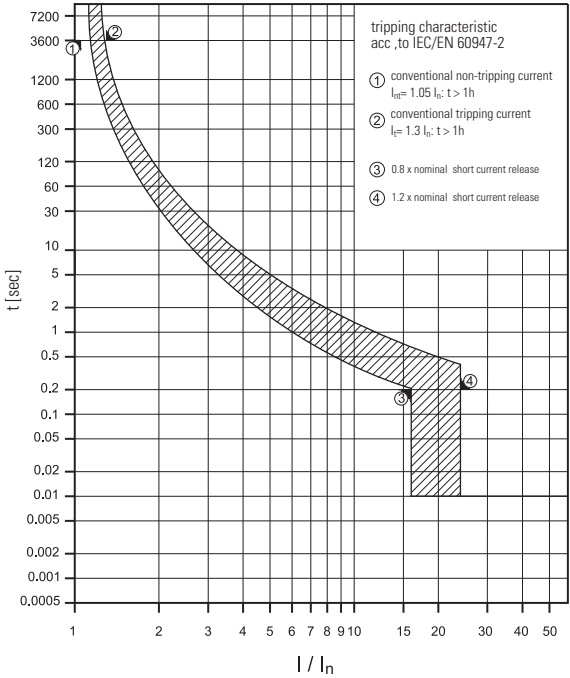
U_e = 400/415V: I_{CU} (BZMB2) = 25 kA (acc. to IEC/EN 60947-2)
 U_e = 400/415V: I_{CU} (BZMC2) = 36 kA (acc. to IEC/EN 60947-2)

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	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	18 kA		
63			

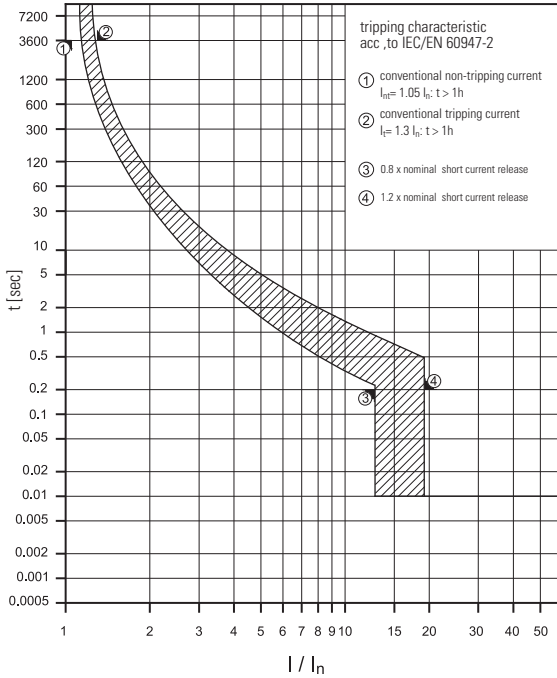
U_e = 240/415V: I_{CU} (PLSM all types except D50, D63) = 15 kA (acc. to IEC/EN 60947-2)
 U_e = 240/415V: I_{CU} (PLSM type D50, D63) = 10 kA (acc. to IEC/EN 60947-2)
 Back-up tests acc. to IEC/EN 60947-2, App. A.6: U = 1.05 * U_e (0 - t - CO)

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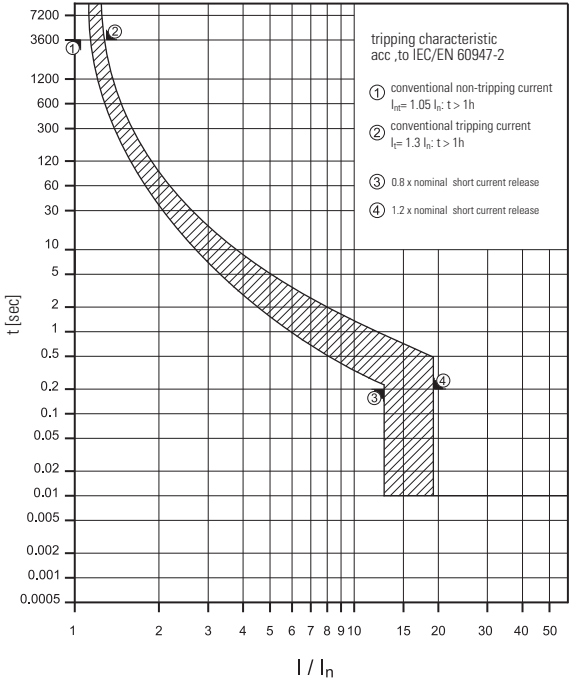
Tripping curve BZM1 16A, 3-pole



