

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

RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 017918 920463 |
| GTIN         | 4017918920463                                                                                           |

### Technical data

#### Dimensions

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

#### Ambient conditions

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

#### General

|                                                 |                                               |
|-------------------------------------------------|-----------------------------------------------|
| Housing material                                | Aluminum, anodized                            |
| Color                                           | black                                         |
| Standards for clearances and creepage distances | DIN VDE 0110-1                                |
|                                                 | IEC 60664-1                                   |
| Overvoltage category                            | II                                            |
| Degree of pollution                             | 2                                             |
| Mounting type                                   | Connection-specific intermediate plugging     |
| Type                                            | Attachment plug                               |
| Direction of action                             | Line-Line & Line-Shield & Shield-Earth Ground |

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## Technical data

### Protective circuit

|                                                                      |                                                                    |
|----------------------------------------------------------------------|--------------------------------------------------------------------|
| IEC test classification                                              | C1                                                                 |
|                                                                      | C2                                                                 |
|                                                                      | C3                                                                 |
|                                                                      | B2                                                                 |
|                                                                      | B3                                                                 |
| VDE requirement class                                                | C1                                                                 |
|                                                                      | C2                                                                 |
|                                                                      | C3                                                                 |
|                                                                      | B2                                                                 |
|                                                                      | B3                                                                 |
| 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 current $I_n$ (8/20) $\mu$ s (line-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 $I_n$ (line-line)                                | $\leq 45$ V                                                        |
| Residual voltage at $I_n$ (line-earth)                               | $\leq 45$ V                                                        |
| Residual voltage at $I_n$ (shield-earth)                             | $\leq 700$ V                                                       |
| Voltage protection level $U_p$ (line-line)                           | $\leq 50$ V (C1 - 500 V / 250 A)                                   |
|                                                                      | $\leq 20$ 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)                        |
|                                                                      | $\leq 25$ V (B3 - 2 kV / 25 A - PA-Ltg: 1 m)                       |
|                                                                      | $\leq 60$ 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) |
|                                                                      | 40 dB (all other pair combinations in 100 $\Omega$ system/100 MHz) |
| Cut-off frequency $f_g$ (3 dB), sym. in 100 Ohm system               | $\leq 100$ MHz                                                     |
| Capacity (line-line)                                                 | 20 pF (typical)                                                    |
| Capacity (line-earth)                                                | 1 pF (typical)                                                     |
| Surge protection fault message                                       | none                                                               |

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### Technical data

#### Protective circuit

|                                 |                    |
|---------------------------------|--------------------|
| 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   |

#### Connection data

|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| Connection method     | RJ45                                                         |
| Connection method IN  | RJ45 socket                                                  |
| Connection method OUT | RJ45 socket                                                  |
| Connection technology | Network interfaces (e.g. Ethernet, Token Ring and CDDI/FDDI) |

#### Connection, equipotential bonding

|                   |                  |
|-------------------|------------------|
| Connection method | Cable connection |
|-------------------|------------------|

#### Standards and Regulations

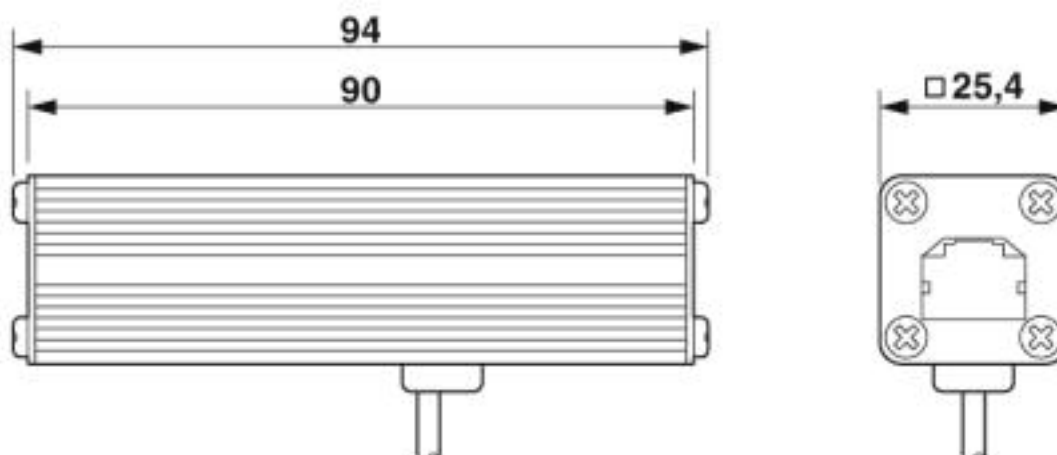
|                       |                |
|-----------------------|----------------|
| Standards/regulations | IEC 61643-21   |
|                       | E VDE 0845-3-1 |
|                       | DIN EN 50173-1 |

