

# Thermomagnetic device circuit breaker - CB TM1 5A M1 P - 2800851

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Thermomagnetic device circuit breaker, 1-pos., tripping characteristic M1 (medium-blow), 1 PDT contact, plug for base element.

## Your advantages

- ✓ Compact design with precise nominal current levels
- ✓ Modular expansion possible thanks to the uniform, plug-in housing concept
- ✓ Sophisticated remote signaling concept enables monitoring from any location
- ✓ Protect 240/277 V AC power supply systems with the M1 characteristic curve (based on the C characteristic)
- ✓ Supply/remote signaling can be bridged with CLIPLINE complete accessories



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356690027

## Technical data

### Dimensions

Height	45 mm
Width	12.3 mm
Depth	52 mm
Complete module height	90 mm
Complete module width	12.3 mm
Complete module depth	77.3 mm

### Ambient conditions

Ambient temperature (operation)	-30 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Humidity test	240 h, 95 % RH, 40 °C
Shock (operation)	30g (According to IEC 60068-2-27, Test Ea)

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## Technical data

### Ambient conditions

Vibration (operation)	8g (In accordance with IEC 60068-2-6, Test Fc)
Degree of protection	IP30 (Actuation area)

### General

Installation instructions	When mounted in rows, the nominal device current can be limited to just 80% or must be oversized accordingly.
Flammability rating according to UL 94	V-0
Mounting type	on base element
Color	gray
Number of positions	1
Insulating material group	II
Degree of pollution	2
Type	Male

### Electrical data

Fuse type	M1 (normal blow)
Rated surge voltage	2.5 kV (Increased insulation in actuation area)
Rated voltage	50 V DC (IEC 60934)
	50 V DC (UL 1077)
	50 V DC (UL 508 - with plug-in base)
	240 V AC (U <sub>e</sub> according to IEC 60934)
	277 V AC (UL 1077)
	277 V AC (UL 508 - with plug-in base)
Rated current I <sub>N</sub>	5 A (IEC 60934)
	5 A AC (inductive load according to UL 1077)
	5 A DC (low-induction load according to UL 1077)
	5 A AC (inductive load according to UL 508 - with plug-in base)
	5 A DC (low-induction load according to UL 508 - with plug-in base)
Rated insulation voltage U <sub>i</sub>	277 V AC (UL 1077)
	250 V AC (IEC 60934)
Power dissipation	1.5 W (in nominal operation per channel)
Device resistance	60 mΩ
Insulation resistance R <sub>iso</sub>	> 100 MΩ (500 V DC)
Type of actuation	S type
Tripping method	TM (thermomagnetic)
Tripping level	Trip-free mechanism (positive)
Rated short-circuit switching capacity I <sub>cn</sub>	300 A (240 V AC)
	600 A (50 V DC)
Required backup fuse	20 A (I > I <sub>cn</sub> )
Short-circuit switching capacity	1000 A AC (277 V AC)
	1000 A DC (50 V DC)
Dielectric strength	3000 V AC (Actuation area)

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## Technical data

### Electrical data

	1500 V AC (Main to auxiliary circuit)
	1500 V AC (Open main circuit)
	1000 V AC (Open auxiliary circuit)
Voltage drop	0.31 V (at 1 x I <sub>n</sub> )
Switching cycles, max.	6000 (at 1 x I <sub>n</sub> )
Auxiliary circuit	277 V AC / 0.5 A (Low-induction)
	277 V AC / 1 A (Low-induction, maximum of 2000 cycles)
	50 V DC / 1 A (Low-induction)
Minimum auxiliary contact operating voltage	10 V
Maximum auxiliary contact operating voltage	240 V
	240 V
Minimum auxiliary contact operating current	10 mA
Maximum auxiliary contact operating current	1 A

### Standards and Regulations

Standards/specifications	EN 60934
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### Conformance/approvals

Designation	UL approval
Identification	UL Listed UL 508
	UL/C-UL Recognized UL 1077
Designation	CSA
Identification	CSA CAN/CSA-C22.2 No. 235-04
Designation	Shipbuilding approval
Identification	DNV GL