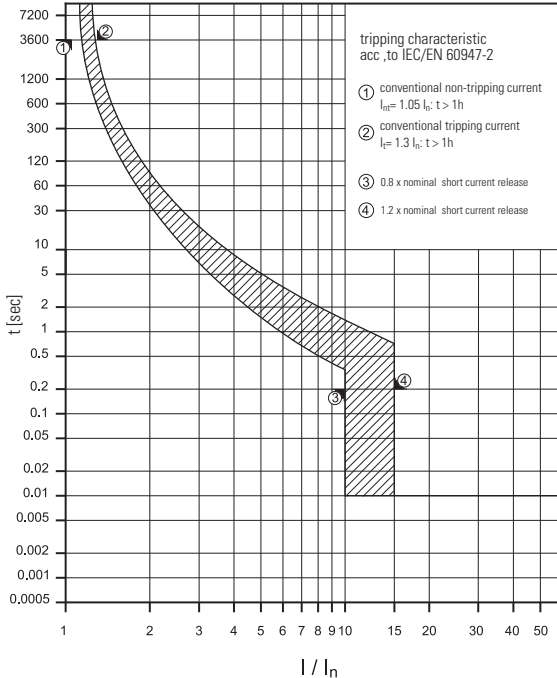
Tripping curve BZM1 20A, 3-pole



Tripping curve BZM1 25A, 3-pole

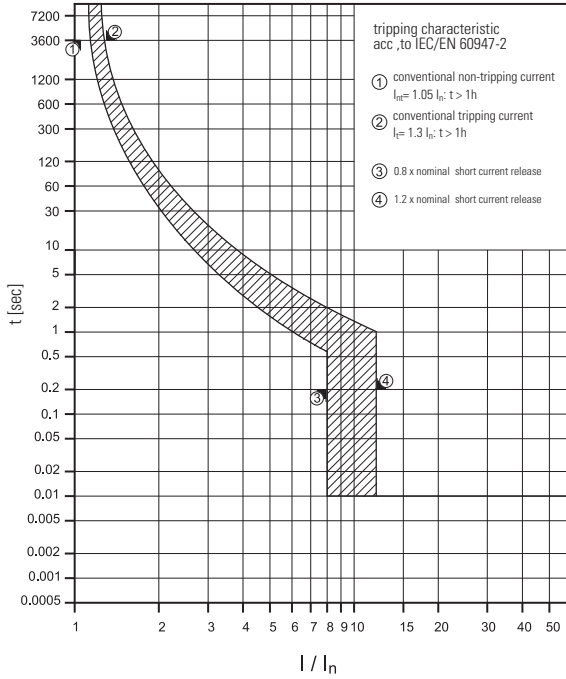


Tripping curve BZM1 32A, 3-pole

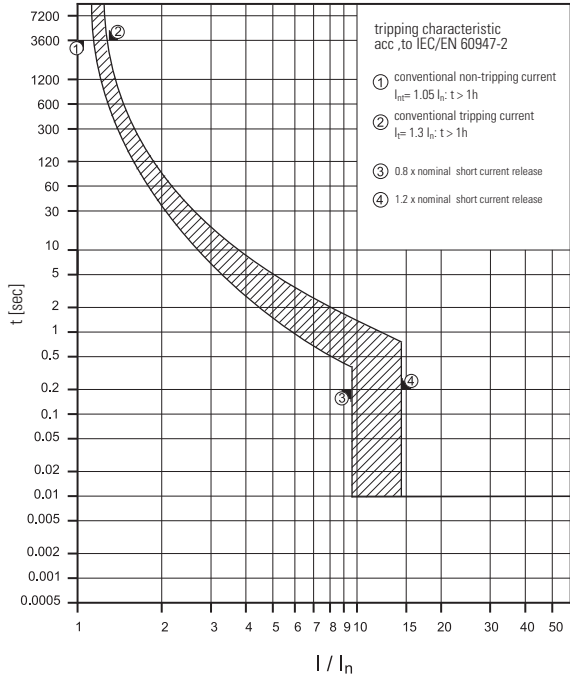


Tripping current curves BZM1

