

## Surge protection device - TT-ST-2/2-S-12DC - 2921310

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Spring cage modular terminal block with integrated surge protection, for assembly on NS 35/7.5, voltage  $U_N$  12 V DC, terminal width: 6.2 mm, cover width: 2.2 mm



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 pc      |
| Weight per Piece (excluding packing) | 26.11 GRM |
| Custom tariff number                 | 85363010  |
| 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                  |
| Mounting type                            | DIN rail: 35 mm             |
| Type                                     | Double-level terminal block |

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### Technical data

#### General

|                     |                   |
|---------------------|-------------------|
| Number of positions | 2                 |
| Direction of action | Line-Earth Ground |

#### Protective circuit

|   |   |
|---|---|
| IEC test classification   | C1  |
|   | C3  |
| VDE requirement class   | C1  |
|   | C3  |
| Nominal voltage $U_N$   | 12 V DC                                       |
| Maximum continuous operating voltage $U_C$                                | 13 V DC                                       |
|   | 9 V AC  |
| Maximum continuous voltage $U_C$ (wire-ground)                            | 13 V DC                                       |
|   | 9 V AC  |
| Nominal current $I_N$   | 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) $\mu\text{s}$ (Core-Earth)         | 700 A (per path)                              |
| Total surge current (8/20) $\mu\text{s}$                                  | 1.4 kA  |
| Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Earth)       | 140 A (per path)                              |
| Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) static      | $\leq 22$ V                                   |
| Residual voltage at $I_n$ , (conductor-ground)                            | $\leq 27$ V                                   |
| Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (conductor-ground) | $\leq 22$ V                                   |
| Voltage protection level $U_P$ (Core-Earth)                               | $\leq 25$ V (C1 - 250 A)                      |
| Response time $t_A$ (Core-Earth)  | $\leq 1$ ns                                   |
| Input attenuation aE, asym.   | typ. 0.3 dB ( $\leq 650$ kHz / 50 $\Omega$ )  |
|   | typ. 0.1 dB ( $\leq 100$ kHz / 150 $\Omega$ ) |
| Cut-off frequency $f_g$ (3 dB), asym. (GND) in 50 Ohm system              | typ. 1.7 MHz                                  |
| Cut-off frequency $f_g$ (3 dB), asym. (GND) in 150 Ohm system             | typ. 300 kHz                                  |
| Capacity (Core-Earth)   | $\leq 5$ nF                                   |
| Max. required back-up fuse  | 10 A (e.g. T (IEC 127-2/III))                 |
| Surge current resistance (conductor-ground)                               | C1 (500 A/250 A)                              |
|   | C3 - 100 A                                    |
| Alternating current carrying capacity (conductor-ground)                  | 2 A (5x 1 s)                                  |

#### Connection data

|                   |                        |
|-------------------|------------------------|
| Connection method | Spring-cage connection |
|-------------------|------------------------|

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### Technical data

#### Connection data

|  |                     |
|--|---------------------|
| Connection type IN                     | Spring-cage         |
| Connection type OUT                    | Spring-cage         |
| Conductor cross section stranded min.  | 0.5 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup> |
| Conductor cross section solid min.     | 0.5 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/regulations | IEC 61643-21 |
|-----------------------|--------------|

### 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 |
| UNSPSC 11     | 39121610 |
| UNSPSC 12.01  | 39121610 |
| UNSPSC 13.2   | 39121620 |

### Approvals

#### Approvals

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## Approvals

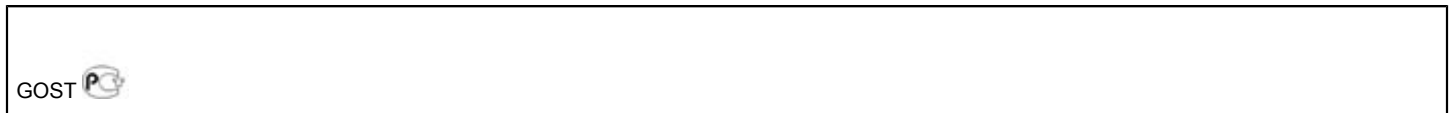
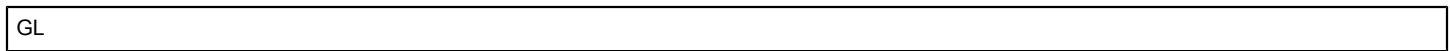
Approvals

GOST / GL / GOST / UL Listed

Ex Approvals

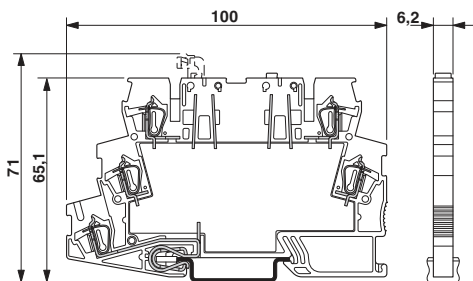
Approvals submitted

## Approval details



## Drawings

Dimensioned drawing



Circuit diagram

