

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



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                           |
| Note                                 | Made to Order (non-returnable) |
| Sales Key                            | C08                            |
| Product Key                          | CL3111                         |
| Catalog Page                         | Page 97 (TT-2005)              |
| 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                             |

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## Technical Data

### Product properties

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

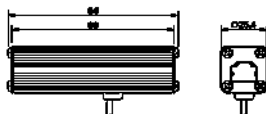
### Insulation characteristics

|                      |    |
|----------------------|----|
| 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              |
| Housing material | Aluminum, anodized |

### Mechanical properties

#### Mechanical data

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

### Protective circuit

|                     |                                               |
|---------------------|-----------------------------------------------|
| Direction of action | Line-Line & Line-Shield & Shield-Earth Ground |
|---------------------|-----------------------------------------------|

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|                                                                      |                                                                                                                                          |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum continuous voltage $U_C$                                     | $\pm 7$ V DC                                                                                                                             |
| Rated current                                                        | 1.5 A (25 °C)                                                                                                                            |
| Operating effective current $I_C$ at $U_C$                           | $\leq 100$ $\mu$ A                                                                                                                       |
| Residual current $I_{PE}$                                            | $\leq 100$ $\mu$ A                                                                                                                       |
| Nominal discharge current $I_n$ (8/20) $\mu$ s (line-line)           | 350 A                                                                                                                                    |
| Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)    | 2.5 kA                                                                                                                                   |
| Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (line-earth) | 2.5 kA (in total)                                                                                                                        |
| Nominal pulse current $I_{an}$ (10/700) $\mu$ s (line-line)          | 160 A                                                                                                                                    |
| Nominal pulse current $I_{an}$ (10/700) $\mu$ s (line-earth)         | 160 A                                                                                                                                    |
| Output voltage limitation at 1 kV/ $\mu$ s (line-line) spike         | $\leq 22$ V                                                                                                                              |
| Output voltage limitation at 1 kV/ $\mu$ s (line-earth) spike        | $\leq 80$ V (equipotential bonding lead: 1 m)                                                                                            |
| Output voltage limitation at 1 kV/ $\mu$ s (shield-earth) spike      | $\leq 700$ V (equipotential bonding lead: 1 m)                                                                                           |
| Residual voltage at $I_n$ (conductor-conductor)                      | $\leq 45$ V                                                                                                                              |
| Residual voltage at $I_n$ (conductor-ground)                         | $\leq 45$ V                                                                                                                              |
| Residual voltage at $I_n$ (shield-ground)                            | $\leq 700$ V                                                                                                                             |
| Voltage protection level $U_p$ (line-line)                           | $\leq 50$ V (C1 - 500 V / 250 A)<br>$\leq 20$ V (B3 - 2 kV / 25 A)                                                                       |
| Voltage protection level $U_p$ (line-earth)                          | $\leq 65$ V (C1, 500 V/250 A - PA-Ltg: 1 m)<br>$\leq 25$ V (B3 - 2 kV / 25 A - PA-Ltg: 1 m)<br>$\leq 60$ V (C3, 7 kV/90 A - PA-Ltg: 1 m) |
| Voltage protection level $U_p$ (shield-earth)                        | $\leq 850$ V (C2 - 4 kV/2 kA - PA-Ltg: 1 m)                                                                                              |
| Response time $t_A$ (line-line)                                      | $\leq 500$ ns                                                                                                                            |
| Response time $t_A$ (line-earth)                                     | $\leq 100$ ns                                                                                                                            |
| Input attenuation aE, sym.                                           | 1 dB (up to 100 MHz, 100 $\Omega$ system)                                                                                                |
| Near-end crosstalk attenuation                                       | 36 dB (pair 3-6 against pair 4-5 in 100 $\Omega$ system / 100 MHz)<br>40 dB (all other pair combinations in 100 $\Omega$ system/100 MHz) |
| Cut-off frequency $f_g$ (3 dB), sym. in 100 $\Omega$ system          | $\leq 100$ 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<br>B3 - 2 kV / 25 A<br>C1 - 500 V / 250 A                                                                              |
| Impulse durability (line-earth)                                      | B2 - 4 kV / 100 A<br>C1 - 500 V / 250 A<br>C2 - 4 kV / 2 kA<br>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

