

Surge protection device - TT-2/2-M-24DC - 2920722

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Modular terminal block with two-stage surge protection for two signal wires with common reference potential, disconnect knife on both signal paths, separate ground connection, nominal voltage: 24 V DC

Why buy this product

- Versions with and without disconnect knife
- Protection of two signal wires with common reference potential
- Multi-stage modular terminal blocks with screw connection technology
- Disconnection of signal circuits by disconnect knife



Key commercial data

Packing unit	14 pc
GTIN	 4 046356 182850
Weight per Piece (excluding packing)	32.88 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	92 mm
Width	6.2 mm
Depth	66.45 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Degree of protection	IP20

General

Housing material	PA 6.6
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Technical data

General

Inflammability class according to UL 94	V2
Color	black
Mounting type	DIN rail: 35 mm
Type	Double-level terminal block with PE foot – separate PE connection
Number of positions	2
Direction of action	Line-Earth Ground

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC
	17 V AC
Maximum continuous operating voltage U_C	30 V DC
	21 V AC
Maximum continuous voltage U_C (wire-ground)	30 V DC
	21 V AC
Nominal current I_N	300 mA (40°C)
Operating effective current I_C at U_C	$\leq 5 \mu\text{A}$ (per path)
Standby power consumption P_C	$\leq 1.02 \text{ VA}$
Residual current I_{PE}	$\leq 10 \mu\text{A}$ (per path)
Nominal discharge current I_n (8/20) μs (Core-Core)	5 kA
Nominal discharge current I_n (8/20) μs (Core-Earth)	5 kA
Total surge current (8/20) μs	10 kA
Total surge current (10/350) μs	1 kA
Max. discharge current I_{max} (8/20) μs maximum (Core-Earth)	5 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	30 A
Impulse discharge current (10/350) μs , peak value I_{imp}	500 A (per path)
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 45 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 45 \text{ V}$
Residual voltage at I_n , (conductor-ground)	$\leq 45 \text{ V}$
Residual voltage with I_{an} (10/1000) μs (conductor-ground)	$\leq 50 \text{ V}$
Voltage protection level U_p (core-ground)	$\leq 85 \text{ V}$ (C2 - 10 kV/5 kA)
	$\leq 55 \text{ V}$ (C1 (500 V/250 A))
Response time t_A (Core-Earth)	$\leq 1 \text{ ns}$
Input attenuation aE, asym.	0.5 dB ($\leq 1.5 \text{ MHz} / 50 \Omega$)
	0.2 dB ($\leq 400 \text{ kHz} / 150 \Omega$)
Cut-off frequency f_g (3 dB), asym. (PE) in 50 Ohm system	typ. 6 MHz
Cut-off frequency f_g (3 dB), asym. (PE) in 150 Ohm system	typ. 2.5 MHz

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Protective circuit

Capacity (Core-Earth)	typ. 2.5 nF
Resistance in series	4.7 Ω ±20 %
	4.7 Ω
Max. required back-up fuse	315 mA (e.g. T in acc. with IEC 127-2/III)
Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	D1 (500 A)
Alternating current carrying capacity (conductor-ground)	5 A - 1 s

Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max.	14

Standards and Regulations

Standards/regulations	IEC 61643-21
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Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

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Classifications

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

EAC

Ex Approvals

Approvals submitted

Approval details

EAC

Accessories

Accessories

End cover

End cover - TT-D-2-PE-M-BK - 2920654



End cover for TERMITRAB TT-2-PE-M-... and TT-2/2-M-...

Labeled terminal marker

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Accessories

Zack Marker strip, flat - ZBF 6,LGS:FORTL.ZAHLEN - 0808749



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into flat marker groove, for terminal block width: 6.2 mm, Lettering field: 5.15 x 6.15 mm

Marker for terminal blocks - ZB 6,LGS:U-N - 1051430



Marker for terminal blocks, Strip, white, labeled, can be labeled with: Plotter, Printed horizontally: U, V, W, N, GND, U, V, W, N, GND, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016



Zack marker strip, Strip, white, labeled, can be labeled with: Plotter, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

Marker pen

Marker pen - B-STIFT - 1051993



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

Terminal marking

Zack Marker strip, flat - ZBF 6:UNBEDRUCKT - 0808710



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 6.2 mm, Lettering field: 5.15 x 6.15 mm

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Accessories

Zack Marker strip, flat - ZBF 6/WH-100:UNBEDRUCKT - 0808736



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 6.2 mm, Lettering field: 5.15 x 6.15 mm

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

Additional products

End cover - TT-D-2-PE-M-BK - 2920654



End cover for TERMITRAB TT-2-PE-M-... and TT-2/2-M-...

Shield connection - SSA 3-6 - 2839295



shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black

Shield connection - SSA 5-10 - 2839512

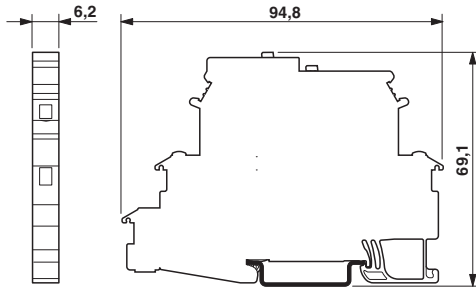


Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

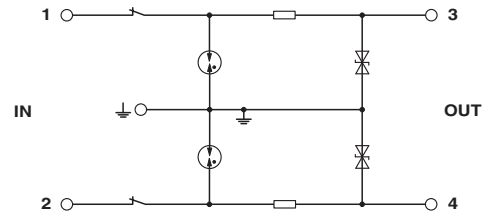
Drawings

Surge protection device - TT-2/2-M-24DC - 2920722

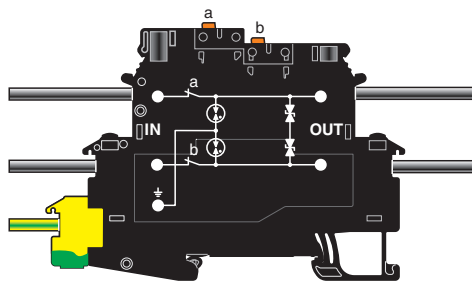
Dimensioned drawing



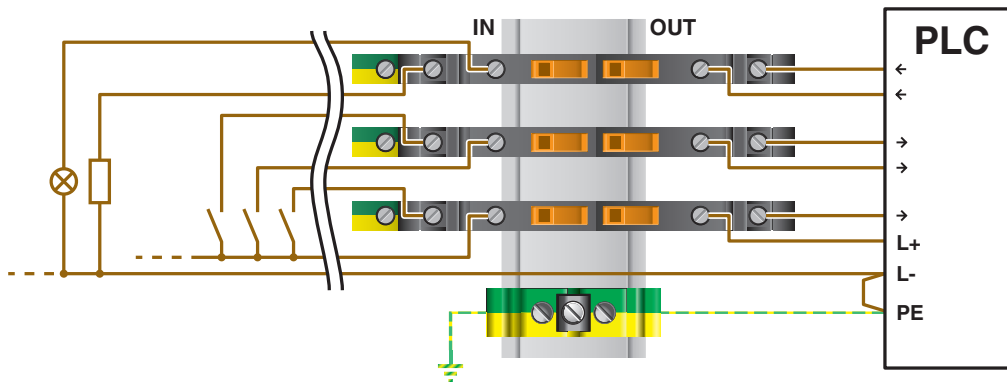
Circuit diagram



Schematic diagram



Application drawing



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Application drawing

