

# 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

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## 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

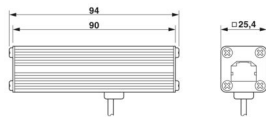
### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Connection data

Connection method	RJ45
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### 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
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### Protective circuit

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Direction of action	Line-Line & Line-Shield & Shield-Earth Ground
Maximum continuous operating 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
Protective conductor 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-ground)	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-ground) 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) $\leq 20$ 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-ground)	$\leq 850$ 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 $\Omega$ 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 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

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## 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
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## Mounting

Mounting type	Connection-specific intermediate plugging
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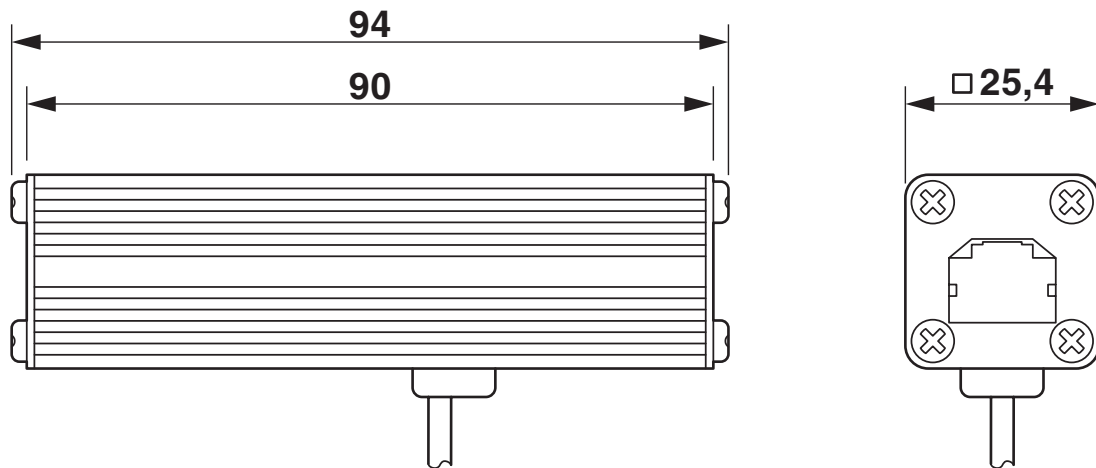
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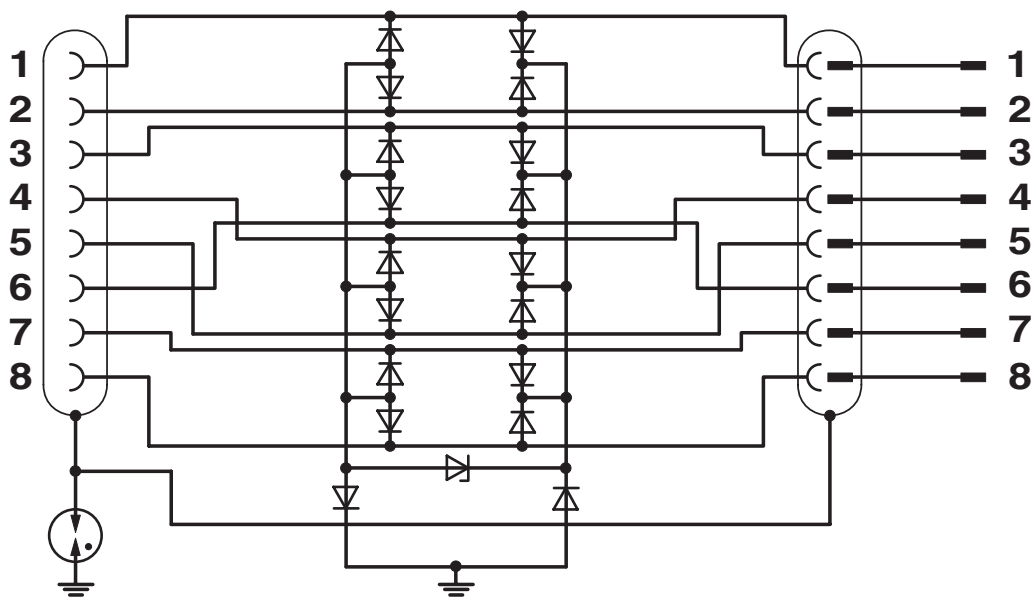
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## Drawings

Dimensional drawing



Circuit diagram



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## Approvals

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



**UL Listed**

Approval ID: FILE E 138168

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## Classifications

### ECLASS

ECLASS-13.0	27171503
ECLASS-15.0	27171503

### ETIM

ETIM 10.0	EC001466
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### UNSPSC

UNSPSC 21.0	39121600
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## 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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