# D-LAN-CAT.5E - Surge protection device

2858991

https://www.phoenixcontact.com/us/products/2858991

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Fine surge protection in accordance with Class D (CAT.5e), for token ring and Ethernet. RJ45 attachment plug with separate grounding cable, incl. RJ45 cable

## Commercial data

| | |
|---|---|
| Item number | 2858991 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL24 |
| Product key | CL3111 |
| GTIN | 4017918920463 |
| Weight per piece (including packing) | 135.8 g |
| Weight per piece (excluding packing) | 135 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

## Technical data

### Product properties

| | |
|---|---|
| Product type | Surge protection for information technology |
| Product family | DATATRAB |
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | B2 |
| | B3 |
| VDE requirement class | C1 |
| | C2 |
| | C3 |
| | B2 |
| | B3 |
| Type | Intermediate plug |
| Surge protection fault message | none |

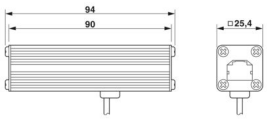
Insulation characteristics

| | |
|---|---|
| Overvoltage category | II |
| Pollution degree | 2 |

### Connection data

| | |
|---|---|
| Connection method | RJ45 |

### Dimensions

| | |
|---|---|
| Dimensional drawing |   |
| Width | 25.4 mm |
| Height | 94 mm |
| Depth | 25.4 mm |

### Material specifications

| | |
|---|---|
| Color | black (RAL 9005) |
| Housing material | Aluminum, anodized |

### Mechanical properties

Mechanical data

| | |
|---|---|
| Open side panel | No |

### Protective circuit

| | |
|---|---|
| Direction of action | Line-Line & Line-Shield & Shield-Earth Ground |
| Maximum continuous operating voltage $U_C$ | ± 7 V DC |
| Rated current | 1.5 A (25 °C) |
| Operating effective current $I_C$ at $U_C$ | ≤ 100 µA |
| Protective conductor current $I_{PE}$ | ≤ 100 µA |
| Nominal discharge current $I_n$ (8/20) µs (line-line) | 350 A |
| Nominal discharge current $I_n$ (8/20) µs (line-ground) | 2.5 kA |
| Max. discharge current $I_{max}$ (8/20) µs maximum (line-earth) | 2.5 kA (in total) |
| Nominal pulse current Ian (10/700) µs (line-line) | 160 A |
| Nominal pulse current Ian (10/700) µs (line-earth) | 160 A |
| Output voltage limitation at 1 kV/µs (line-line) spike | ≤ 22 V |
| Output voltage limitation at 1 kV/µs (line-earth) spike | ≤ 80 V (equipotential bonding lead: 1 m) |
| Output voltage limitation at 1 kV/µs (shield-ground) spike | ≤ 700 V (equipotential bonding lead: 1 m) |
| Residual voltage at $I_n$ (conductor-conductor) | ≤ 45 V |
| Residual voltage at $I_n$ (conductor-ground) | ≤ 45 V |
| Residual voltage at $I_n$ (shield-ground) | ≤ 700 V |
| Voltage protection level $U_p$ (line-line) | ≤ 50 V (C1 - 500 V / 250 A) |
| | ≤ 20 V (B3 - 2 kV / 25 A) |
| Voltage protection level $U_p$ (line-earth) | ≤ 65 V (C1, 500 V/250 A - PA-Ltg: 1 m) |
| | ≤ 25 V (B3 - 2 kV / 25 A - PA-Ltg: 1 m) |
| | ≤ 60 V (C3, 7 kV/90 A - PA-Ltg: 1 m) |
| Voltage protection level $U_p$ (shield-ground) | ≤ 850 V (C2 - 4 kV/2 kA - PA-Ltg: 1 m) |
| Response time $t_A$ (line-line) | ≤ 500 ns |
| Response time $t_A$ (line-earth) | ≤ 100 ns |
| Input attenuation aE, sym. | 1 dB (up to 100 MHz, 100 Ω system) |
| Near-end crosstalk attenuation | 36 dB (pair 3-6 against pair 4-5 in 100 Ω system / 100 MHz) |
| | 40 dB (all other pair combinations in 100 Ω system/100 MHz) |
| Cut-off frequency fg (3 dB), sym. in 100 Ω system | ≤ 100 MHz |
| Capacity (Core-Core) | 20 pF (typical) |
| Capacity (Core-Earth) | 1 pF (typical) |
| Surge protection fault message | none |
| Impulse durability (line-line) | B2 - 4 kV / 100 A |
| | B3 - 2 kV / 25 A |
| | C1 - 500 V / 250 A |
| Impulse durability (line-earth) | B2 - 4 kV / 100 A |
| | C1 - 500 V / 250 A |
| | C2 - 4 kV / 2 kA |
| | B3 - 2 kV / 25 A |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 80 °C |

