

LIT 2X2-24 - Surge protection device



2804623

<https://www.phoenixcontact.com/in/products/2804623>

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Surge protection in a one-piece 6.2 mm wide DIN rail module for two floating signal circuits in 2-conductor technology. Tested in accordance with the following types of protection in Ex areas: Ex ia IIC / Ex iaD. HART-compatible.

Your advantages

- Space saving with a narrow overall width of just 6□mm
- Cost-optimized with tailored product features
- Universal use with extended nominal voltage range

Commercial Data

Item number	2804623
Packing unit	10 pc
Minimum order quantity	1 pc
Sales Key	CL2
Product Key	CL2211
Catalog Page	Page 124 (C-4-2019)
GTIN	4046356428309
Weight per Piece (including packing)	74 g
Weight per Piece (excluding packing)	63 g
Customs tariff number	85363010
Country of origin	DE

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Technical Data

Product properties

IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, one-piece
Product type	Surge protection for MCR technology
Product family	LINETRAB
Wire pairs per module	2

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal voltage U_N	24 V DC
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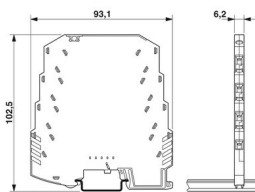
Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.8 Nm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

Ex data

Maximum inner capacitance C_i	typ. 1.3 nF
Max. internal inductance L_i	< 1 μ H
Max. input current I_i	350 mA ($T_4 / \leq 80^\circ\text{C}$)
	200 mA ($T_5 / \leq 50^\circ\text{C}$)
	150 mA ($T_6 / \leq 40^\circ\text{C}$)
Max. input voltage U_i	36 V DC
max. input power P_i	3 W
Maximum inner time factor (R_i/L_i)	0.2 μ s

Dimensions

Dimensional drawing	
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Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm (incl. DIN rail 7.5 mm)

Material specifications

Color	anthracite grey RAL 7016
Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Maximum continuous voltage U_C	36 V DC
	25 V AC
Rated current	350 mA (40 °C)
Operating effective current I_C at U_C	$\leq 2 \mu\text{A}$
Residual current I_{PE}	$\leq 4 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (line-line)	5 kA
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	5 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	500 A
	2 kA (in total)
Total discharge current I_{total} (8/20) μs	20 kA
Max. discharge current I_{max} (8/20) μs maximum (line-line)	10 kA
Max. discharge current I_{max} (8/20) μs maximum (line-earth)	10 kA
	20 kA (in total)
Nominal pulse current I_{an} (10/1000) μs (line-line)	50 A
Nominal pulse current I_{an} (10/1000) μs (line-earth)	50 A
	200 A (in total)
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 60 \text{ V}$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 650 \text{ V}$
Residual voltage at I_n (conductor-conductor)	$\leq 70 \text{ V}$
Residual voltage with I_{an} (10/1000) μs (line-line)	$\leq 50 \text{ V}$
Voltage protection level U_p (line-line)	$\leq 70 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 50 \text{ V}$ (C3 - 10 A)
	$\leq 55 \text{ V}$ (C3 - 50 A)
	$\leq 80 \text{ V}$ (D1 - 500 A)
Voltage protection level U_p (line-earth)	$\leq 650 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 700 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 650 \text{ V}$ (C3 - 10 A)
	$\leq 700 \text{ V}$ (C3 - 50 A)

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	≤ 700 V (D1 - 500 A)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.7 dB (1 MHz / 50 Ω) typ. 0.3 dB (350 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ω system	typ. 6 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ω system	typ. 2 MHz
Capacity	≤ 1.3 nF (per channel)
Resistance per path	3.3 Ω ±20 %
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
Impulse durability (line-line)	C2 - 10 kV / 5 kA C3 - 50 A D1 - 500 A
Impulse durability (line-earth)	C1 - 500 V / 250 A C2 - 10 kV / 5 kA C3 - 50 A D1 - 500 A
Alternating current carrying capacity (line-earth)	5 A - 1 s

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))

Approvals

Conformity/Approvals

ATEX	<input type="checkbox"/> II 1 G Ex ia IIC T4...T6 <input type="checkbox"/> II 1 D Ex iaD 20 T85°C...135°C
IECEX	Ga Ex ia IIC T4...T6 Ex iaD 20 T85 °C...T135 °C

