

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

Your advantages

- ✓ 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
GTIN	4046356182850

Technical data

Dimensions

Height	94.8 mm
Width	6.2 mm
Depth	69.1 mm

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

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Technical data

General

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	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 10 \mu A$
Nominal discharge current I_n (8/20) μs (line-line)	5 kA
Nominal discharge current I_n (8/20) μs (line-earth)	5 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	500 A
Total discharge current I_{total} (8/20) μs	10 kA
Nominal pulse current I_{an} (10/1000) μs (line-earth)	30 A
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 45 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 45 V$
Residual voltage at I_n (line-earth)	$\leq 45 V$
Residual voltage with I_{an} (10/1000) μs (line-earth)	$\leq 50 V$
Voltage protection level U_p (line-earth)	$\leq 55 V$ (C1 - 500 V / 250 A)
	$\leq 85 V$ (C2 - 10 kV / 5 kA)
Response time t_A (line-earth)	$\leq 1 ns$
Input attenuation aE, asym.	typ. 0.5 dB ($\leq 1.5 MHz / 50 \Omega$)
	typ. 0.2 dB ($\leq 400 kHz / 150 \Omega$)
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
Capacity (line-earth)	$< 2.5 nF$
Resistance per path	$4.7 \Omega \pm 20 \%$
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
Impulse durability (line-earth)	C1 - 500 V / 250 A
	C2 - 10 kV / 5 kA
	D1 - 500 A

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Technical data

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

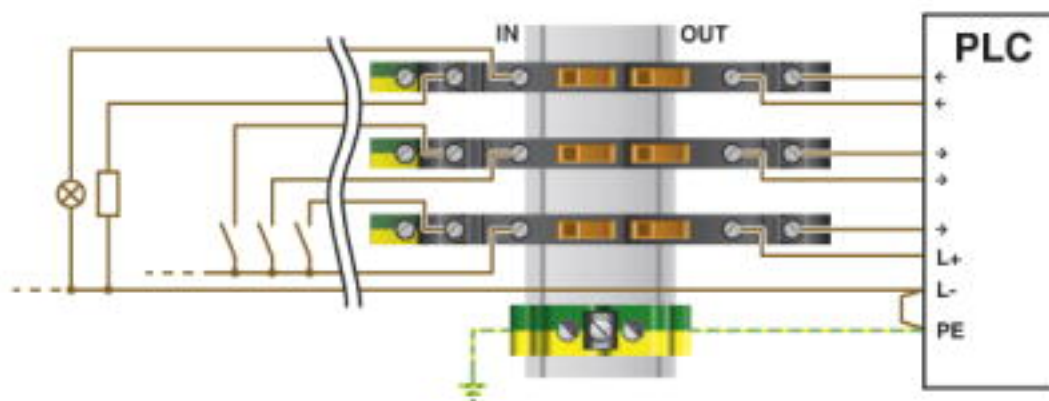
Standards/specifications	EN 61643-21 2001
	IEC 61643-21 2000