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

## Air clearances and creepage distances

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

## 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 |

## Mounting

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

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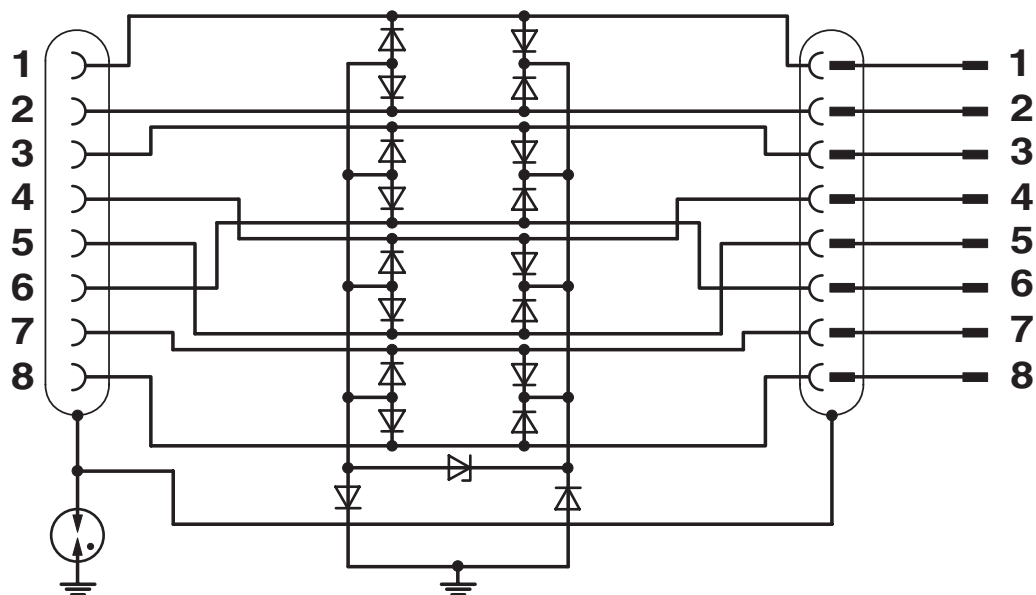
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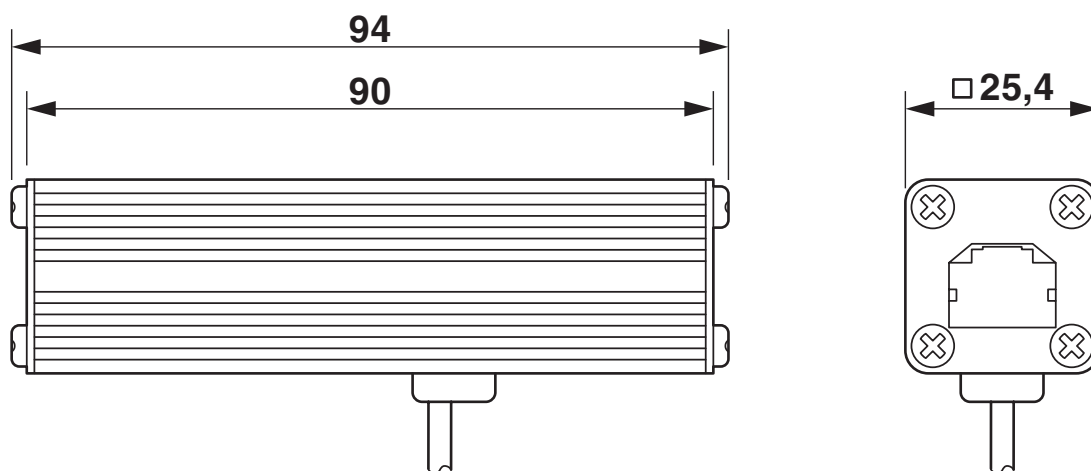


## Drawings

Circuit diagram



Dimensional drawing



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## Approvals



**EAC**

Approval ID: EAC-Zulassung



**EAC**

Approval ID: RU C-DE.\*09.B.00169



**UL Listed**

Approval ID: FILE E 138168

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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27130807 |
| ECLASS-10.0.1 | 27130807 |
| ECLASS-11.0   | 27130807 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC000943 |
|----------|----------|

### UNSPSC

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

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## Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

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## Accessories

### Patch cable

Patch cable - FL CAT6 PATCH 0,5 - 2891288

<https://www.phoenixcontact.com/us/products/2891288>

Patch cable, CAT6, pre-assembled, 0.5 m



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### Patch cable

Patch cable - FL CAT6 PATCH 1,5 - 2891482

<https://www.phoenixcontact.com/us/products/2891482>

Patch cable, CAT6, pre-assembled, 1.5 m



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