Standards and regulations

Standards/specifications	EN 61643-21
Standards/specifications	EN 60079-0
Standards/specifications	EN 60079-11
Standards/specifications	IEC 60079-0
Standards/specifications	IEC 60079-11

Mounting

Mounting type	DIN rail: 35 mm
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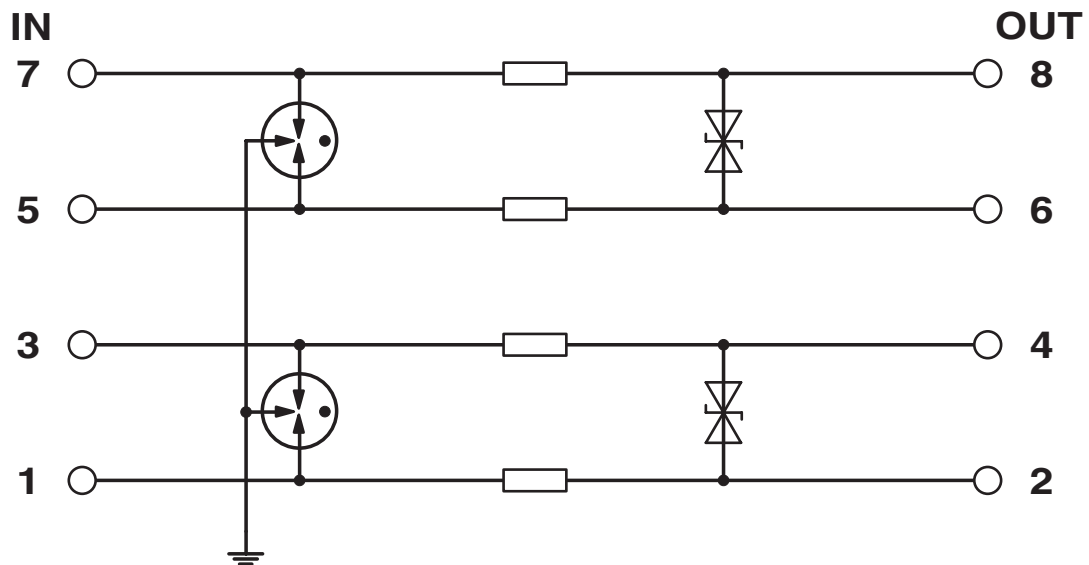
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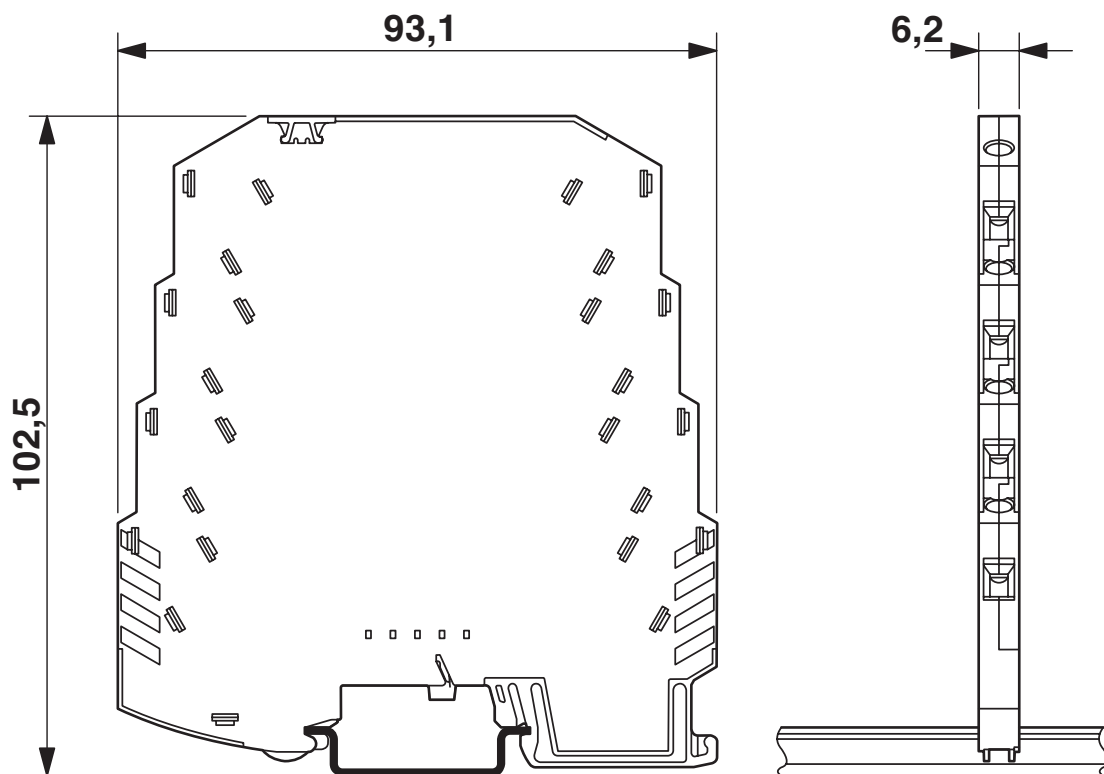
<https://www.phoenixcontact.com/in/products/2804623>