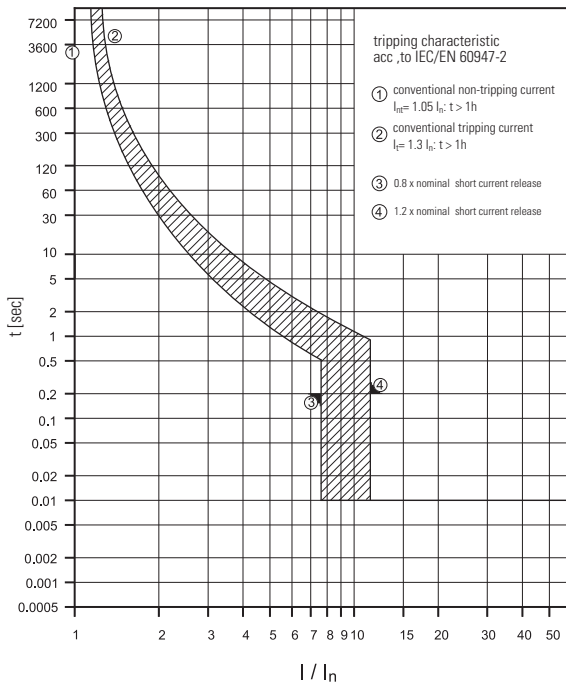
Tripping curve BZM1 40A,3-pole



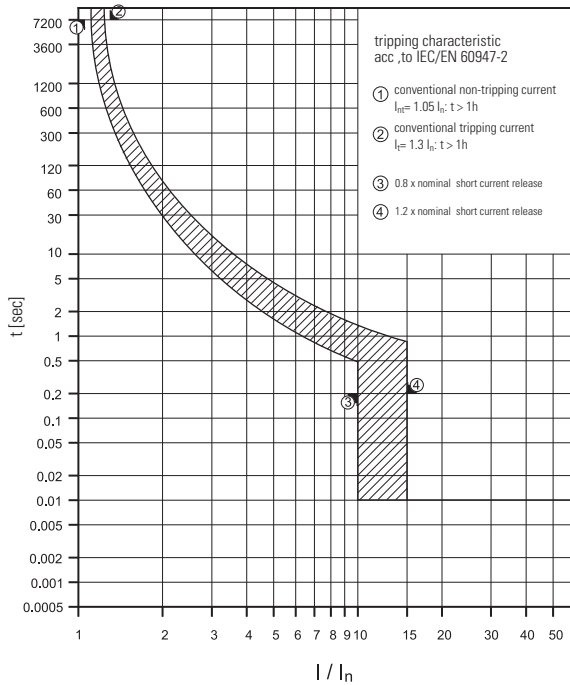
Tripping curve BZM1 50A,3-pole



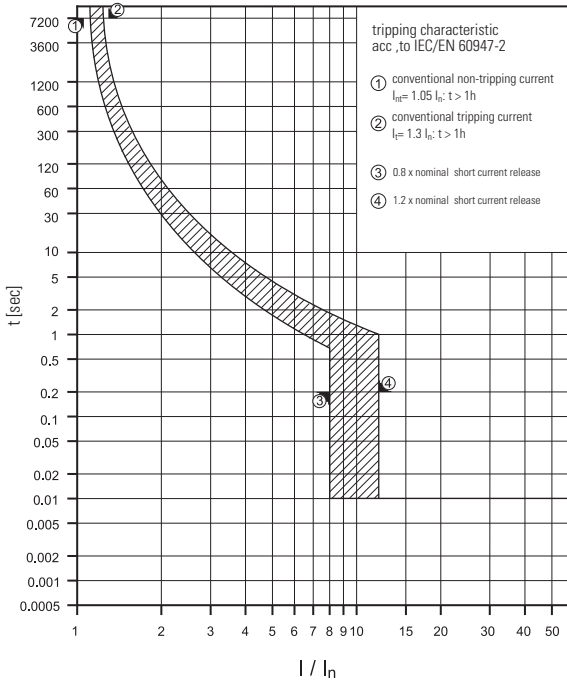
Tripping curve BZM1 63A,3-pole



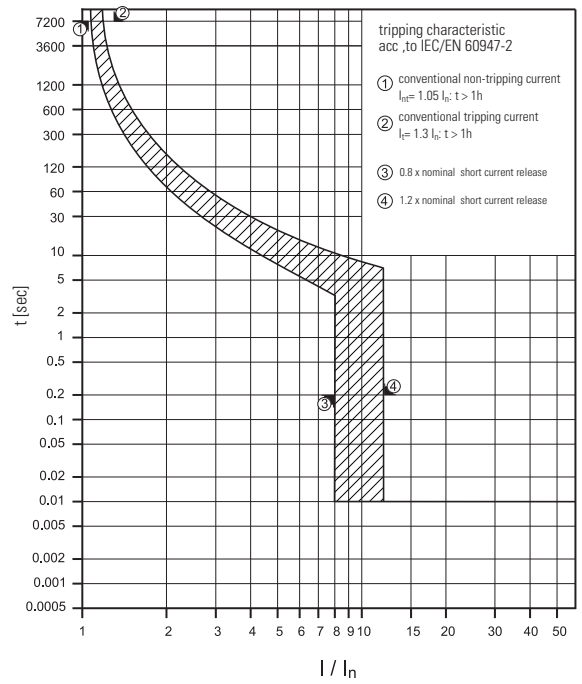
