

LIT 4X1-24 - Surge protection device



2804649

<https://www.phoenixcontact.com/us/products/2804649>

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Surge protection in one-piece 6.2 mm wide DIN rail module for four conductors with common reference potential.

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	2804649
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL02
Product key	CL2211
Catalog page	Page 140 (C-4-2019)
GTIN	4046356428286
Weight per piece (including packing)	66.3 g
Weight per piece (excluding packing)	63.74 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

Product type	Surge protection for MCR technology
Product family	LINETRAB
IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, one-piece
Surge protection fault message	none

Data management status

Article revision	10
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Insulation characteristics

Overvoltage category	III
Pollution degree	2

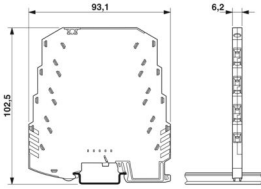
Electrical properties

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

Dimensions

Dimensional drawing	
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

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Insulating material	PBT
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Direction of action	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	$\leq 2 \mu A$
Residual current I_{PE}	$\leq 8 \mu A$
Nominal discharge current I_n (8/20) μs (line-ground)	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-earth)	10 kA
	20 kA (in total)
Nominal pulse current I_{an} (10/1000) μs (line-earth)	50 A
	200 A (in total)
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 60 V$
Residual voltage at I_n (conductor-ground)	$\leq 50 V$
Residual voltage with I_{an} (10/1000) μs (line-earth)	$\leq 60 V$
Voltage protection level U_p (line-earth)	$\leq 60 V$ (C1 - 500 V / 250 A)
	$\leq 95 V$ (C2 - 10 kV / 5 kA)
	$\leq 55 V$ (C3 - 10 A)
	$\leq 55 V$ (C3 - 50 A)
	$\leq 250 V$ (D1 - 500 A)
Response time t_A (line-earth)	$\leq 1 ns$
Input attenuation aE, asym.	typ. 0.3 dB (1 MHz/50 Ω)
	typ. 0.2 dB (350 kHz/150 Ω)
Cut-off frequency f_g (3 dB), asym. (PE) in 50 Ω system	typ. 6 MHz
Cut-off frequency f_g (3 dB), asym. (PE) in 150 Ω system	typ. 2 MHz
Capacity	$\leq 1.3 nF$ (per channel)
Resistance per path	3.3 $\Omega \pm 20 \%$
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
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

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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)

Standards and regulations

Standards/specifications	IEC 61643-21
Note	A2:2012
Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

Mounting

Mounting type	DIN rail: 35 mm
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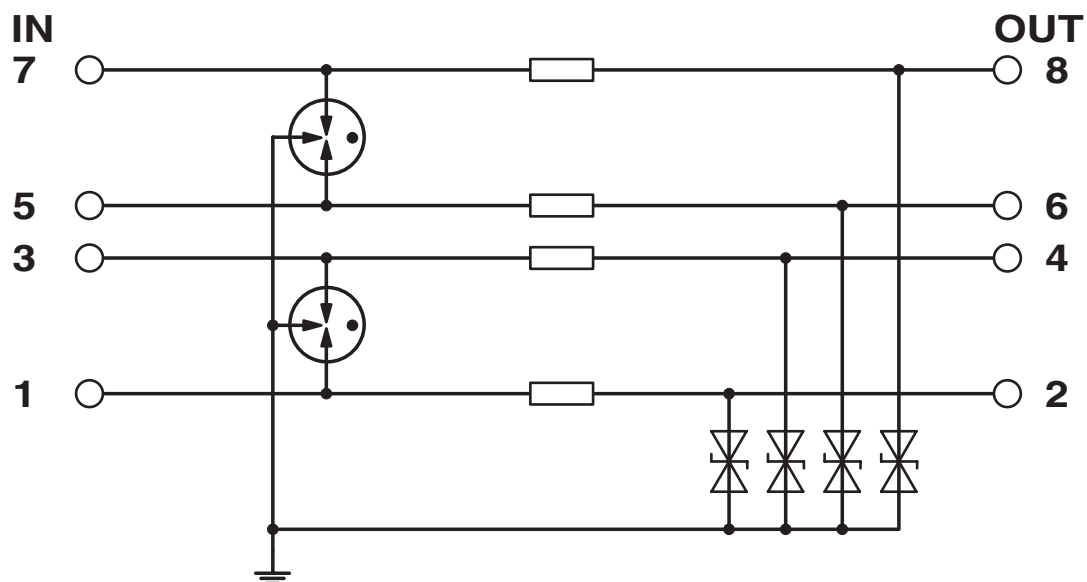
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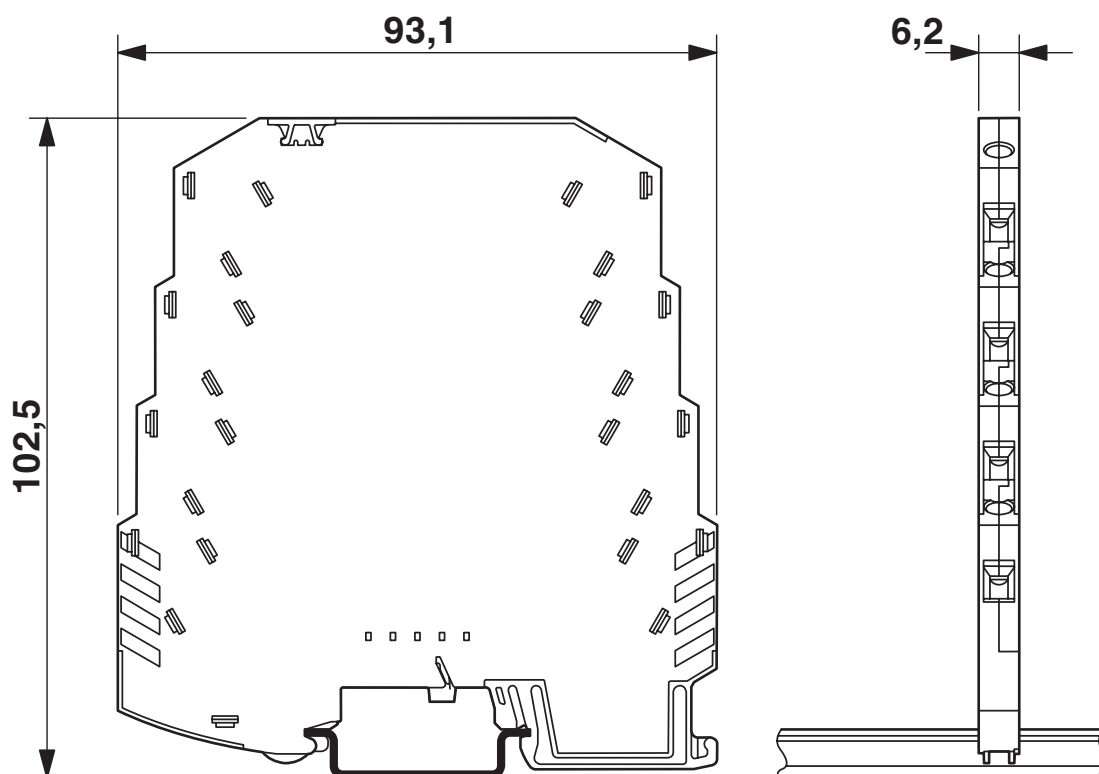
<https://www.phoenixcontact.com/us/products/2804649>