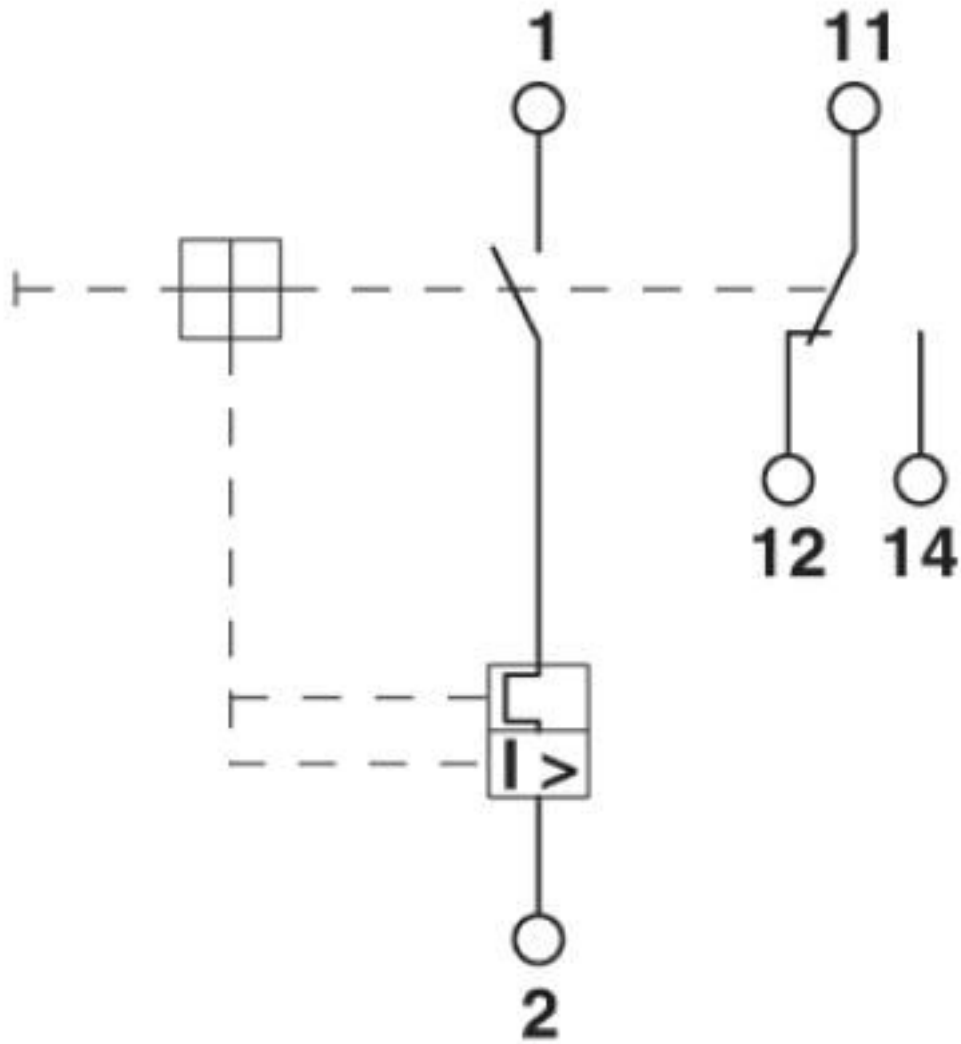
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

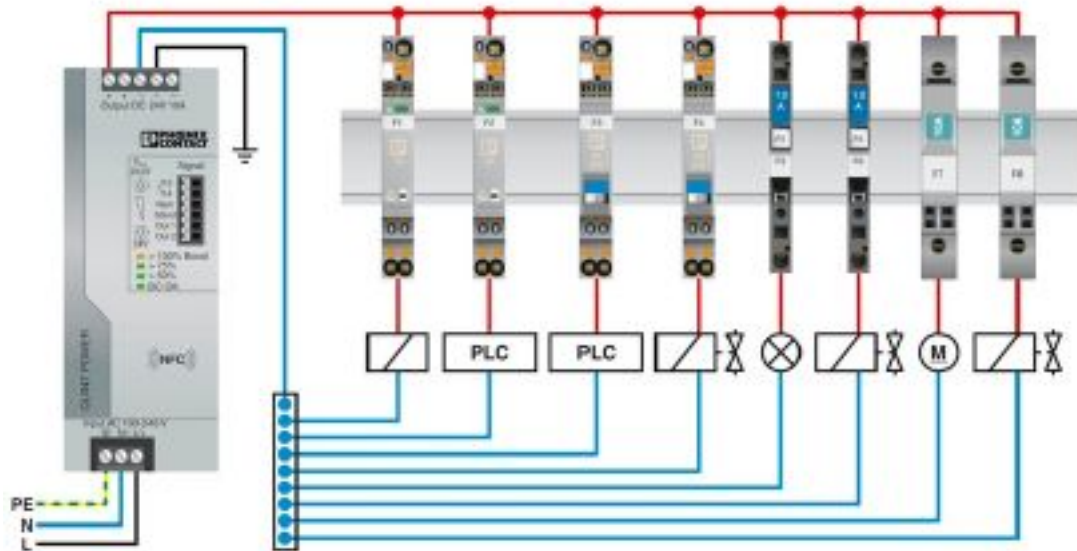
# Thermomagnetic device circuit breaker - CB TM1 5A M1 P - 2800851