## Standards and regulations

| | |
|---|---|
| VDE requirement class | C1 |
| | C2 |
| | C3 |
| | B2 |
| | B3 |

Standards Information technology specification

| | |
|---|---|
| Standards/regulations | IEC 61643-21 |
| | E VDE 0845-3-1 |
| | DIN EN 50173-1 |
| | IEC 61643-21 |
| | E VDE 0845-3-1 |
| | DIN EN 50173-1 |

Air clearances and creepage distances

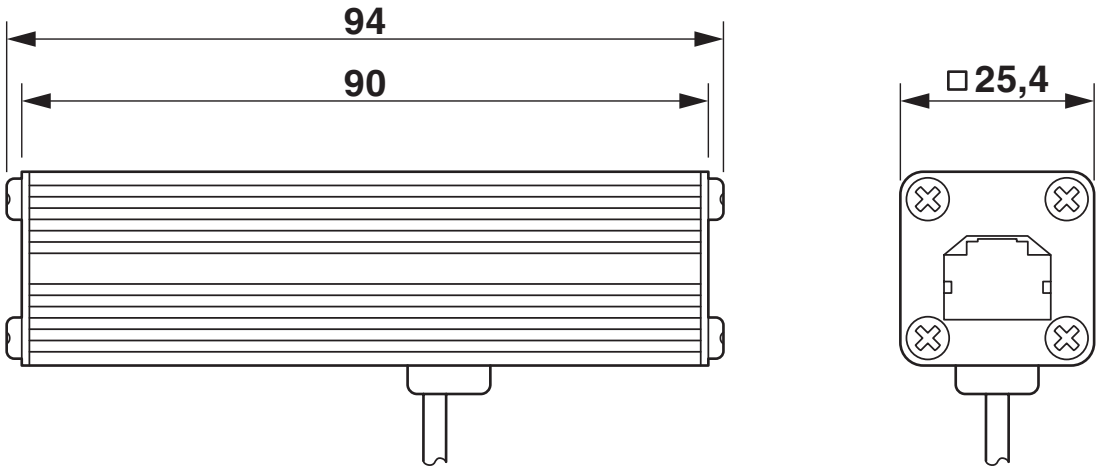
| | |
|---|---|
| Standards/regulations | DIN VDE 0110-1 / IEC 60664-1 |

## Mounting

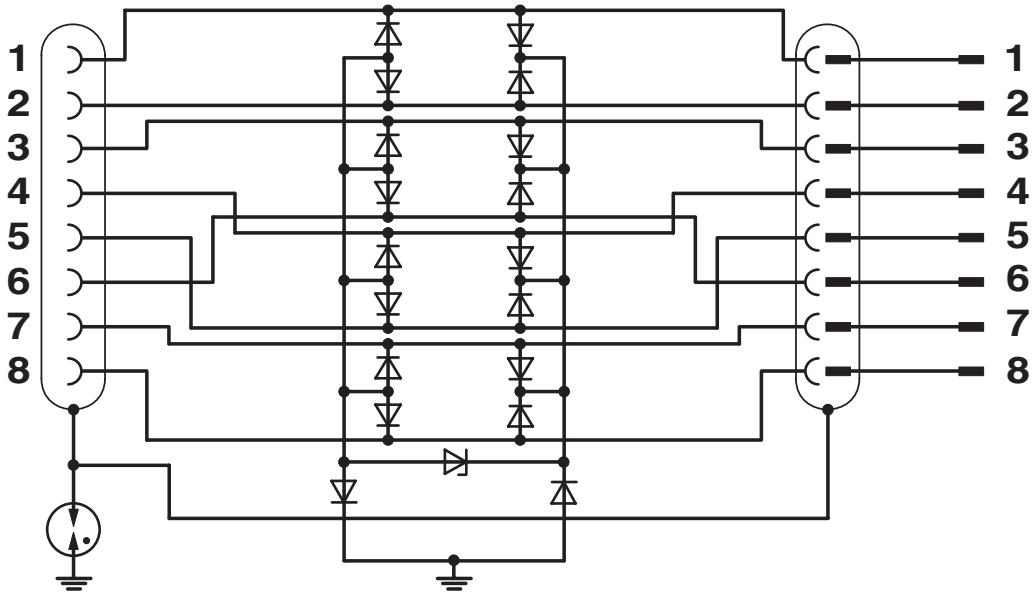
| | |
|---|---|
| Mounting type | Connection-specific intermediate plugging |

## Drawings

Dimensional drawing




Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2858991

**UL Listed**
Approval ID: FILE E 138168

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27171503 |
| ECLASS-15.0 | 27171503 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC001466 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121600 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 5560daf8-02ad-477f-8264-22d6d2558977 |


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