

Surge protection device - LIT 1X2-24 - 2804610

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Surge protection in the one-piece 6.2 mm DIN rail module for one floating signal circuit in 2-wire technology. Tested according to the protection types in Ex areas Ex ia IIC/Ex iaD. HART-compatible.

Your advantages

- Can be used in binary, analog, and intrinsically safe circuits
- Protection of up to four signal wires over a design width of 6.2 mm



Key Commercial Data

Packing unit	10 pc
GTIN	
GTIN	4046356428330

Technical data

Dimensions

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

Ambient conditions

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

General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	anthracite grey RAL 7016
Mounting type	DIN rail: 35 mm

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Technical data

General

Type	DIN rail module, one-piece
Direction of action	Line-Line & Line-Earth Ground

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC
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}	$\leq 2 \mu A$
Nominal discharge current I_n (8/20) μs (line-line)	5 kA
Nominal discharge current I_n (8/20) μs (line-earth)	5 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	500 A
	1 kA (in total)
Total discharge current I_{total} (8/20) μs	10 kA
	20 kA (1x)
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
	100 A (in total)
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 60 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 650 V$
Residual voltage at I_n (line-line)	$\leq 70 V$
Residual voltage with I_{an} (10/1000) μs (line-line)	$\leq 50 V$
Voltage protection level U_p (line-line)	$\leq 70 V$ (C2 - 10 kV / 5 kA)
	$\leq 50 V$ (C3 - 10 A)
	$\leq 55 V$ (C3 - 50 A)
Voltage protection level U_p (line-earth)	$\leq 650 V$ (C1 - 500 V / 250 A)
	$\leq 700 V$ (C2 - 10 kV / 5 kA)
	$\leq 650 V$ (C3 - 10 A)
	$\leq 700 V$ (C3 - 50 A)
Response time t_A (line-line)	$\leq 1 ns$
Response time t_A (line-earth)	$\leq 100 ns$
Input attenuation aE, sym.	typ. 0.7 dB (1 MHz / 50 Ω)

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Technical data

Protective circuit

	typ. 0.3 dB (350 kHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm 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
Impulse durability (line-earth)	C1 - 1 kV / 500 A C2 - 10 kV / 5 kA C3 - 50 A D1 - 500 A
Alternating current carrying capacity (line-earth)	5 A - 1 s

Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

Connection, equipotential bonding

Connection method	DIN rail NS35
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Standards and Regulations

Standards/specifications	EN 61643-21 A2:2013
	EN 60079-0 2012
	EN 60079-11 2012
	EN 60079-26 2007
	IEC 60079-0 2011
	IEC 60079-11 2011
	IEC 60079-26 2006

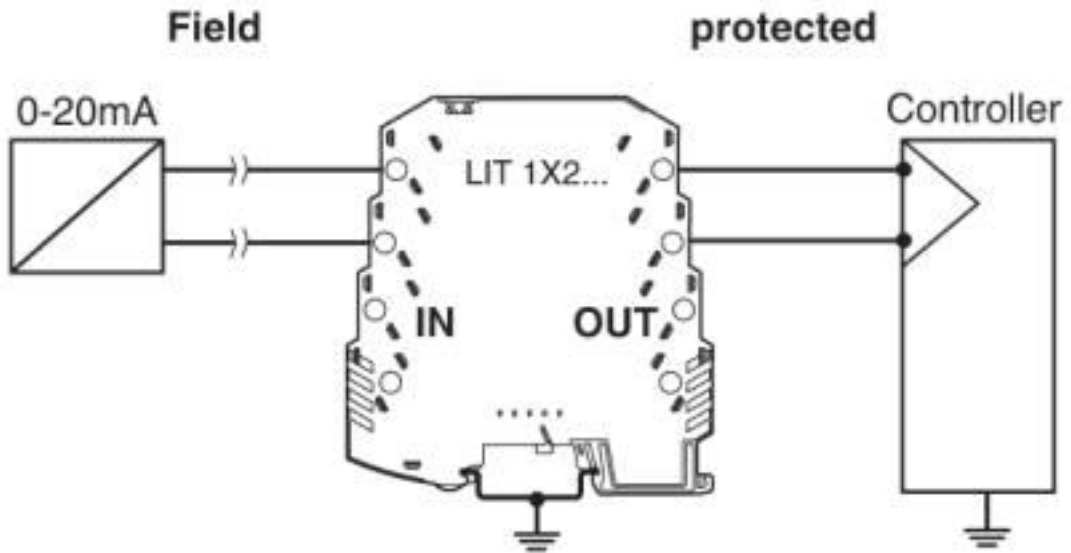
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