Tripping curve BZM1 80A,3-pole



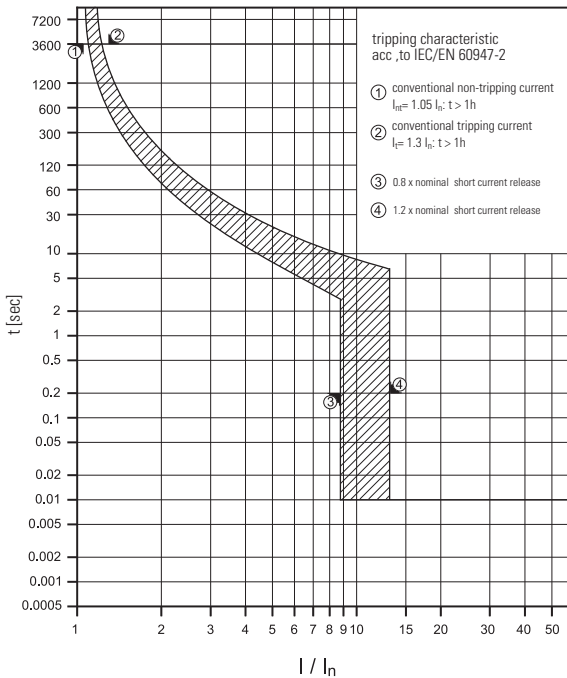
Tripping curve BZM1 100A,3-pole



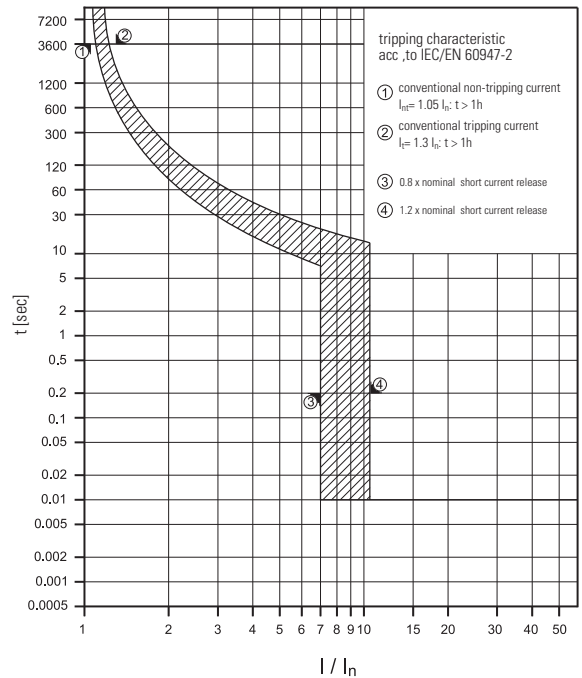
Tripping curve BZM2 125A



Tripping curve BZM2 160A



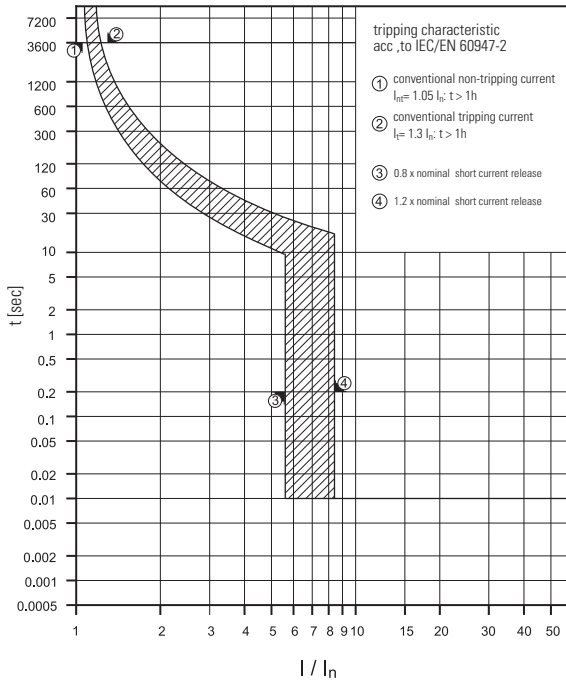
Tripping curve BZM2 200A



