

## Surge protection device - TT-ST-2PE-24DC - 2858878

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Spring cage modular terminal block with integrated surge protection, for assembly on NS 35/7.5, voltage  $U_{N}$  24 V DC, terminal width: 6.2 mm, cover width: 2.2 mm

### Why buy this product

- ✔ Multi-stage modular terminal blocks with spring-cage connection
- ✔ Disconnection of signal circuits by disconnect knife



### Key commercial data

Packing unit	1
Minimum order quantity	1
Catalog page	Page 108 (TT-2011)
GTIN	 4 017918 939120
Custom tariff number	85363030
Country of origin	GERMANY

### Technical data

#### General

Housing material	PA 6.6
Inflammability class according to UL 94	V2
Color	black
Standards for air and creepage distances	EN 60664-1
Standards for air and creepage distances	IEC 60664-1
Surge voltage category	III
Pollution degree	2
Total surge current (8/20) $\mu$ s	10 kA
Total surge current (10/350) $\mu$ s	2 kA
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	DIN rail: 35 mm
Design	Double-level terminal block
Number of positions	2
Degree of protection	IP20

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## Technical data

### General

Direction of action	Line-Line & Line-Earth Ground
Width	6.2 mm
Height	100 mm
Depth	63.5 mm

### Protective circuit

IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
VDE requirement class	C1
VDE requirement class	C2
VDE requirement class	C3
VDE requirement class	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	350 mA (45°C)
Operating effective current IC at UC	≤ 10 μA
Ground conductor current IPE	≤ 2 μA
Nominal discharge surge current In (8/20) μs (Core-Core)	5 kA
Nominal discharge surge current In (8/20) μs (Core-Earth)	5 kA
Total surge current (8/20) μs	10 kA
Max. discharge surge current I <sub>max</sub> (8/20) μs maximum (Core-Core)	5 kA
Max. discharge surge current I <sub>max</sub> (8/20) μs maximum (Core-Earth)	5 kA
Nominal pulse current I <sub>an</sub> (10/1000) μs (Core-Core)	100 A
Nominal pulse current I <sub>an</sub> (10/1000) μs (Core-Earth)	200 A (in total)
Lightning test current (10/350) μs, peak value I <sub>imp</sub>	1 kA (per path)
Output voltage limitation at 1 kV/μs (Core-Core) spike	≤ 40 V
Output voltage limitation at 1 kV/μs (Core-Earth) spike	≤ 600 V
Output voltage limitation at 1 kV/μs (Core-Core) static	≤ 40 V
Output voltage limitation at 1 kV/μs (Core-Earth) static	≤ 600 V
Residual voltage at I <sub>n</sub> , (conductor-conductor)	≤ 40 V
Protection level UP (Core-Core)	≤ 60 V (C2 (10 kV/5 kA))
Protection level UP (Core-Core)	≤ 40 V (stat.)
Protection level UP (Core-Earth)	≤ 600 V (C2 (10 kV/5 kA))
Response time t <sub>A</sub> (Core-Core)	≤ 1 ns
Response time t <sub>A</sub> (Core-Earth)	≤ 100 ns
Input attenuation a <sub>E</sub> , sym.	Typ. 1 dB (400 kHz/50 Ω)
Input attenuation a <sub>E</sub> , sym.	Typ. 0.4 dB (150 kHz/150 Ω)

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## Technical data

### Protective circuit

Input attenuation aE, sym.	Typ. 0.1 dB (30 kHz/600 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	3 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	1 MHz
Cut-off frequency fg (3 dB), sym. in 600 Ohm system	Typ. 250 kHz
Capacity (Core-Core)	4 nF
Capacity (Core-Earth)	2 pF
Resistance in series	6.6 Ω ±20 % (per path)
Resistance in series	6.6 Ω
Message: Surge protection fault	None
Max. required back-up fuse	370 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (100 A)
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)	D1 (1 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (100 A)

### Connection data

Connection method	Spring-cage connection
Connection type IN	Spring-cage
Connection type OUT	Spring-cage
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

## 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

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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

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Approvals

GOST / UL Listed

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Ex Approvals

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Approvals submitted

### Approval details



## Accessories

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

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### Accessories

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

End cover - TT-D-STTCO-BK - 2858894



End cover for TERMITRAB TT-ST-..., width: 2.2 mm, color: Black

### Additional products

End cover - TT-D-STTCO-BK - 2858894

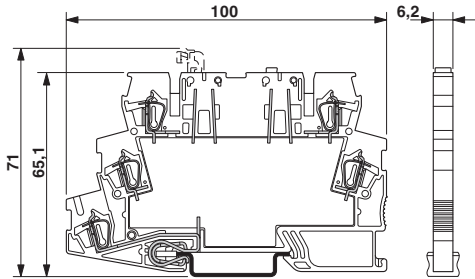


End cover for TERMITRAB TT-ST-..., width: 2.2 mm, color: Black

### Drawings

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Dimensioned drawing



Circuit diagram

