

PT 2+1-S-48DC/FM - Type 3 surge protection device



2817958

<https://www.phoenixcontact.com/in/products/2817958>

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Rail-mountable surge arrester as device protection for terminal equipment, fault signal in the plug and signaling contact in the base element, 2-section, pluggable. Design: 48 V DC

Your advantages

- Easy testing and documentation with CHECKMASTER 2 with pluggable protective modules
- Maximum ease of maintenance, thanks to the 2-piece design
- Easy selection for all possible demands in MCR applications with a complete product portfolio
- The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- Permanent protective device monitoring with optical signaling via LED

Commercial data

Item number	2817958
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL1
Product key	CL1411
Catalog page	Page 84 (C-4-2019)
GTIN	4017918574987
Weight per piece (including packing)	67.93 g
Weight per piece (excluding packing)	63.465 g
Customs tariff number	85363090
Country of origin	DE

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Technical data

Product properties

Product type	Device protection
IEC power supply system	DC
Type	DIN rail module, two-section, divisible
Surge protection fault message	Optical, remote indicator contact

Insulation characteristics

Overvoltage category	III
Pollution degree	2
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.00
IEC test classification	III T3
EN type	T3
Number of ports	One

Electrical properties

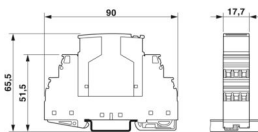
Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	N/C contact
Operating voltage	7 V DC ... 70 V DC (open collector)
Operating current	5 mA DC ... 15 mA (open collector)

Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.8 Nm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section rigid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Dimensions

Dimensional drawing	
Width	17.7 mm
Height	90 mm
Depth	65.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

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Material specifications

Color	black (RAL 9005)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6
Housing material	PA 6.6

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
	(L+) - (L-)
	(L+/L-) - PE
Direction of action	1L-N & N-PE
Nominal voltage U_N	48 V DC
Maximum continuous voltage U_C	60 V DC
Rated load current I_L	26 A (30 °C)
Residual current I_{PE}	$\leq 10 \mu A$
Nominal discharge current I_n (8/20) μs	500 A
Combination wave U_{OC}	1 kV (2 Ω)
	1 kV (2 Ω)
Voltage protection level U_p	$\leq 120 V$
Response time t_A (L-N)	$\leq 1 ns$
Response time t_A (L-PE)	$\leq 1 ns$
Short-circuit current rating I_{SCCR}	200 A (without backup fuse for U_C)
Max. backup fuse with branch wiring	50 A (gG)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 2000 m$ (amsl)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1 / DIN VDE 0675-6 / IEC 61643-1
Standards/specifications	EN 61643-11
Note	2012
Standards/specifications	IEC 61643-11
Note	2011

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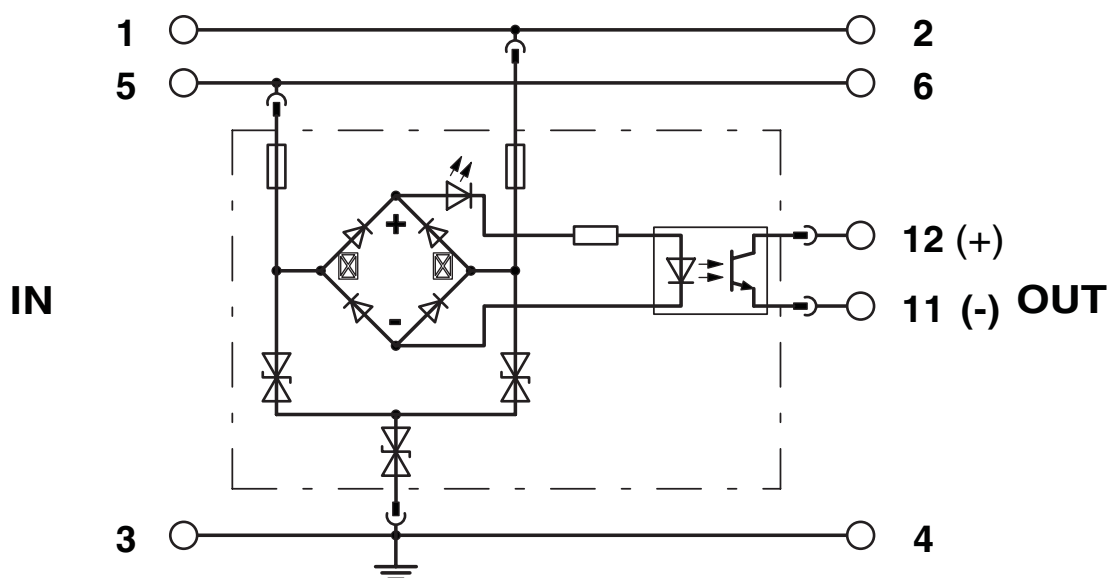
<https://www.phoenixcontact.com/in/products/2817958>

