

CB TM2 12A SFB P - Thermomagnetic device circuit breaker

2800877

<https://www.phoenixcontact.com/pc/products/2800877>

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Thermomagnetic device circuit breaker, 2-pos., tripping characteristic SFB, 2 changeover contacts, plug for base element.

Product description

Thermomagnetic device circuit breaker

Commercial data

Item number	2800877
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CLA124
Catalog page	Page 391 (C-4-2019)
GTIN	4046356690324
Weight per piece (including packing)	70 g
Weight per piece (excluding packing)	70 g
Customs tariff number	85362010
Country of origin	ID

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Technical data

Notes

General	When mounted in rows, the nominal device current can be limited to just 80% or must be oversized accordingly.
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Product properties

Product type	Thermomagnetic device circuit breakers
Product family	CB TM
Type	Male
Number of positions	2
No. of channels	1

Insulation characteristics

Degree of pollution	2
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Electrical properties

Fuse type	Automatic device
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General

Rated voltage	80 V DC (IEC 60934)
	80 V DC (UL 1077)
	80 V DC (UL 508 - with plug-in base)
Rated insulation voltage U_i	277 V AC (UL 1077)
	250 V AC (IEC 60934)
Rated current I_N	12 A (IEC 60934)
	inductive load according to UL 1077
	12 A DC (low-induction load according to UL 1077)
	12 A DC (low-induction load according to UL 508 - with plug-in base)
	12 A DC
Rated surge voltage	2.5 kV (Increased insulation in actuation area)
Insulation resistance R_{iso}	> 100 M Ω (500 V DC)
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)
Type of actuation	S type
Tripping method	TM (thermomagnetic)
Tripping level	Trip-free mechanism (positive)
Device resistance	11 m Ω
Required backup fuse	≥ 48 A ($I > I_{cn}$)
Rated short-circuit switching capacity I_{cn}	600 A (80 V DC)
Short-circuit switching capacity	1000 A AC (277 V AC)
	1000 A DC (50 V DC)
	3000 V AC (Actuation area)

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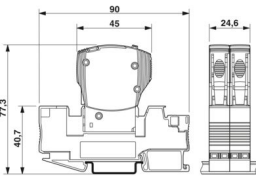
Dielectric strength	1500 V AC (Main to auxiliary circuit)
	1500 V AC (Open main circuit)
	1000 V AC (Open auxiliary circuit)
	1500 V AC (Position to position)
Switching cycles, max.	6000 (240 V AC / 1 x I _n)
	3000 (80 V DC/1 x I _n)
Fuse	SFB
Power dissipation	2.88 W (in nominal operation per channel)
Voltage drop	0.13 V (at 1 x I _n)

Auxiliary contact	
Minimum operating voltage U _{min} DC	10 V
Maximum operating voltage U _{max} DC	240 V
Maximum operating voltage U _{max} AC	240 V
Minimum operating current I _{min}	10 mA
Max. operating current I _{max}	1 A

Connection data

Connection method	pluggable
Connection method	pluggable

Dimensions

Dimensional drawing	
Width	24.6 mm
Height	45 mm
Depth	52 mm

Material specifications

Color	gray (RAL 7042)
	black (RAL 9005)
Flammability rating according to UL 94	V-0
Insulating material group	II

Mechanical properties

Mechanical data	
Open side panel	No

Environmental and real-life conditions

Ambient conditions

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Degree of protection	IP30 (Actuation area)
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 (IEC 60068-2-27, Test Ea)
Vibration (operation)	8g (IEC 60068-2-6, Test Fc)

Approvals

UL approval

Identification	UL Listed UL 508
	UL/C-UL Recognized UL 1077

CSA

Identification	CSA CAN/CSA-C22.2 No. 235-04
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Shipbuilding approval

Identification	DNV GL
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Standards and regulations

Standards/specifications	EN 60934
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Mounting