Drawings

Circuit diagram



Dimensional drawing



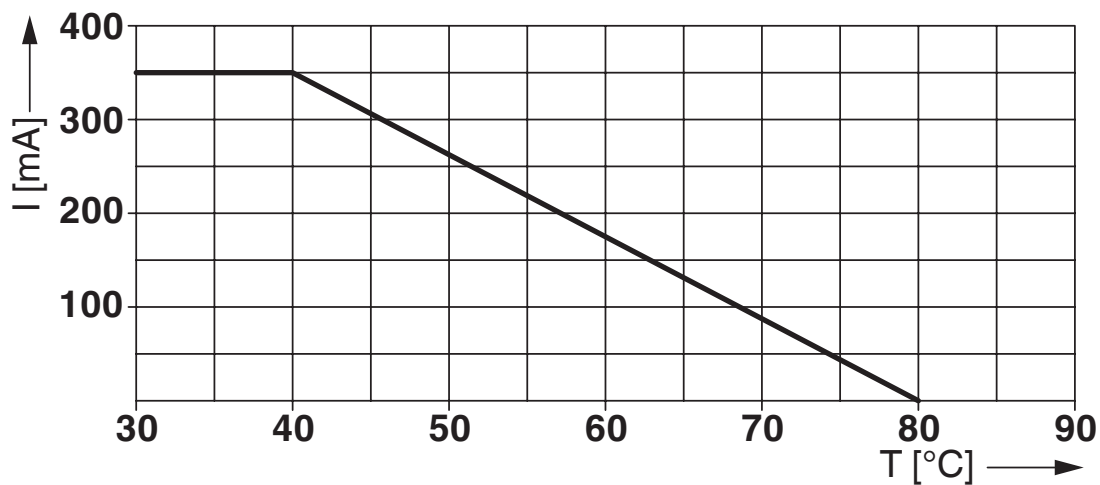
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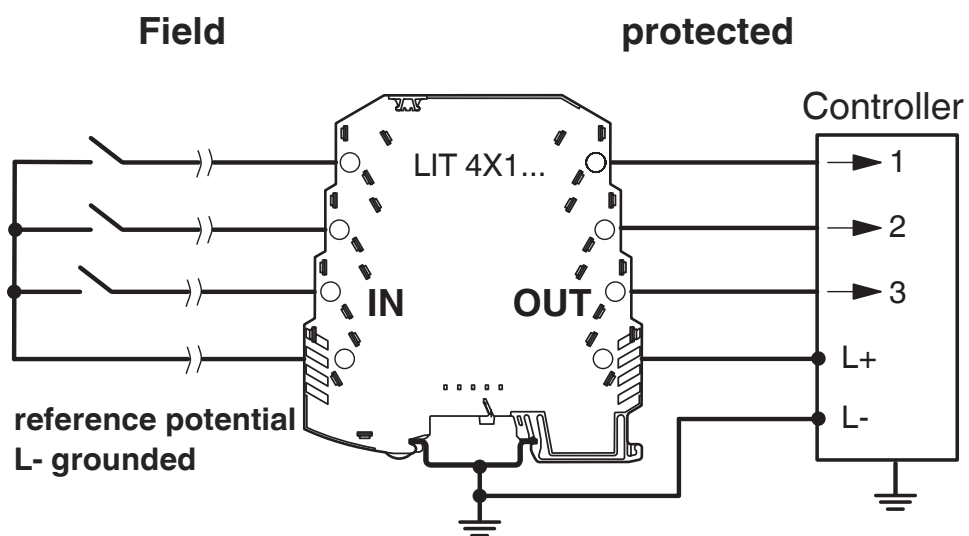
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Diagram



Application drawing



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Approvals

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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

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

ETIM

ETIM 9.0	EC000943
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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	08314f8b-dee6-4342-a061-937fc7633d86

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