Mounting

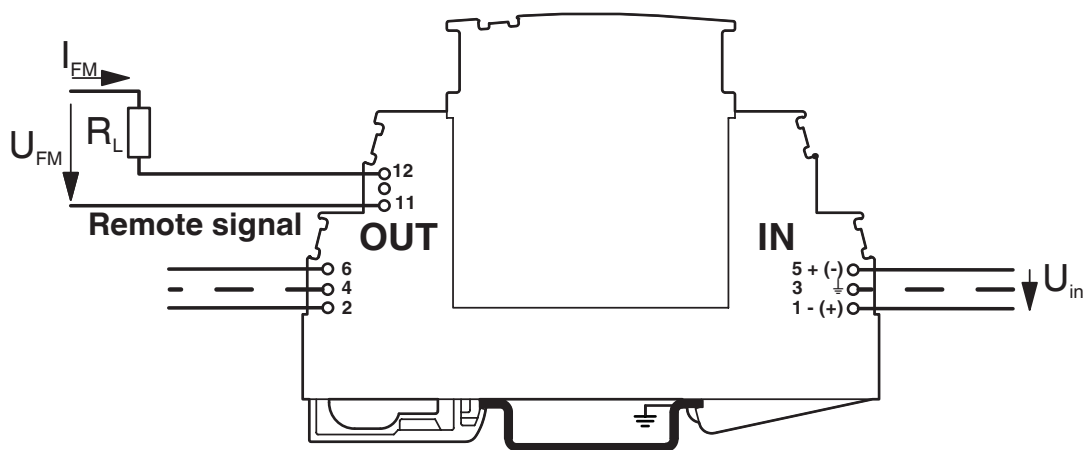
Mounting type	DIN rail: 35 mm
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Drawings

Circuit diagram



Connection diagram



The voltage of the cable to be protected (U_{in}) determines the current driven by the transistor output (I_{FM}).

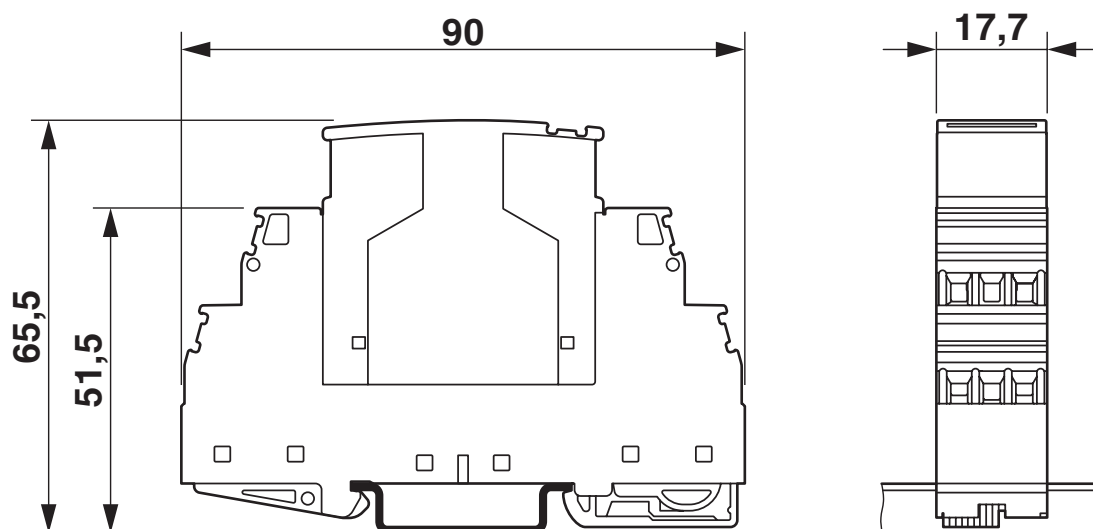
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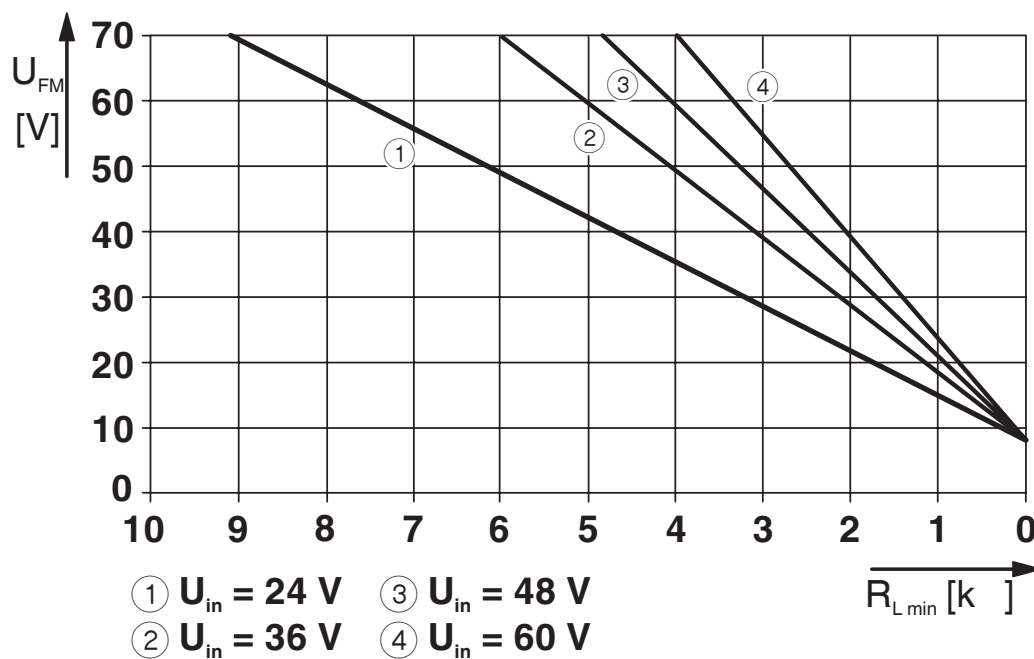
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Dimensional drawing