Circuit diagram

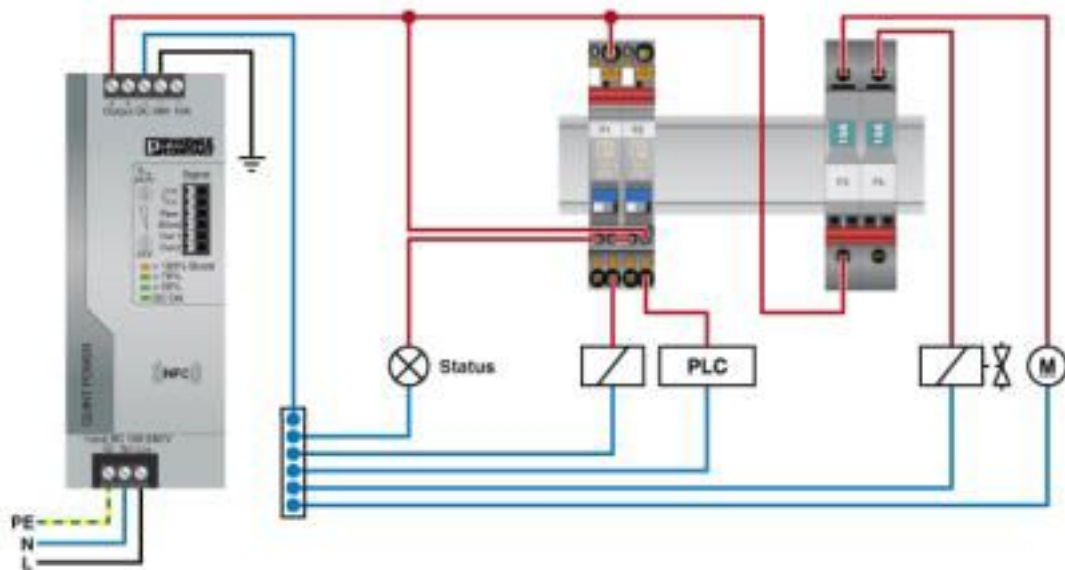


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Application drawing