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

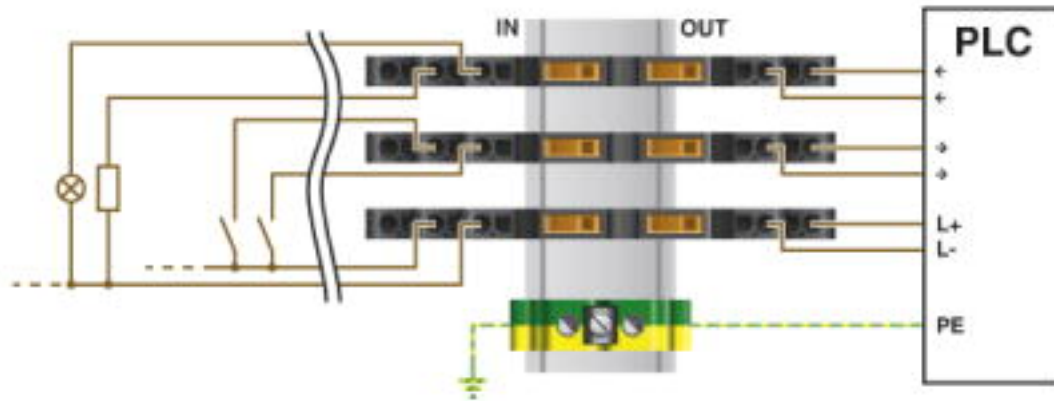
Drawings

Application drawing

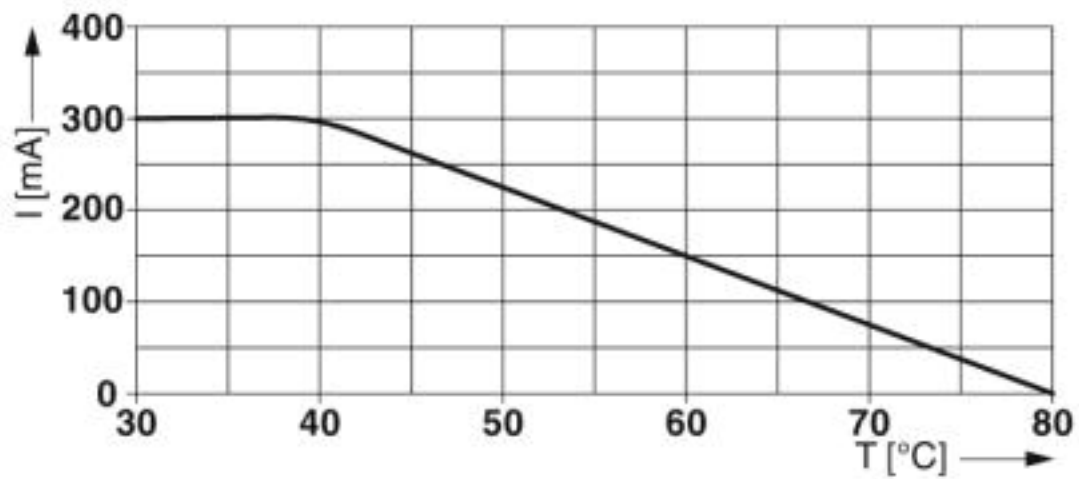


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Application drawing

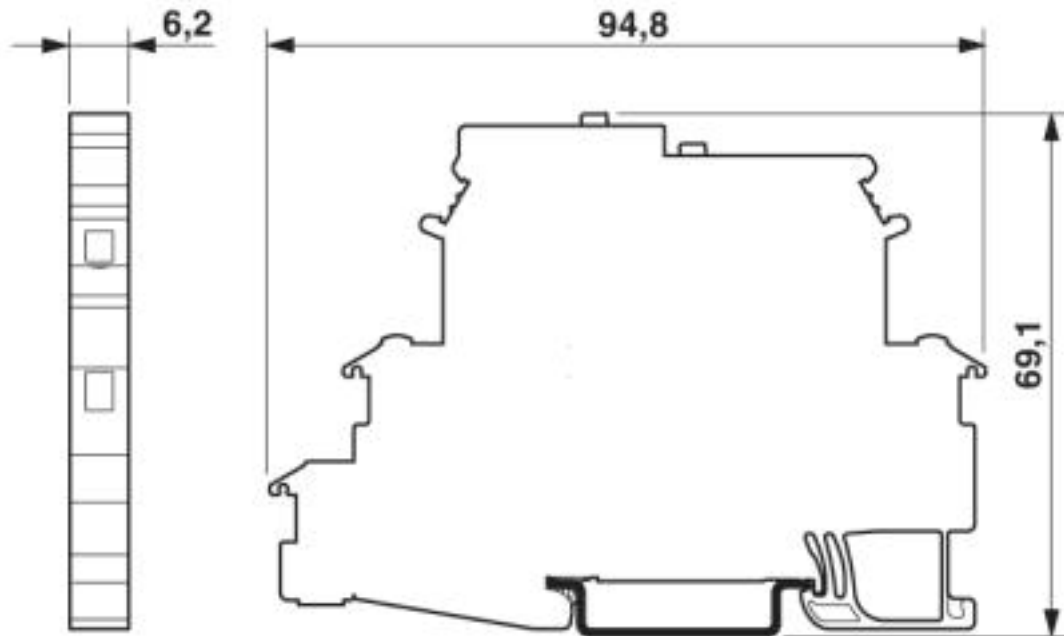


Diagram

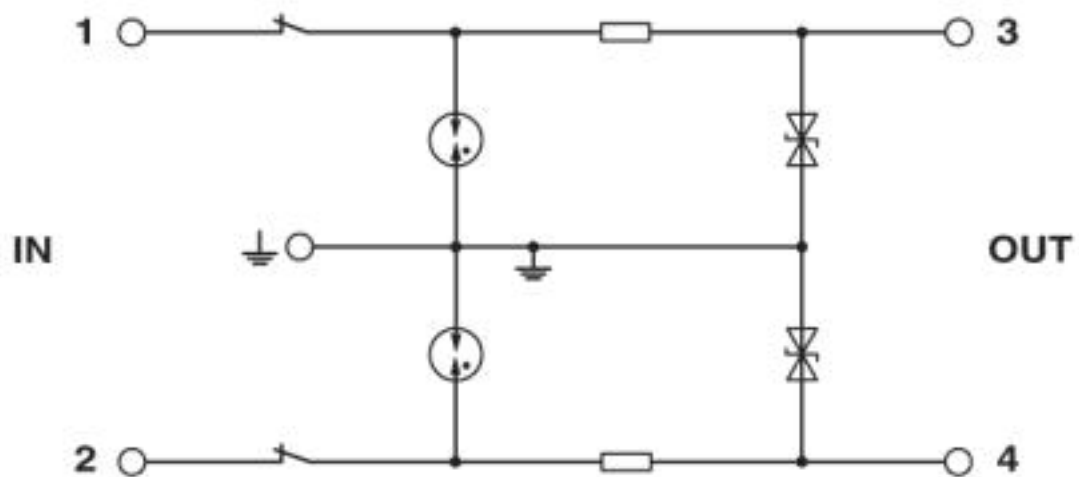


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Dimensional drawing

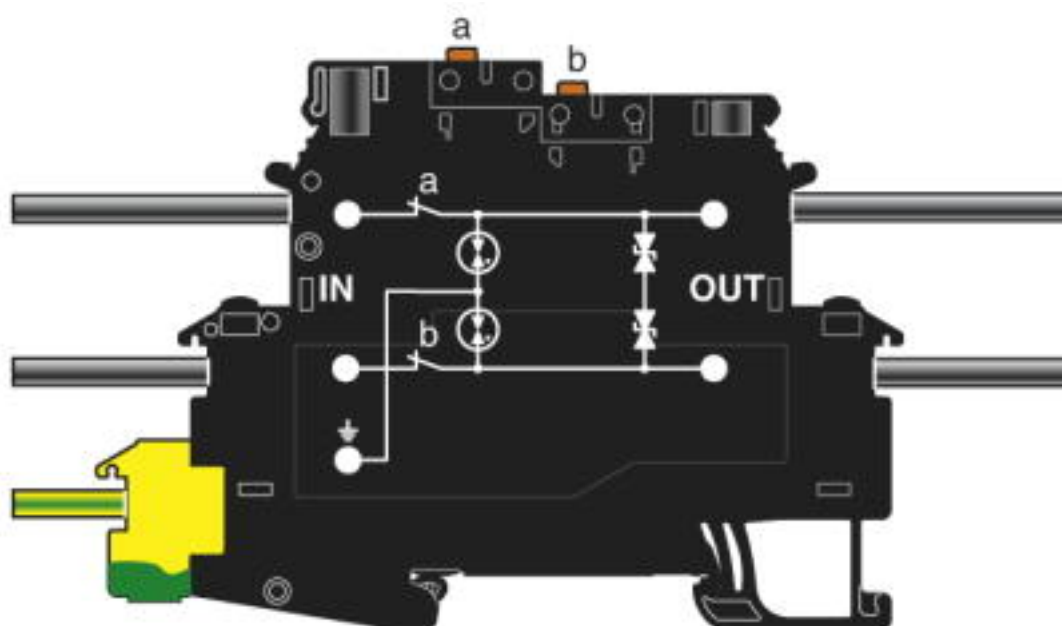


Circuit diagram



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Schematic diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27130807
eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
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
ETIM 7.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610

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Classifications

UNSPSC

UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

Approvals

Approvals

Approvals

UL Listed / EAC / EAC

Ex Approvals

Approval details

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

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Accessories

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 size: 5.15 x 6.15 mm, Number of individual labels: 10

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, Number of individual labels: 10

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, Number of individual labels: 10

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: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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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: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

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

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