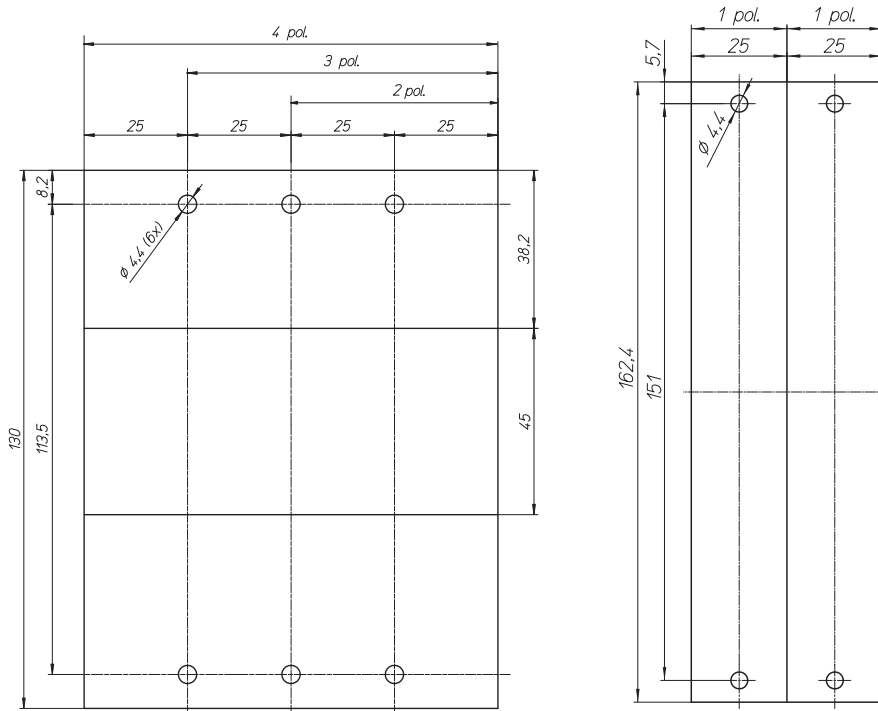
Tripping current curves BZM2

Mounting holes BZM1

Tripping curve BZM2 250A

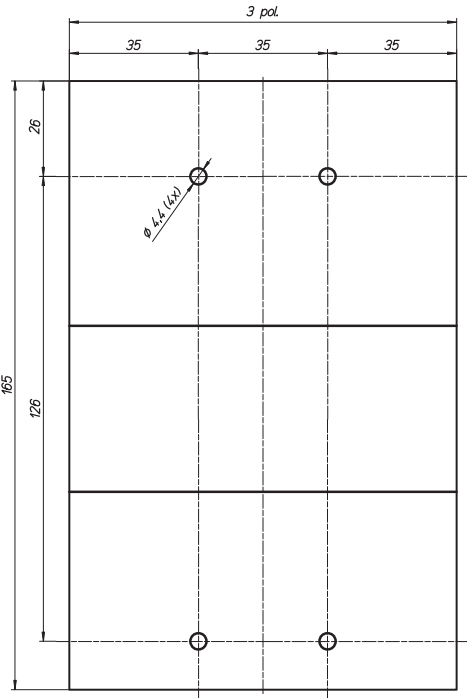


Mounting holes BZM1

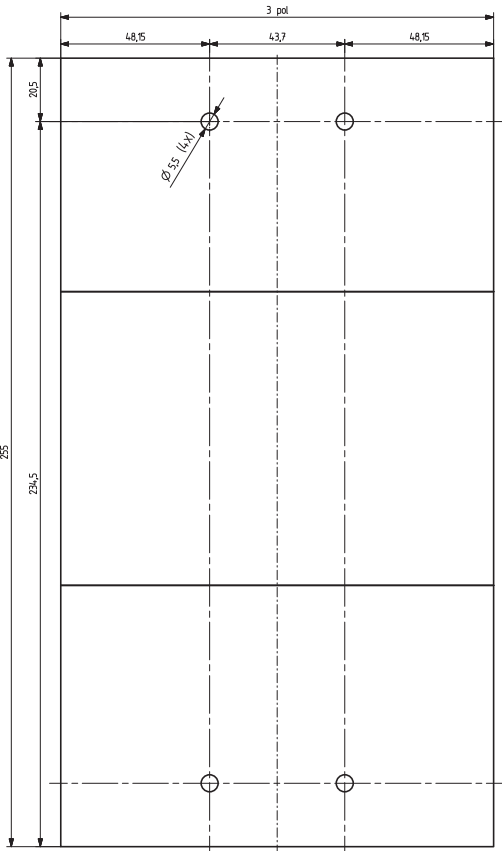


Mounting holes BZM1, BZM2, BZM3

Mounting holes BZM2