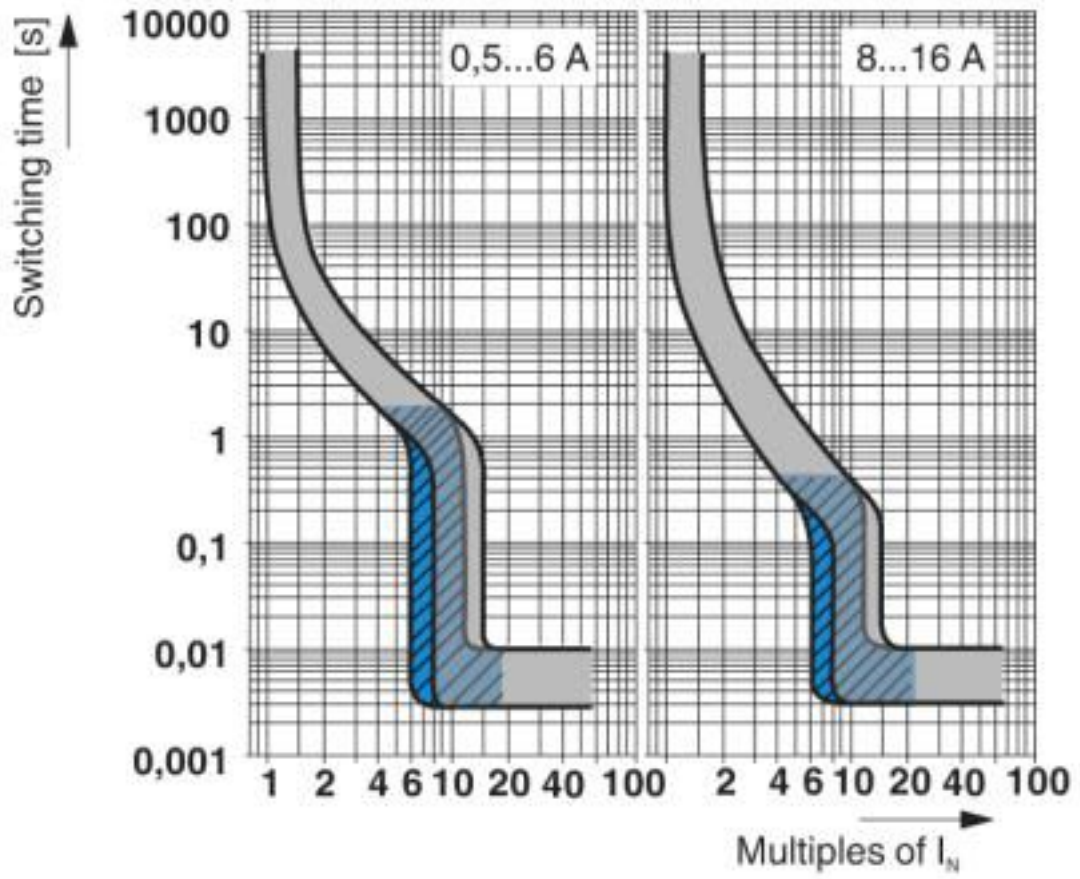


Application drawing



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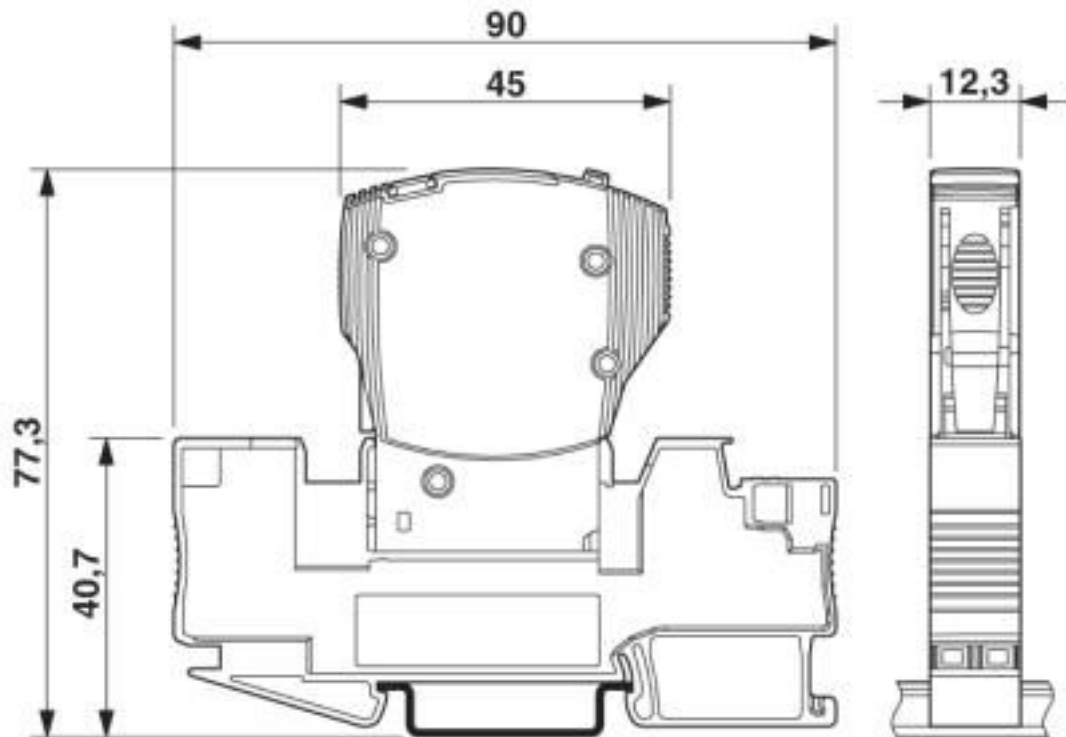
Diagram



