

## Surge protection device - TT-ST-M-SFP-24AC - 2858946

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TERMITRAB, spring-cage modular terminal block with integrated surge protection as a filter circuit 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

- Combined protective circuit for absorbing transient surge voltages and high-frequency interference voltages
- With spring-cage connection
- Disconnection of signal circuits by disconnect knife



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	30.15 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

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### Technical data

#### General

Standards for air and creepage distances	EN 60664-1
	IEC 60664-1
Surge voltage category	III
Pollution degree	2
Mounting type	DIN rail: 35 mm
Type	Double-level terminal block
Direction of action	Line-Earth Ground

#### Protective circuit

IEC test classification	C1
	C3
VDE requirement class	C1
	C3
Nominal voltage $U_N$	24 V AC
Maximum continuous operating voltage $U_C$	38 V DC
	30 V AC
Maximum continuous voltage $U_C$ (wire-ground)	38 V DC
	30 V AC
Nominal current $I_N$	0.5 A (55°C)
Operating effective current $I_C$ at $U_C$	$\leq 100 \mu\text{A}$ (per path)
Residual current $I_{PE}$	$\leq 1 \text{ mA}$ (per path)
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	350 A
Total surge current (8/20) $\mu\text{s}$	700 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Earth)	1.5 kA (per path)
	3 kA (in total)
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Earth)	60 A (per path)
	120 A (in total)
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) spike	$\leq 70 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) static	$\leq 70 \text{ V}$
Residual voltage at $I_n$ , (conductor-ground)	$\leq 80 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (conductor-ground)	$\leq 80 \text{ V}$
Voltage protection level $U_P$ (Core-Earth)	$\leq 80 \text{ V}$ (C1 (500 V/250 A))
Response time $t_A$ (Core-Earth)	$\leq 25 \text{ ns}$
Input attenuation $a_E$ , asym.	typ. 40 dB (1 MHz / 50 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 50 Ohm system	typ. 60 kHz
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 Ohm system	typ. 20 kHz
Capacity (Core-Earth)	130 nF

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### Technical data

#### Protective circuit

Inductivity in series	100 $\mu$ H (per path)
Resistance in series	0.5 $\Omega$ (per path)
Max. required back-up fuse	500 mA (e.g. T in acc. with IEC 127-2/III)
Surge current resistance (conductor-ground)	C1 (500 A/250 A)
	C3 (25 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

#### Standards and Regulations

Standards/specifications	IEC 61643-21/A1 2008
	EN 61643-21/A1 2009

### 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

#### ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	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 / GOST / UL Listed

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#### Ex Approvals


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#### Approvals submitted

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## Approval details

GOST 

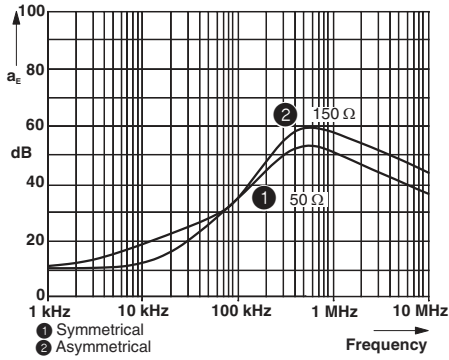
GOST 

UL Listed 

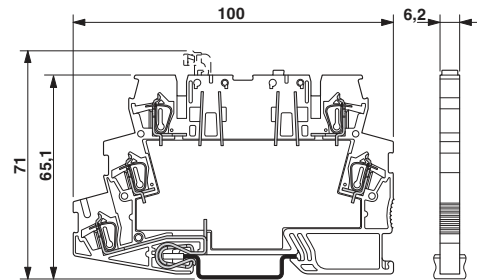
## Drawings

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Diagram



Dimensioned drawing



Circuit diagram

