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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## Surge protection device - TT-PI-TB - 2858373

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Basic terminal block, with isolating connector, test connections and surge protection, mounting on NS 35/7.5

### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	99.0 GRM
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

Height	144.7 mm
Width	12.35 mm
Depth	84.5 mm

#### Ambient conditions

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

#### General

Housing material	PBT
Inflammability class according to UL 94	V2
Color	black
Standards for air and creepage distances	VDE 0110-1 IEC 60664-1
Mounting type	DIN rail: 35 mm
Type	PI basic terminal block
Number of positions	2
Direction of action	Line-Line & Line-Earth Ground

#### Protective circuit

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### Technical data

#### Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage $U_N$	24 V AC
Maximum continuous operating voltage $U_C$	45 V DC
	31 V AC
Maximum continuous voltage $U_C$ (wire-ground)	45 V DC
	31 V AC
Nominal current $I_N$	250 mA (40°C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu\text{A}$
Residual current $I_{PE}$	$\leq 2 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Core)	5 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	5 kA
Total surge current (8/20) $\mu\text{s}$	10 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Core)	5 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-Core)	100 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Earth)	100 A
Impulse discharge current (10/350) $\mu\text{s}$ , peak value $I_{imp}$	1 kA
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Core) spike	$\leq 90 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) spike	$\leq 650 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Core) static	$\leq 70 \text{ V}$
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 45 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (conductor-conductor)	$\leq 70 \text{ V}$
Voltage protection level $U_p$ (Core-Core)	$\leq 110 \text{ V}$ (C2 (10 kV/5 kA))
Voltage protection level $U_p$ (Core-Earth)	$\leq 650 \text{ V}$ (C2 (10 kV/5 kA))
Response time $t_A$ (Core-Core)	$\leq 1 \text{ ns}$
Response time $t_A$ (Core-Earth)	$\leq 100 \text{ ns}$
Input attenuation $a_E$ , sym.	1 dB ( $\leq 1 \text{ MHz} / 50 \Omega$ )
	0.3 dB ( $\leq 150 \text{ kHz} / 150 \Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency $f_g$ (3 dB), sym. in 150 Ohm system	typ. 2 MHz
Resistance in series	4.7 $\Omega \pm 10 \%$
	4.7 $\Omega$
Surge protection fault message	None

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## Technical data

### Protective circuit

Surge current resistance (conductor-conductor)	C2 - 10 kV/5 kA
Surge current resistance (conductor-ground)	C2 - 10 kV/5 kA
	D1 (500 A)

### Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
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.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14

### Standards and Regulations

Standards/regulations	IEC 61643-21
	EN 50020

## 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

### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610

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## Classifications

### UNSPSC

UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Approvals

### Approvals

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Approvals

GOST / GOST

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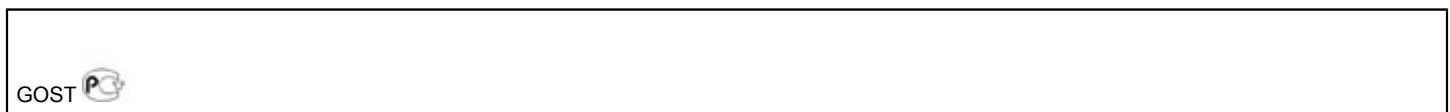
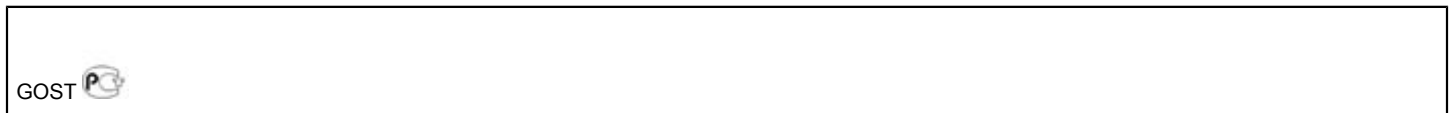
Ex Approvals

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Approvals submitted

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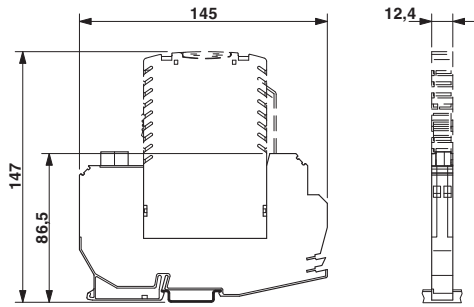
### Approval details



## Drawings

## Surge protection device - TT-PI-TB - 2858373

Dimensioned drawing



Circuit diagram