Mounting type	on base element
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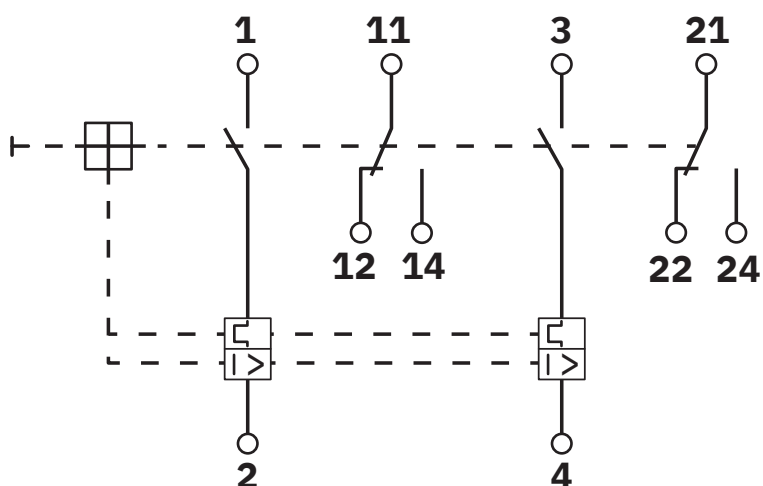
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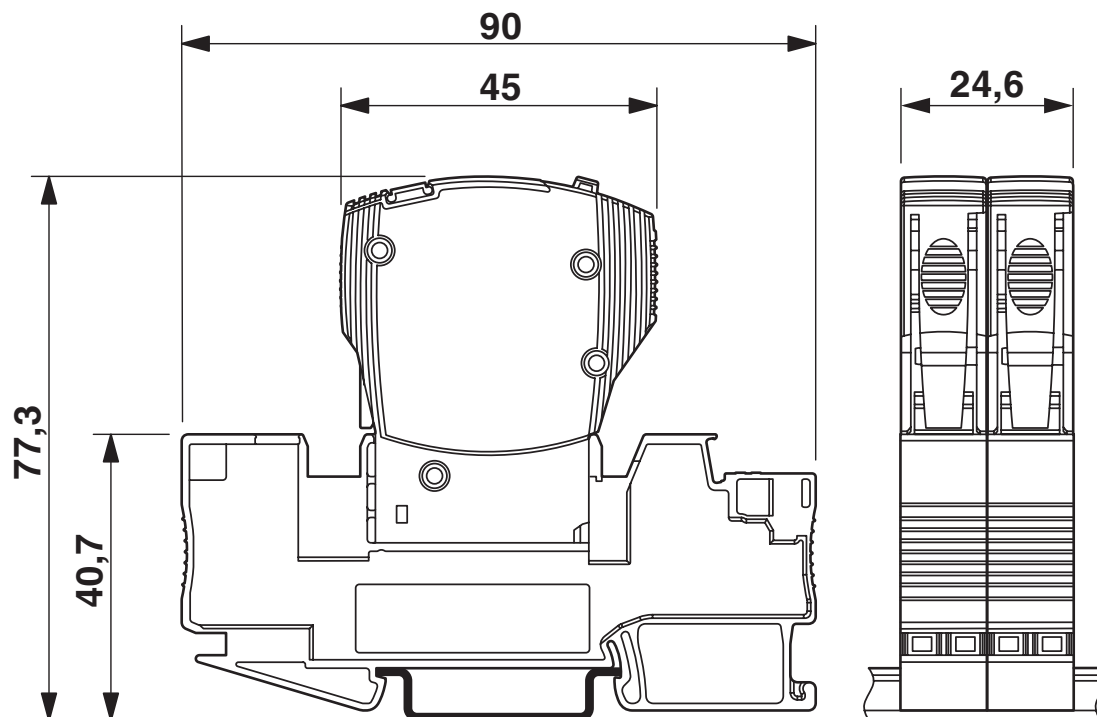
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Drawings

Circuit diagram



Dimensional drawing



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

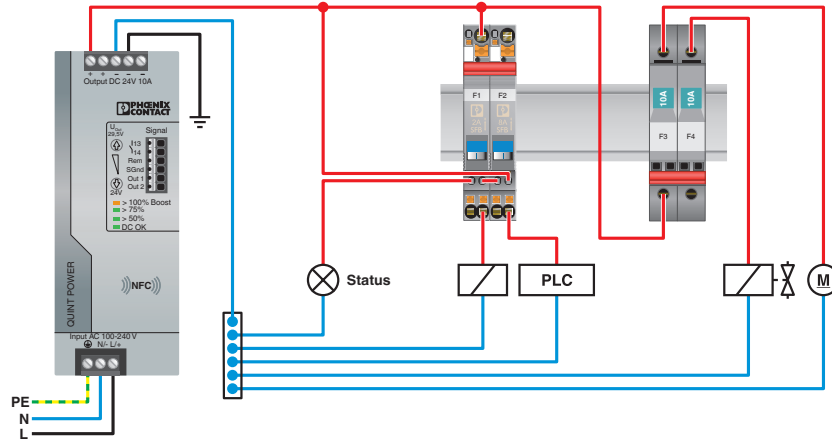
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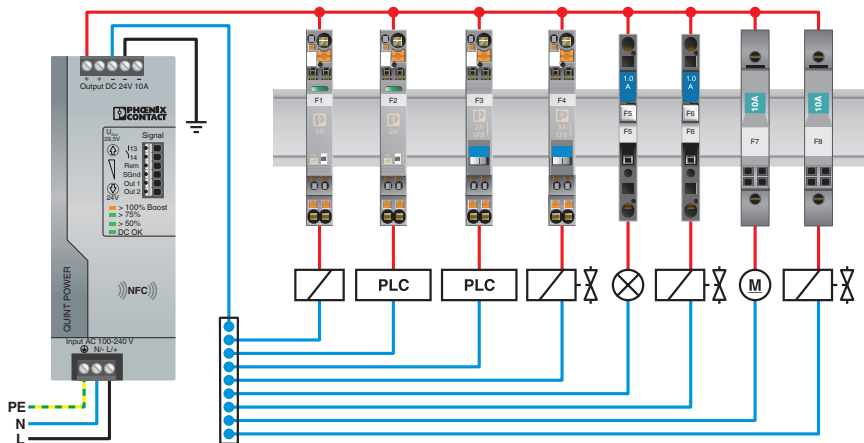
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Application drawing



