

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	1 STK
GTIN	 4 046356 182850
GTIN	4046356182850
Weight per Piece (excluding packing)	32.850 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	94.8 mm
Width	6.2 mm
Depth	69.1 mm

Ambient conditions

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP20 (with end cover)

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
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
Maximum continuous voltage U_C	30 V DC
	21 V AC
Rated current	300 mA (40 °C)
Operating effective current I_C at U_C	≤ 5 μA
Residual current I_{PE}	≤ 10 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
Pulse discharge current I_{imp} (10/350) μs (core-ground)	500 A
Total discharge current I_{total} (8/20) μs	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	30 A
Output voltage limitation at 1 kV/μs (core-earth) spike	≤ 45 V
Output voltage limitation at 1 kV/μs (core-earth) static	≤ 45 V
Residual voltage at I_n (conductor-ground)	≤ 45 V
Residual voltage with I_{an} (10/1000) μs (conductor-ground)	≤ 50 V
Voltage protection level U_p (core-ground)	≤ 55 V (C1 - 500 V / 250 A)
	≤ 85 V (C2 - 10 kV / 5 kA)
Response time t_A (core-earth)	≤ 1 ns
Input attenuation aE, asym.	typ. 0.5 dB (≤ 1.5 MHz / 50 Ω)
	typ. 0.2 dB (≤ 400 kHz / 150 Ω)

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Protective circuit

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
Capacity (core-earth)	< 2.5 nF
Resistance in series	4.7 Ω \pm 20 %
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
Impulse durability (conductor-ground)	C1 - 500 V / 250 A
	C2 - 10 kV/5 kA
	D1 - 500 A

Connection data

Connection method	Screw connection
Connection method IN	Screw terminal blocks
Connection method OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.6 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 14

Standards and Regulations

Standards/specifications	EN 61643-21 2001
	IEC 61643-21 2000

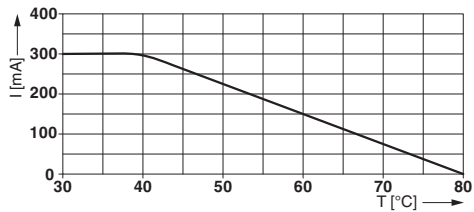
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

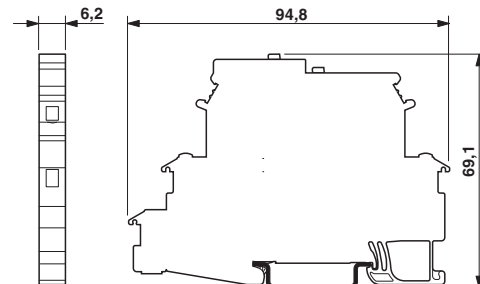
Drawings

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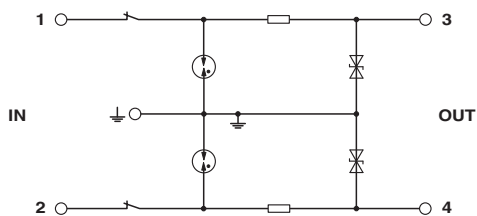
Diagram



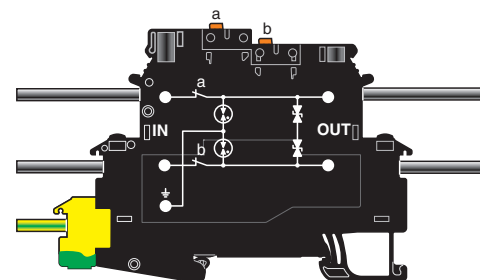
Dimensional drawing



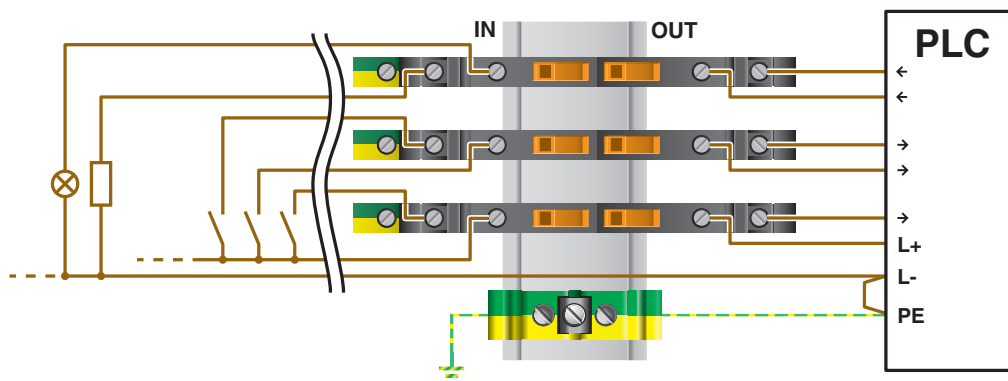
Circuit diagram



Schematic diagram

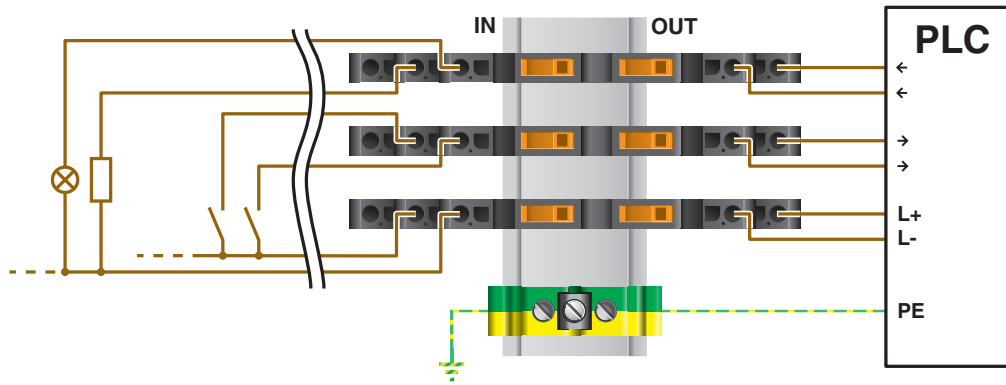


Application drawing



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Application drawing



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
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943
ETIM 6.0	EC000943

UNSPSC

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

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Approvals

Approvals

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EAC / EAC / UL Listed

Ex Approvals

Approval details

EAC		EAC-Zulassung
EAC		RU C- DE.A*30.B01561
UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 138168

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 size: 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: CMS-P1-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 size: 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: CMS-P1-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 size: 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: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 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: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 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 connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

Shield connection - SSA 5-10 - 2839512



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

