

# TTC-6-MOV-D-120AC-PT-I - Surge protection device



1109689

<https://www.phoenixcontact.com/us/products/1109689>

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Medium surge protection with integrated status indicator for one 2-wire floating signal circuit. Can be used in safety-related circuits up to SIL 3.

## Your advantages

- Space-saving and cost-saving with a narrow overall width of just 6 mm
- Continuous monitoring of protective devices, plus mechanical status indicator with optional remote signaling
- Finding the right product for all possible requirements in MCR applications is easy, thanks to the complete range of products with customized features

## Commercial data

Item number	1109689
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL23
Product key	CL2265
GTIN	4063151020170
Weight per piece (including packing)	27.568 g
Weight per piece (excluding packing)	22.648 g
Customs tariff number	85363010
Country of origin	DE

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## Technical data

### Product properties

Product type	Surge protection for MCR technology
Product family	TERMITRAB complete
IEC test classification	C1
	C2
	C3
Type	DIN rail module, one-piece
Wire pairs per module	1

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

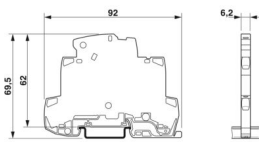
### Electrical properties

Nominal voltage $U_N$	120 V AC
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### Connection data

Connection method	Push-in connection
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12

### Dimensions

Dimensional drawing	
Width	6.2 mm
Height	92 mm
Depth	69.5 mm (incl. DIN rail 7.5 mm)

### Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

### Mechanical properties

#### Mechanical data

Open side panel	Yes
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## Protective circuit

Direction of action	Line-Line
Nominal voltage $U_N$	120 V AC
Maximum continuous operating voltage $U_C$	150 V DC 150 V AC
Rated current	10 A (60 °C)
Operating effective current $I_C$ at $U_C$	$\leq 100 \mu\text{A}$
Protective conductor current $I_{PE}$	$\leq 100 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-line)	2.5 kA
Voltage protection level $U_p$ (line-line)	$\leq 200 \text{ V}$ (C1 - 800 A) $\leq 500 \text{ V}$ (C2 - 5 kV) $\leq 380 \text{ V}$ (C3 - 25 A) $\leq 380 \text{ V}$ (C3 - 35 A)
Response time $t_A$ (line-line)	$\leq 25 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ( $\leq 300 \text{ kHz} / 150 \Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 150 $\Omega$ system	typ. 1 MHz
Capacity (Core-Core)	5 nF
Resistance per path	$\leq 100 \text{ m}\Omega$
Surge protection fault message	optical
Impulse durability (line-line)	C1 - 800 A C2 - 2,5 kA C3 - 35 A

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20 (with end cover)
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	$\leq 2000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %

## Standards and regulations

Standards/specifications	IEC 61643-21
Note	2000 + corrigendum 2001 + A1:2008, modified + A2:2012

### EN 61643-21

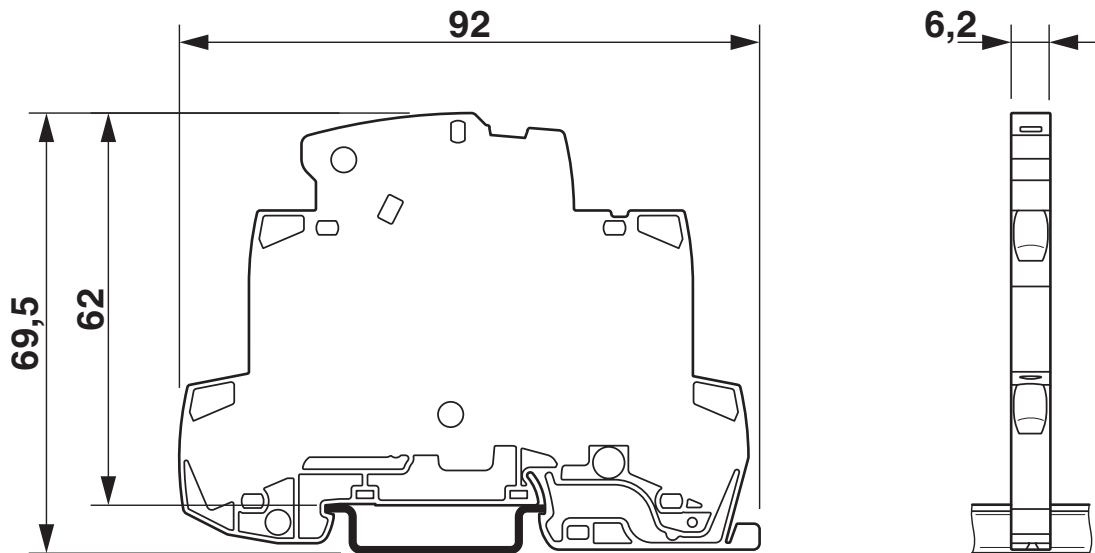
Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