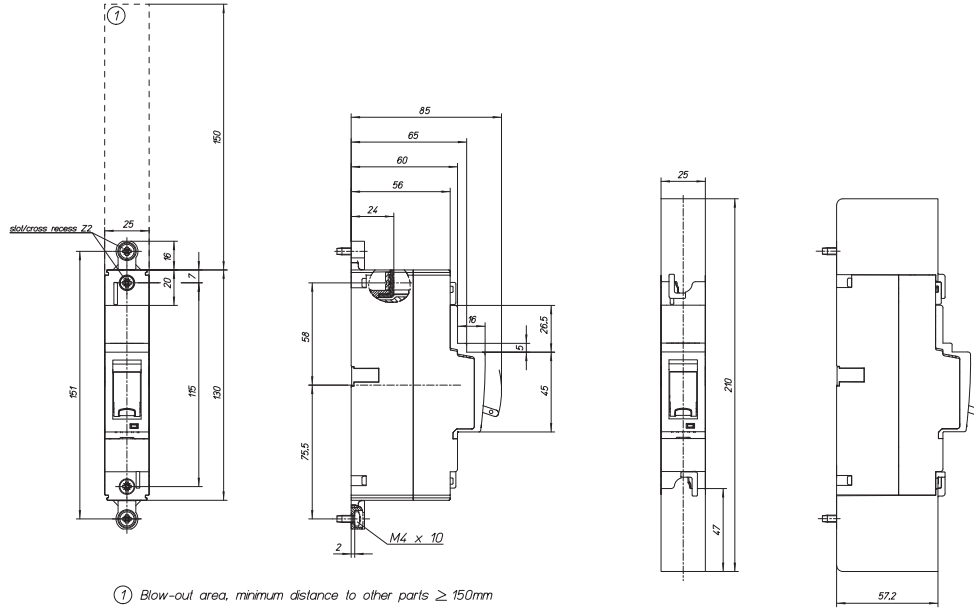
Mounting holes BZM3



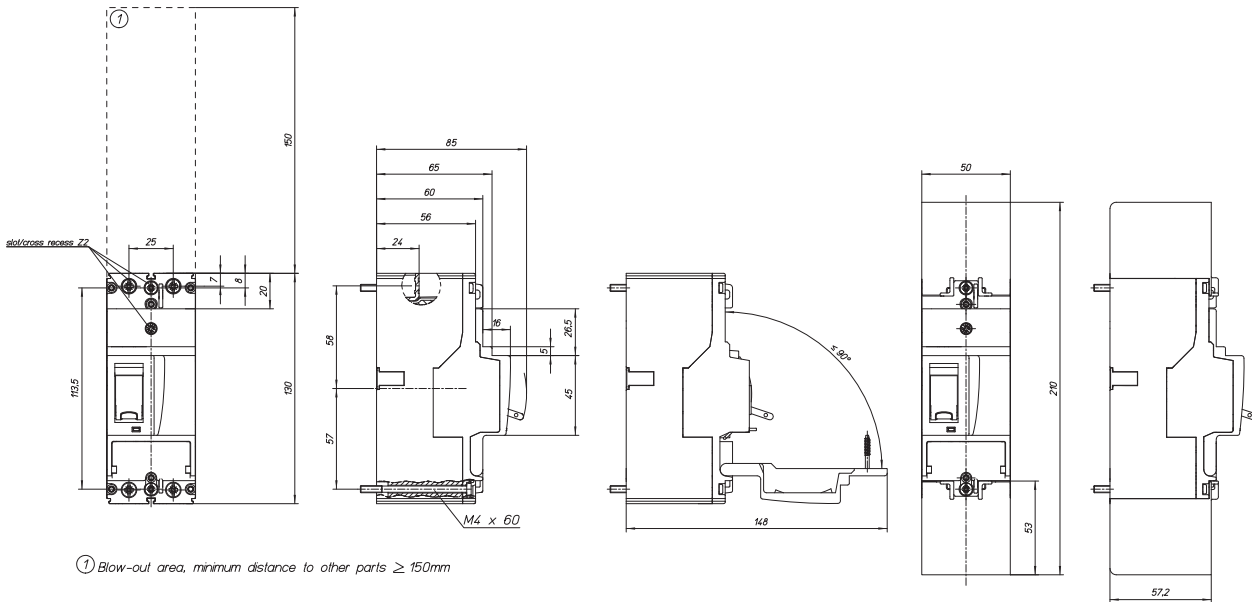
All dimensions in mm

Dimensions BZM1

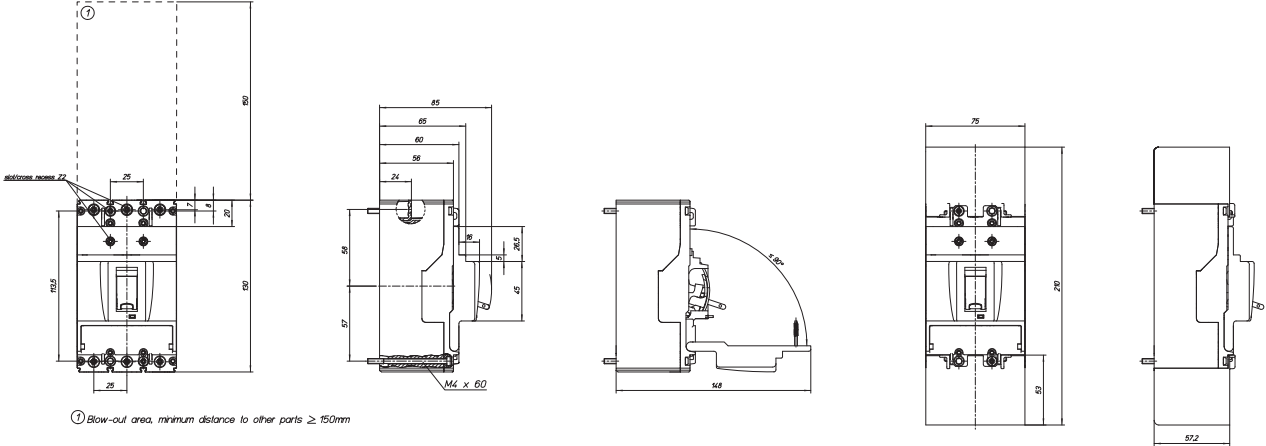
Circuit breaker BZM1 1-pole



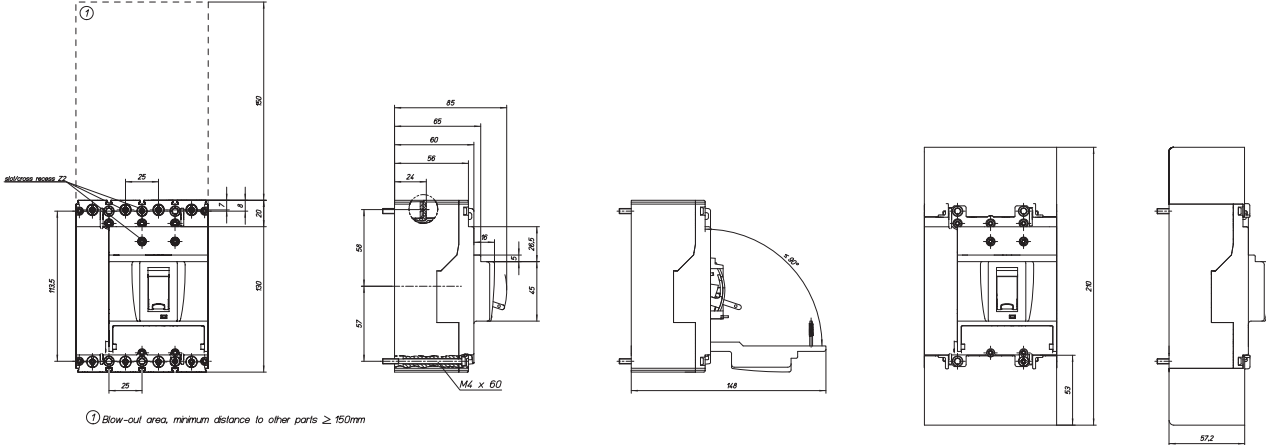
