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Surge protection device - TT-2-PE-M-24DC - 2920641

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Modular terminal block with two-stage surge protection for one operated floating double conductor, disconnect knife on both signal paths, separate ground connection, nominal voltage: 24 V DC.

Product Features

☑ Versions with and without disconnect knife

☑ Protection of a floating double wire

☑ 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

SIL evaluated **IEC 61508**

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	34.28 GRM
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

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Technical data

General

Housing material	PA 6.6
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-Line & 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 UC (wire-wire)	30 V DC
	21 V AC
Nominal current I_N	300 mA (40°C)
Operating effective current I_C at U_C	≤ 5 µA
Residual current I_{PE}	≤ 2 µA
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-Core)	5 kA
Max. discharge current I_{max} (8/20) µs maximum (Core-Earth)	5 kA (per path)
Nominal pulse current Ian (10/1000) µs (Core-Core)	30 A
Nominal pulse current Ian (10/1000) µs (Core-Earth)	100 A (per path)
Impulse discharge current (10/350)#µs, peak value I_{imp}	500 A (per path)
Output voltage limitation at 1 kV/µs (Core-Core) spike	≤ 45 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 650 V
Output voltage limitation at 1 kV/µs (Core-Core) static	≤ 45 V
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 650 V
Residual voltage at I_n, (conductor-conductor)	≤ 45 V
Residual voltage with Ian (10/1000)µs (conductor-conductor)	≤ 50 V

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Protective circuit

Voltage protection level U_P (Core-Core)	≤ 55 V (C2 (10 kV/5 kA))
	≤ 53 V (C1 (500 V/250 A))
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	0.6 dB (≤ 500 kHz / 50 Ω)
	0.2 dB (≤ 200 kHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 2 MHz
Capacity (Core-Core)	typ. 2.5 nF
Resistance in series	3.3 Ω 20 %
	3.3 Ω
Max. required back-up fuse	315 mA (e.g. T in acc. with IEC 127-2/III)
Surge current resistance (conductor-conductor)	C2 - 10 kV/5 kA
Surge current resistance (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 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14

Standards and Regulations

Standards/regulations	IEC 61643-21

Classifications

eCl@ss

eCl@ss 4.0	27140201

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Classifications

eCl@ss

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

UNSPSC

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

Approvals

Approvals

Approvals

GOST

Ex Approvals

Approvals submitted

Approval details

GOST

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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

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

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Accessories

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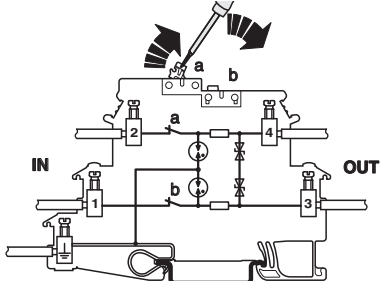
Zack Marker strip, flat - ZBF 6:UNBEDRUCKT - 0808710

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

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
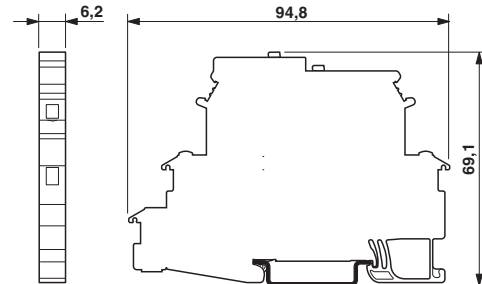
Drawings

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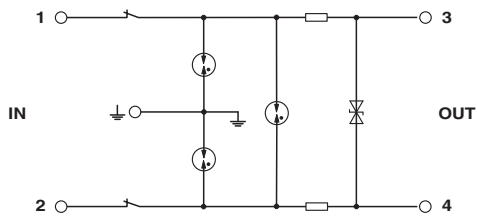# Surge protection device - TT-2-PE-M-24DC - 2920641
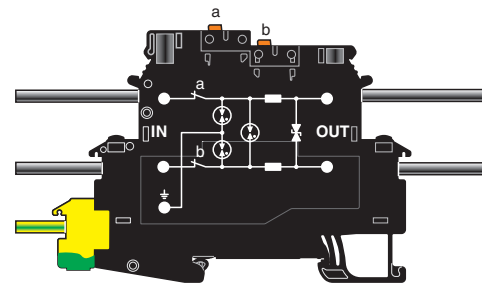
Connection diagram

Dimensioned drawing

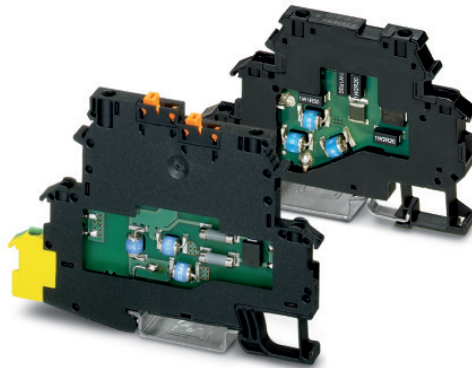Circuit diagram

Schematic diagram

Catalog photo

Figure may contain other products.

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Application drawing