

# CB TM2 16A SFB P - Thermal-magnetic device circuit breaker



2800878

<https://www.phoenixcontact.com/us/products/2800878>

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

## Product description

Thermal-magnetic device circuit breaker

## Commercial data

Item number	2800878
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL04
Product key	CLA124
GTIN	4046356690331
Weight per piece (including packing)	69.9 g
Weight per piece (excluding packing)	69.9 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 overdimensioned 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 $I_N$	16 A (IEC 60934)
	inductive load according to UL 1077
	16 A DC (low-induction load according to UL 1077)
	16 A DC (low-induction load according to UL 508 - with plug-in base)
	16 A DC
Rated surge voltage	2.5 kV (Increased insulation in actuation area)
Insulation resistance $R_{iso}$	> 100 M $\Omega$ (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 (thermal-magnetic)
Tripping level	Trip-free mechanism (positive)
Device resistance	8 m $\Omega$
Required backup fuse	$\geq 64$ 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 <sub>n</sub> )
	3000 (80 V DC/1 x I <sub>n</sub> )
Fuse	SFB
Power dissipation	5.12 W (in nominal operation per channel)
Voltage drop	0.13 V (at 1 x I <sub>n</sub> )
Contact switching type	2 changeover contacts

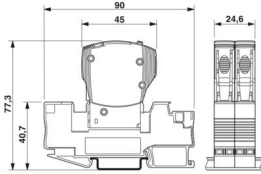
## Auxiliary contact

Minimum operating voltage U <sub>min</sub> DC	10 V
Maximum operating voltage U <sub>max</sub> DC	240 V
Maximum operating voltage U <sub>max</sub> AC	240 V
Minimum operating current I <sub>min</sub>	10 mA
Max. operating current I <sub>max</sub>	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
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## Environmental and real-life conditions

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## Ambient conditions

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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## Drawings

Dimensional drawing



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

Application drawing



The figure shows the single-position versions

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Application drawing



Diagram



Trigger characteristic in the DC range

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Circuit diagram



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## Approvals

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**cUL Recognized**  
Approval ID: FILE E 140459



**UL Recognized**  
Approval ID: FILE E 140459



**DNV GL**  
Approval ID: TAE00003C7



**VDE Zeichengenehmigung**  
Approval ID: 40034683



**CCC**  
Approval ID: 2025010307749779



**CSA**  
Approval ID: 2786957



**KC**  
Approval ID: SW05012-15004

**UAE-RoHS**

Approval ID: 22-09-50938

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## Classifications

### ECLASS

ECLASS-13.0	27140401
ECLASS-15.0	27140401

### ETIM

ETIM 10.0	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
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### 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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### EF3.1 Climate Change

CO2e kg	8.858 kg CO2e
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