Trigger characteristic  
Gray: DC range, blue: AC range

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Dimensional drawing



The figure shows the complete module consisting of a base element and connector

## Classifications

eCl@ss

eCl@ss 10.0.1	27141116
eCl@ss 4.0	27141100
eCl@ss 4.1	27141100
eCl@ss 5.0	27141100
eCl@ss 5.1	27141100
eCl@ss 6.0	27141100
eCl@ss 7.0	27141116
eCl@ss 8.0	27141116
eCl@ss 9.0	27141116

ETIM

ETIM 3.0	EC000899
ETIM 4.0	EC000899
ETIM 5.0	EC000899
ETIM 6.0	EC000899
ETIM 7.0	EC000899

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## Classifications

### UNSPSC

UNSPSC 6.01	30211812
UNSPSC 7.0901	39121411
UNSPSC 11	39121411
UNSPSC 12.01	39121411
UNSPSC 13.2	39121410
UNSPSC 18.0	39121410
UNSPSC 19.0	39121410
UNSPSC 20.0	39121410
UNSPSC 21.0	39121410

## Approvals


### Approvals


#### Approvals


CSA / UL Listed / UL Recognized / cUL Recognized / cUL Listed / VDE Zeichengenehmigung / EAC / KC / DNV GL / CCC / cULus Recognized / cULus Listed


#### Ex Approvals

### Approval details

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	2786957
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140459
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 140459
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## Approvals

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40034683
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EAC			RU C-DE.*09.B.00169
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KC		<a href="http://eng.kcc.go.kr/user/ehpMain.do">http://eng.kcc.go.kr/user/ehpMain.do</a>	SW05012-15001A
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DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE00003C7
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CCC			2019010307158887
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cULus Recognized			
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cULus Listed			
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## Accessories

Accessories

Bridge

Jumper - CB PT BRIDGE - 2801014



Bridge plug for bridging contacts 1 to 2 for CB base elements

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## Accessories

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Jumper - CB RC BRIDGE - 2801616



Bridge plug for bridging contacts 11 to 14 for CB base elements

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## Cutting tools

Front cutter - CUTFOX-FBS - 1212124



Cutting tool, for separating individual jumper bars from FBS ... plug-in bridges and EB ... insertion bridges

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## Jumper

Plug-in bridge - FBS 2-6 - 3030336



Plug-in bridge, pitch: 6.2 mm, width: 10.7 mm, number of positions: 2, color: red

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Plug-in bridge - FBS 3-6 - 3030242



Plug-in bridge, pitch: 6.2 mm, width: 16.9 mm, number of positions: 3, color: red

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Plug-in bridge - FBS 4-6 - 3030255



Plug-in bridge, pitch: 6.2 mm, width: 23.1 mm, number of positions: 4, color: red

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## Accessories

Plug-in bridge - FBS 5-6 - 3030349



Plug-in bridge, pitch: 6.2 mm, width: 29.3 mm, number of positions: 5, color: red

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Plug-in bridge - FBS 10-6 - 3030271



Plug-in bridge, pitch: 6.2 mm, width: 60.3 mm, number of positions: 10, color: red

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Plug-in bridge - FBS 20-6 - 3030365



Plug-in bridge, pitch: 6.2 mm, width: 122.3 mm, number of positions: 20, color: red

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Plug-in bridge - FBS 50-6 - 3032224



Plug-in bridge, pitch: 6.2 mm, width: 308.3 mm, number of positions: 50, color: red

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## Labeled terminal marker

Zack Marker strip, flat - ZBF 12 CUS - 0825018



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

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## Terminal marking

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## Accessories

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 12 mm, lettering field size: 5.15 x 12.15 mm, Number of individual labels: 5

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## Necessary add-on products

Base element - CB 1/6-2/4 PT-BE - 2800929



Base element with push-in connection technology for CB ... device circuit breakers

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Base element - CB 1/10-1/10 UT-BE - 2801305



Base element with screw connection technology for CB... device circuit breakers

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