

## Surge protection device - TT-ST-2/2-S-24DC - 2920735


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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



### Key Commercial Data

Packing unit	10 pc
GTIN	 4 046356 168373
GTIN	4046356168373

### 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
Flammability rating according to UL 94	V-0
Color	black
Standards for clearances and creepage distances	EN 60664-1
Mounting type	DIN rail: 35 mm
Type	Double-level terminal block
Number of positions	2
Direction of action	Line-Earth Ground

#### Protective circuit

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## Technical data

### Protective circuit

IEC test classification	C1
	C3
VDE requirement class	C1
	C3
Nominal voltage $U_N$	24 V DC
Maximum continuous voltage $U_C$	30 V DC
	21 V AC
Rated current	10 A (50 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu\text{A}$ (DC)
	$\leq 20 \mu\text{A}$ (60 Hz)
Residual current $I_{PE}$	$\leq 10 \mu\text{A}$ (DC)
	$\leq 40 \mu\text{A}$ (60 Hz)
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-earth)	310 A (per path)
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	620 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	62 A (per path)
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 45$ V
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) static	$\leq 45$ V
Residual voltage at $I_n$ (line-earth)	$\leq 48$ V
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	$\leq 48$ V
Voltage protection level $U_p$ (line-earth)	$\leq 45$ V (C1 - 250 A)
Response time $t_A$ (line-earth)	$\leq 1$ ns
Input attenuation aE, asym.	typ. 0.3 dB ( $\leq 1$ MHz / 50 $\Omega$ )
	typ. 0.1 dB ( $\leq 150$ kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 50 Ohm system	typ. 3 MHz
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 150 Ohm system	typ. 500 kHz
Capacity (line-earth)	$\leq 2$ nF
Surge protection fault message	none
Max. required back-up fuse	10 A (T)
Impulse durability (line-earth)	C1 - 500 V / 250 A
	C3 - 25 A
Alternating current carrying capacity (line-earth)	2 A - 5x 1 s

### Connection data

Connection method	Spring-cage connection
Connection method IN	Spring-cage
Connection method OUT	Spring-cage
Stripping length	8 mm
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section solid	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

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## Technical data

### Standards and Regulations

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

### Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Approvals

### Approvals

#### Approvals

DNV GL / UL Listed / EAC

#### Ex Approvals

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE00001N7
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
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