

## Surge protection device - TT-ST-M-2/2-24DC - 2858917

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TERMITRAB, spring-cage modular terminal block with integrated surge protection and disconnect knives, for assembly on NS 35/7.5, voltage  $U_N$  24 V DC, terminal width: 6.2 mm, cover width: 2.2 mm

### Product Features

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



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	31.39 GRM
Custom tariff number	85363030
Country of origin	Germany

### Technical data

#### Dimensions

Height	100 mm
Width	6.2 mm
Depth	63.5 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Degree of protection	IP20

#### General

Housing material	PA 6.6
Inflammability class according to UL 94	V2
Color	black
Standards for air and creepage distances	EN 60664-1

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### Technical data

#### General

	IEC 60664-1
Surge voltage category	III
Pollution degree	2
Mounting type	DIN rail: 35 mm
Type	Double-level terminal block with disconnect knife
Number of positions	2
Direction of action	Line-Earth Ground

#### Protective circuit

IEC test classification	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage $U_N$	24 V DC
Maximum continuous operating voltage $U_c$	30 V DC
	21 V AC
Maximum continuous voltage $U_c$ (wire-ground)	30 V DC
	21 V AC
Nominal current $I_N$	300 mA (45°C)
Operating effective current $I_c$ at $U_c$	$\leq 10 \mu\text{A}$ (per path)
Residual current $I_{PE}$	$\leq 20 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	5 kA
Total surge current (8/20) $\mu\text{s}$	10 kA
Total surge current (10/350) $\mu\text{s}$	2 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Earth)	5 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Earth)	100 A
	200 A (in total)
Impulse discharge current (10/350) $\mu\text{s}$ , peak value $I_{imp}$	1 kA (per path)
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) spike	$\leq 40 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) static	$\leq 40 \text{ V}$
Residual voltage at $I_n$ , (conductor-ground)	$\leq 40 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (conductor-ground)	$\leq 45 \text{ V}$
Voltage protection level $U_p$ (Core-Earth)	$\leq 80 \text{ V}$ (C2 - 10 kV / 5 kA)

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### Technical data

#### Protective circuit

	≤ 40 V (static)
Response time tA (Core-Earth)	≤ 1 ns
Input attenuation aE, asym.	typ. 0.6 dB (500 kHz/50 Ω system)
	typ. 0.1 dB (170 kHz/150 Ω system)
	typ. 0.1 dB (40 kHz/600 Ω system)
Cut-off frequency fg (3 dB), asym. (PE) in 50 Ohm system	typ. 3 MHz
Cut-off frequency fg (3 dB), asym. (PE) in 150 Ohm system	typ. 1 MHz
Cut-off frequency fg (3 dB), asym. (PE) in 600 Ohm system	typ. 250 kHz
Capacity (Core-Earth)	2 nF
Resistance in series	9.4 Ω ±10 % (per path)
	9.4 Ω
Surge protection fault message	None
Max. required back-up fuse	315 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (1 kA)
	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

#### 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

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## Classifications

### 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

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#### Approvals

GOST / GOST / UL Listed / GL

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#### Ex Approvals

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Approvals submitted

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### Approval details

GOST
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GOST
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UL Listed
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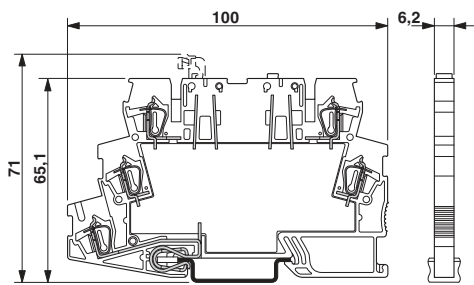
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## Approvals

GL

## Drawings

Dimensioned drawing



Circuit diagram