Circuit breaker BZM1 2-pole



Circuit breaker BZM1 3-pole

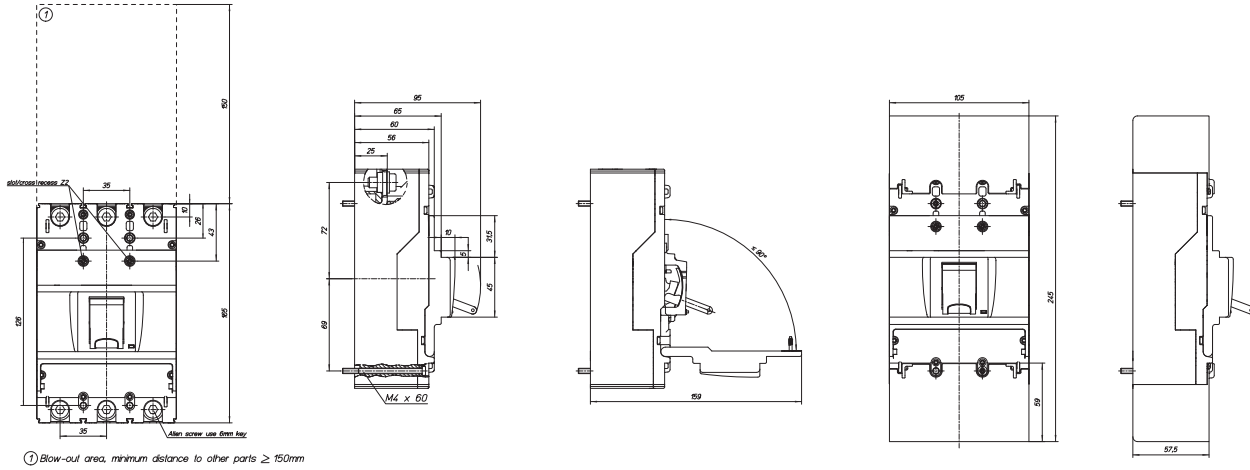


Circuit breaker BZM1 4-pole

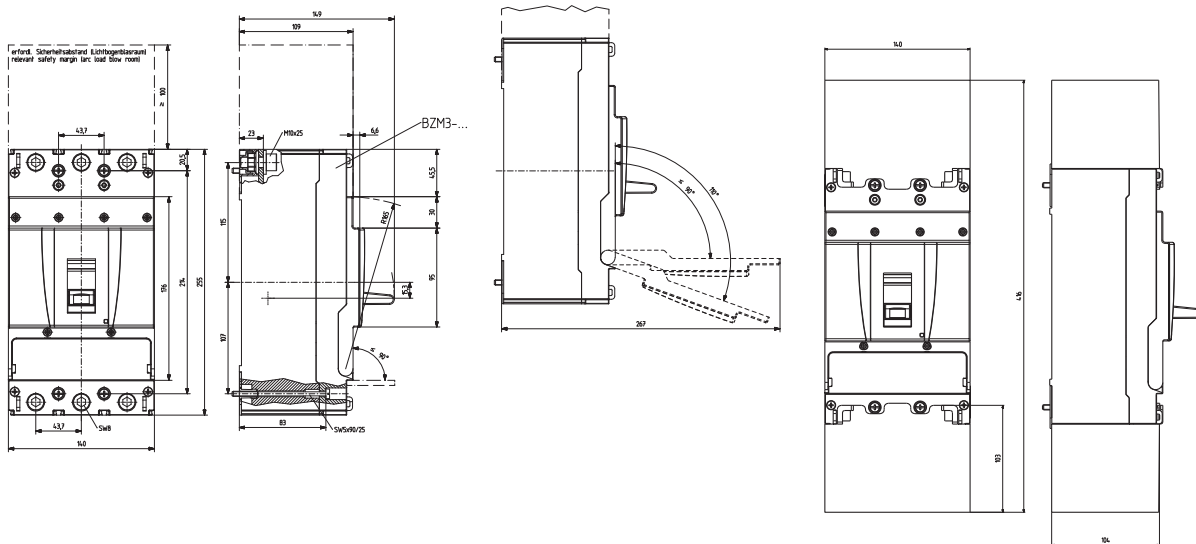


Dimensions BZM2 and BZM3

Circuit breaker BZM2 3-pole



Circuit breaker BZM3 3-pole



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Electrical Sector Asia Pacific
No.3, Lane 280, Linhong Road,
Changning District, Shanghai

Eaton Industries Pte Ltd
Electrical Sector
4 Loyang Lane #04-01/02
Singapore 508914

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