## Mounting

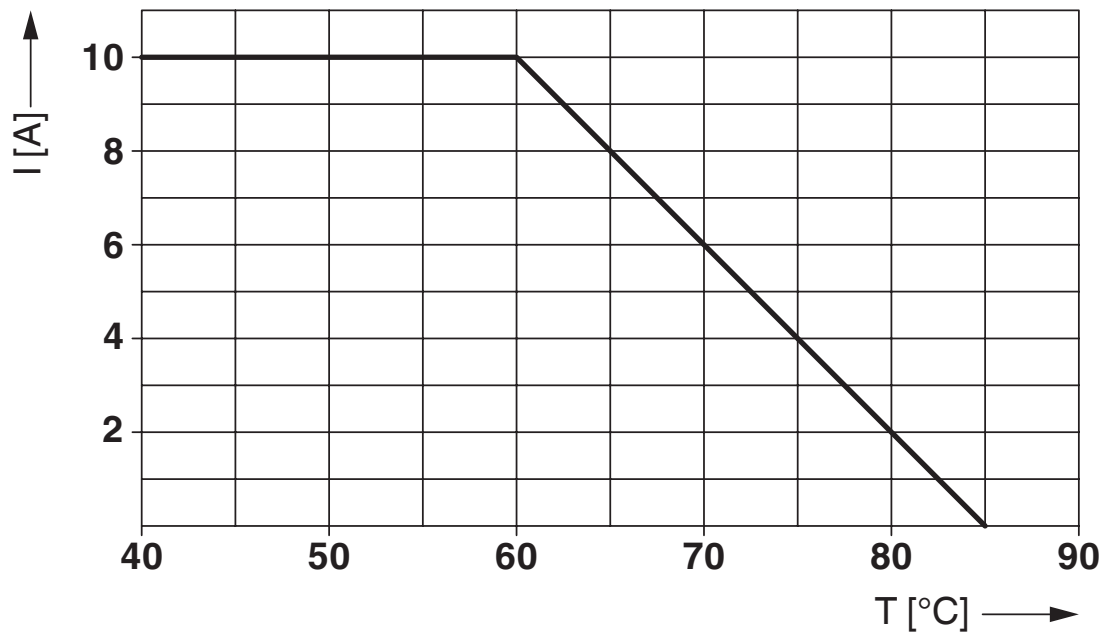
Mounting type	DIN rail: 35 mm
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Drawings

Dimensional drawing



Diagram



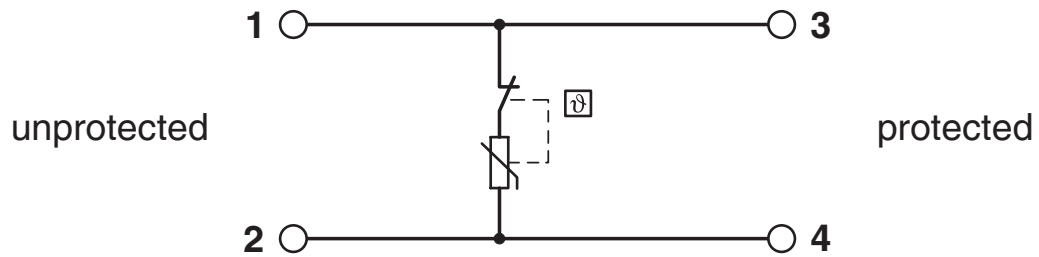
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Circuit diagram




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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1109689>

 **CSA**  
Approval ID: 70136717

 **DNV GL**  
Approval ID: TAE000027G

 **UL Listed**  
Approval ID: FILE E 138168

 **CSAus**  
Approval ID: 70136717

**UAE-RoHS**  
Approval ID: 22-06-16192

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## Classifications

### ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

### ETIM

ETIM 10.0	EC001466
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

### 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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