#### Environmental Product Compliance

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

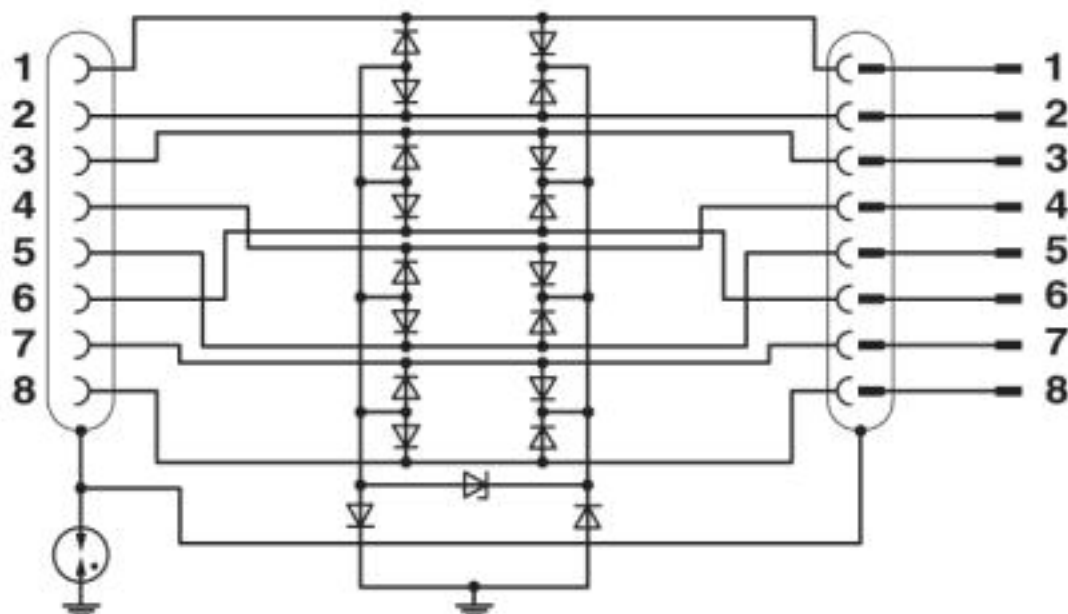
### Drawings

Dimensional drawing



## Surge protection device - D-LAN-CAT.5E - 2858991

Circuit diagram



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27130807 |
| eCl@ss 4.0    | 27130800 |
| eCl@ss 4.1    | 27130800 |
| eCl@ss 5.0    | 27130800 |
| eCl@ss 5.1    | 27130800 |
| eCl@ss 6.0    | 27130800 |
| eCl@ss 7.0    | 27130807 |
| eCl@ss 8.0    | 27130807 |
| eCl@ss 9.0    | 27130807 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000943 |
| ETIM 3.0 | EC000943 |
| ETIM 4.0 | EC000943 |
| ETIM 5.0 | EC000943 |
| ETIM 6.0 | EC000943 |
| ETIM 7.0 | EC000943 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11     | 39121610 |

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### Classifications

#### UNSPSC

|              |          |
|--------------|----------|
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2  | 39121620 |
| UNSPSC 18.0  | 39121620 |
| UNSPSC 19.0  | 39121620 |
| UNSPSC 20.0  | 39121620 |
| UNSPSC 21.0  | 39121620 |

### Approvals

#### Approvals

##### Approvals

UL Listed / EAC / EAC

##### Ex Approvals

#### Approval details

|           |                                                                                     |                                                                                                                                                       |               |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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 |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|     |                                                                                     |               |
|-----|-------------------------------------------------------------------------------------|---------------|
| EAC |  | EAC-Zulassung |
|-----|-------------------------------------------------------------------------------------|---------------|

|     |                                                                                     |                         |
|-----|-------------------------------------------------------------------------------------|-------------------------|
| EAC |  | RU C-<br>DE.A*30.B01561 |
|-----|-------------------------------------------------------------------------------------|-------------------------|

### Accessories

#### Additional products

Patch cable - FL CAT6 PATCH 0,5 - 2891288



Patch cable, CAT6, pre-assembled, 0.5 m

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### Accessories

Patch cable - FL CAT6 PATCH 1,5 - 2891482



Patch cable, CAT6, pre-assembled, 1.5 m

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>