Diagram



The figure shows the minimum load resistance (R_L) at the transistor output of the remote indication contact depending on the specified input voltage (U_{in}).

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Approvals

📄 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/2817958>



EAC

Approval ID: EAC-Zulassung



EAC

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

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Classifications

ECLASS

ECLASS-11.0	27130806
ECLASS-13.0	27171203

ETIM

ETIM 9.0	EC000942
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
SCIP	bba789db-0658-4177-889f-1efe413733db

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Accessories

ZB 5,LGS:FORTL.ZAHLEN - Zack marker strip

1050017

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Zack marker strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: latching, for terminal block width: 5.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 5.15 mm

ZB 5 :UNBEDRUCKT - Zack marker strip

1050004

<https://www.phoenixcontact.com/in/products/1050004>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 5.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 5.1 mm

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ZB 5,LGS:L1-N,PE - Zack marker strip

1050415

<https://www.phoenixcontact.com/in/products/1050415>

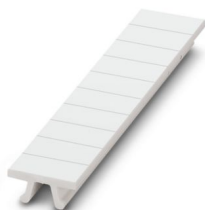


Zack marker strip, Strip, white, labeled, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: latching, for terminal block width: 5.2 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 5.15 mm

ZB 5,8:UNBEDRUCKT - Zack marker strip

2715209

<https://www.phoenixcontact.com/in/products/2715209>



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 5.8 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 5.75 mm

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ZBF 5:UNBEDRUCKT - Zack Marker strip, flat

0808642

<https://www.phoenixcontact.com/in/products/0808642>

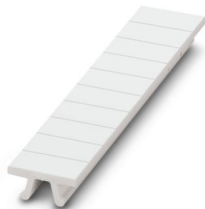


Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 5 mm, Number of individual labels: 10, text field height: 5.15 mm, text field width: 5.15 mm

ZB 5,8 CUS - Zack marker strip

0824965

<https://www.phoenixcontact.com/in/products/0824965>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.8 mm, Number of individual labels: 10, text field height: 10.5 mm, text field width: 5.75 mm

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SSA 3-6 - Shield connection

2839295

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Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable:
200 mm, 1 mm², color: black



SSA 5-10 - Shield connection

2839512

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Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable:
200 mm, 1 mm², color: black



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X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/in/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/in/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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SZS 0,6X3,5 VDE - Screwdriver

1212602

<https://www.phoenixcontact.com/in/products/1212602>



Screwdriver, slot-headed, VDE insulated, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

PT 2+1-S-48DC-ST - Type 3 surge protection plug

2839648

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Protective plug PT with device surge protection for power supply units, visual error display. Nominal voltage: 48 V AC

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