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Surge protection device - TT-2-PE/S1-24DC - 2839538

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Double-level modular terminal block with two-stage surge protection for one two-wire impedance-sensitive signal circuit, separate ground connection, nominal voltage: 24 V DC.

Why buy this product

- Versions with and without disconnect knife
- Protection of a floating double wire in which the introduction of additional resistors for decoupling the protection stages leads to problems
- Multi-stage modular terminal blocks with screw connection technology
- Disconnection of signal circuits by disconnect knife



Key commercial data

Packing unit	1
Minimum order quantity	10
Catalog page	Page 107 (TT-2011)
GTIN	 4 017918 183189
Custom tariff number	85363010
Country of origin	GERMANY

Technical data

General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	IEC 60664-1
Total surge current (8/20) μ s	10 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Mounting type	DIN rail: 35 mm
Design	Double-level terminal block with PE foot – separate PE connection
Number of positions	2
Degree of protection	IP20
Direction of action	Line-Line & Line-Earth Ground

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Technical data

General

Width	6.2 mm
Height	79.6 mm
Depth	54.6 mm

Protective circuit

IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
Nominal voltage UN	24 V DC
Maximum continuous operating voltage UC	30 V DC
Maximum continuous operating voltage UC	21 V AC
Maximum continuous voltage UC (wire-wire)	30 V DC
Maximum continuous voltage UC (wire-wire)	21 V AC
Nominal current IN	10 A (40°C)
Operating effective current IC at UC	≤ 1 μA
Ground conductor current IPE	≤ 1 μA
Nominal discharge surge current In (8/20) μs (Core-Core)	300 A
Nominal discharge surge current In (8/20) μs (Core-Earth)	5 kA
Total surge current (8/20) μs	10 kA
Nominal pulse current Ian (10/1000) μs (Core-Core)	60 A
Nominal pulse current Ian (10/1000) μs (Core-Earth)	100 A
Lightning test current (10/350) μs, peak value limp	500 A
Output voltage limitation at 1 kV/μs (Core-Core) spike	≤ 45 V
Output voltage limitation at 1 kV/μs (Core-Earth) spike	≤ 700 V
Protection level UP (Core-Core)	≤ 50 V (C1 - 500 V / 250 A)
Protection level UP (Core-Core)	≤ 45 V (C3 - 10 A)
Protection level UP (Core-Core)	≤ 50 V (C3 - 25 A)
Protection level UP (Core-Earth)	≤ 900 V (C2 - 10 kV / 5 kA)
Protection level UP (Core-Earth)	≤ 650 V (C1 - 1 kV/500 A)
Protection level UP (Core-Earth)	≤ 850 V (C3 - 25 A)
Protection level UP (Core-Earth)	≤ 850 V (D1 - 500 A)
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	Typ. 0 dB (≤ 1 MHz / 50 Ω)
Input attenuation aE, sym.	Typ. 0 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. 2.2 MHz
Capacity (Core-Core)	4 nF
Max. required back-up fuse	10 A (T/IEC 60127-2/3)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (500 V / 250 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 (1 kV / 500 A)

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Protective circuit

Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (500 A)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Core)	1A - 1s
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	1 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.	4 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14

Connection, protective circuit

Standards/regulations	IEC 61643-21
Standards/regulations	EN 61643-21

Classifications

eclass

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

etim

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	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

Approvals

Approvals

Approvals

UL Recognized / GOST / GL / UL Listed

Ex Approvals

Approvals submitted

Approval details



Accessories

Accessories

Assembly

End cover - D-DEK 1,5 BK - 2838995



Cover for setting the end of a TERMITRAB TT-2-PE... and TT-2/2 row of terminal blocks, color: black

Surge protection device - TT-2-PE/S1-24DC - 2839538

Accessories

Marking

Marker pen - B-STIFT - 1051993



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

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, 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

Additional products

End cover - D-DEK 1,5 BK - 2838995



Cover for setting the end of a TERMITRAB TT-2-PE... and TT-2/2 row of terminal blocks, color: black

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Accessories

Shield connection - SSA 3-6 - 2839295



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

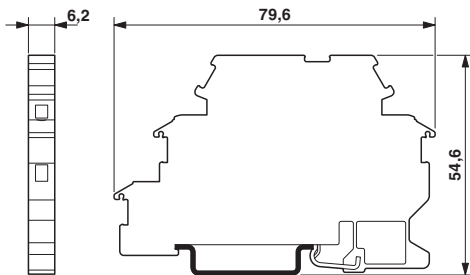
Shield connection - SSA 5-10 - 2839512



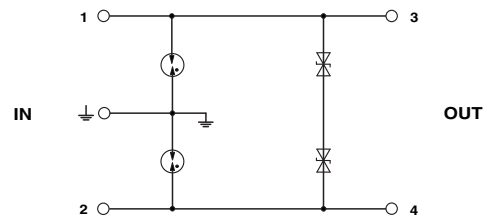
Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

Drawings

Dimensioned drawing



Circuit diagram



Schematic diagram