Application drawing



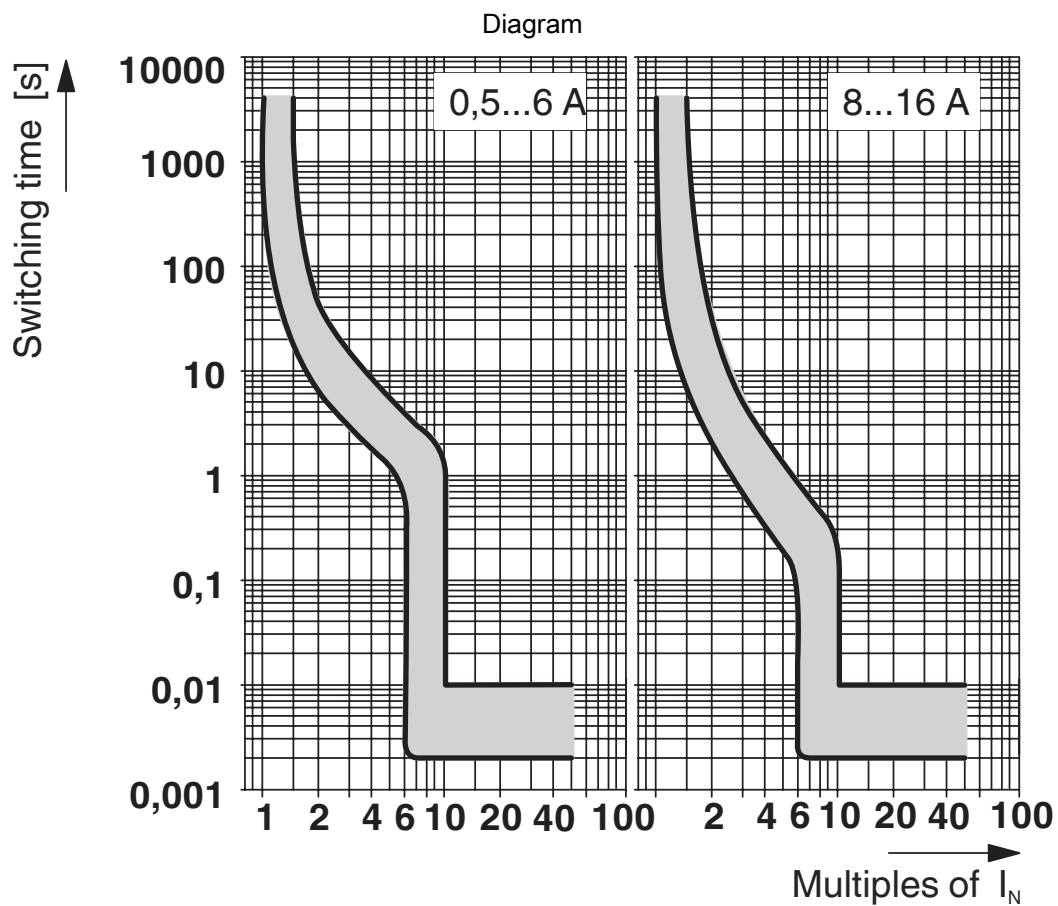
The figure shows the single-position versions

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Trigger characteristic in the DC range

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Approvals

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cUL Recognized
Approval ID: FILE E 140459



UL Recognized
Approval ID: FILE E 140459



EAC
Approval ID: RU C-DE.*09.B.00169



DNV GL
Approval ID: TAE00003C7



VDE Zeichengenehmigung
Approval ID: 40034683



CCC
Approval ID: 2019010307158887



CSA
Approval ID: 2786957



KC
Approval ID: SW05012-15004

UAE-RoHS

Approval ID: 22-09-50937

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Classifications

ECLASS

ECLASS-11.0	27140401
ECLASS-12.0	27140401
ECLASS-13.0	27140401

ETIM

ETIM 9.0	EC003538
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UNSPSC

UNSPSC 21.0	39121400
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com