Drawings

Circuit diagram



Dimensional drawing



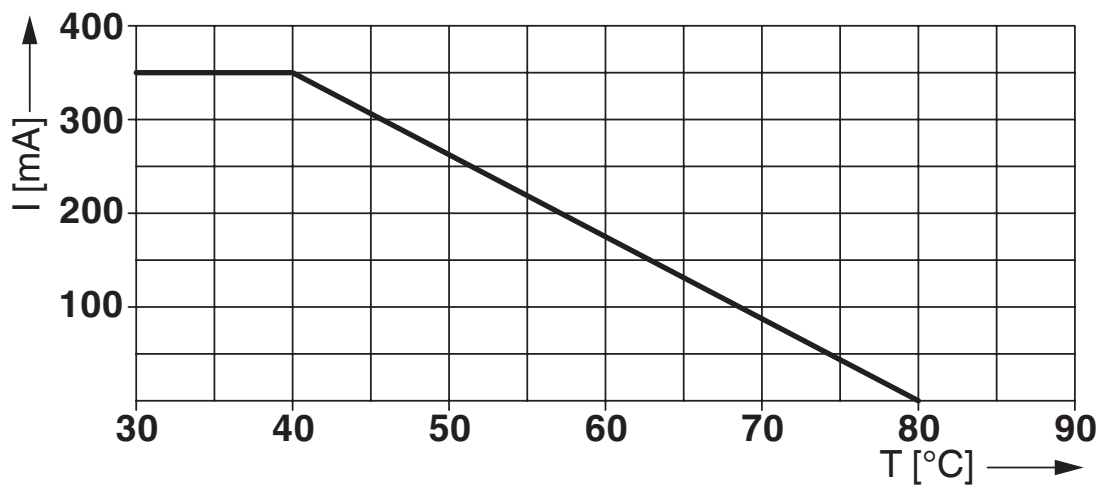
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Diagram



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Approvals

 **EAC**
Approval ID: EAC-Zulassung


 **DNV GL**
Approval ID: TAE00001N8


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


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

 **ATEX**
Approval ID: KEMA 09ATEX0051 X

 **EAC Ex**
Approval ID: RU C-DE.**87.B.00420

 **IECEX**
Approval ID: IECEX KEM 09.0018X

 **CCC**
Approval ID: 2020322316000816

 **NEPSI-EX**
Approval ID: GYJ20.1176X

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Classifications

ECLASS

ECLASS-11.0

27130807

ETIM

ETIM 7.0

EC000943

UNSPSC

UNSPSC 21.0

39121620

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Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

UC-TM 6 - Marker for terminal blocks

0818085

<https://www.phoenixcontact.com/in/products/0818085>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

UC-TM 6 OG - Marker for terminal blocks

0818328

<https://www.phoenixcontact.com/in/products/0818328>



Marker for terminal blocks, Sheet, orange, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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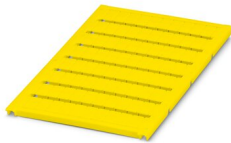
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UC-TM 6 YE - Marker for terminal blocks

0818331

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Marker for terminal blocks, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

UC-TM 6 BU - Marker for terminal blocks

0818344

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Marker for terminal blocks, Sheet, blue, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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UC-TM 6 RD - Marker for terminal blocks

0818357

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Marker for terminal blocks, Sheet, red, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

UC-TM 6 GN - Marker for terminal blocks

0818360

<https://www.phoenixcontact.com/in/products/0818360>



Marker for terminal blocks, Sheet, green, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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