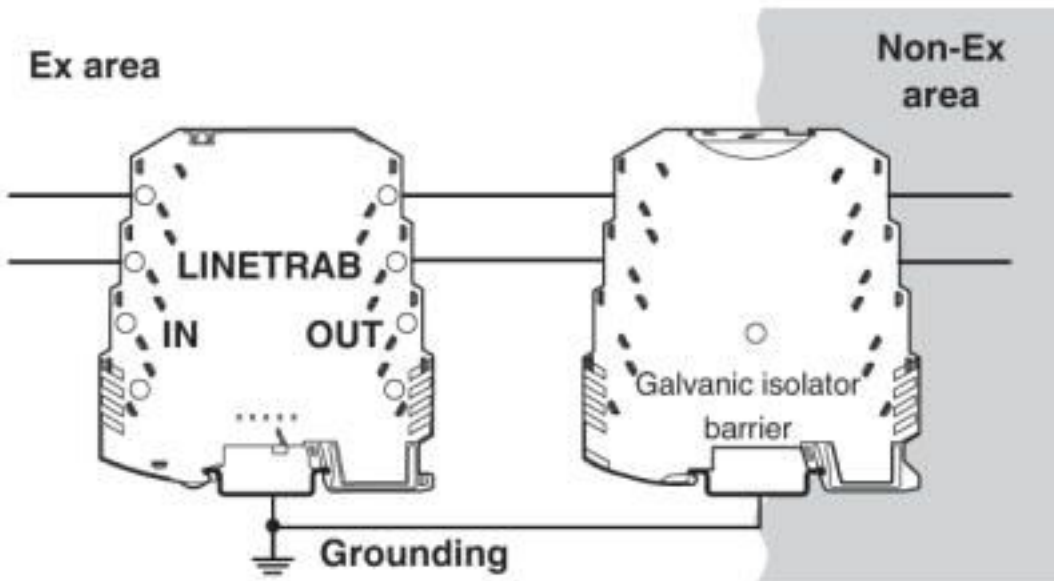
Drawings

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Application drawing

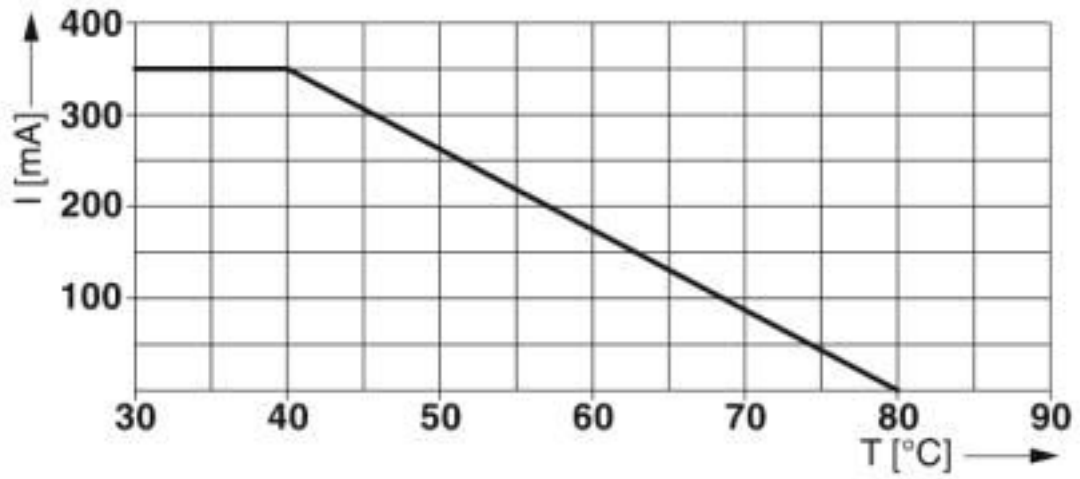


Application drawing

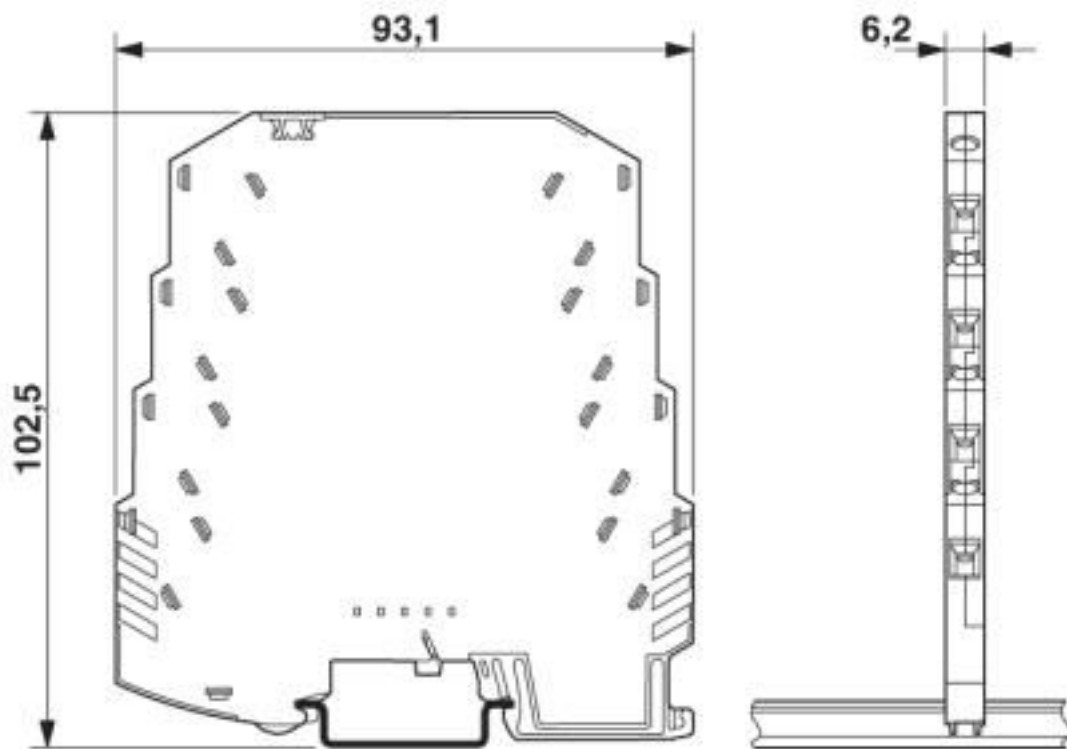


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Diagram

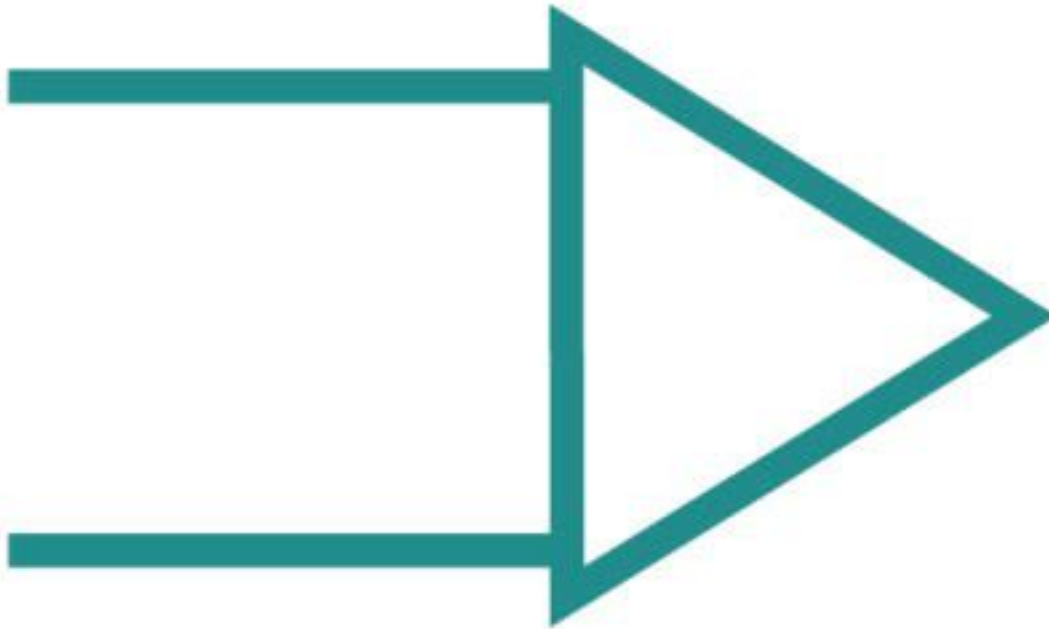


Dimensional drawing

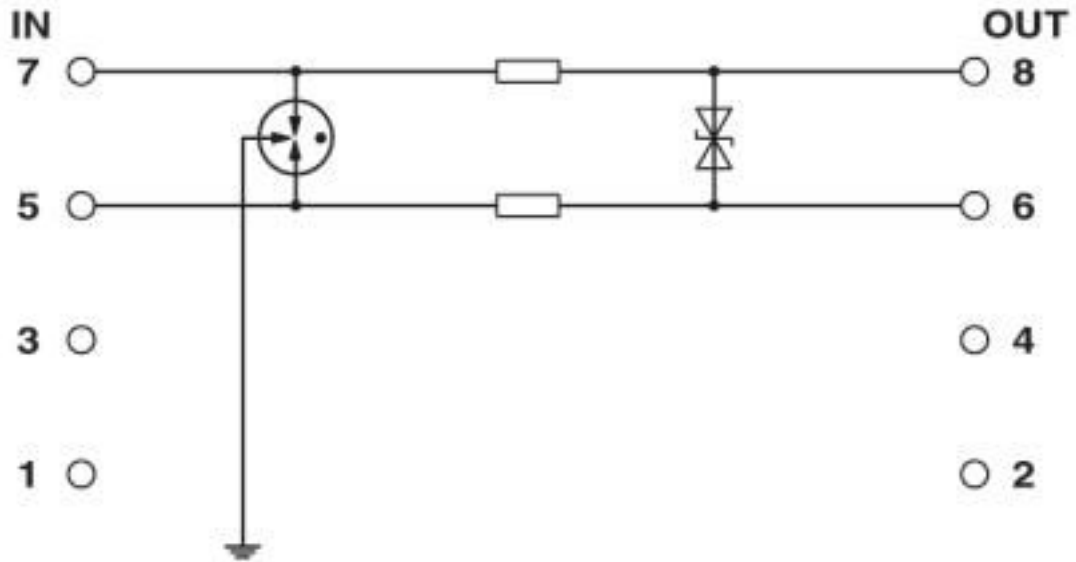


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Pictogram



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

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Classifications

eCl@ss

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
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

DNV GL / UL Listed / EAC / EAC

Ex Approvals

IECEX / ATEX / EAC Ex

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAE00001N8
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Approvals

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 138168
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EAC		EAC-Zulassung
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EAC		RU C-DE.*09.B.00169
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Accessories

Accessories

System adapter

System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.

System cable

Cable - VIP-CAB-FLK16/FR/FR/0,14/2,0M - 2900156



Round cable set; controller: MINI-Analog, TRABTECH LINETRAB LIT; connection 1: IDC/FLK socket strip (1x 16-position, 90 °-out put); connection 2: IDC/FLK socket strip (1x 16-position, 90 °-out put); cable length: 2 m

Cable - VIP-CAB-FLK16/FR/FR/0,14/1,0M - 2900155



Round cable set; controller: MINI-Analog, TRABTECH LINETRAB LIT; connection 1: IDC/FLK socket strip (1x 16-position, 90 °-out put); connection 2: IDC/FLK socket strip (1x 16-position, 90 °-out put); cable length: 1 m

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Accessories

Cable - VIP-CAB-FLK16/FR/FR/0,14/0,5M - 2900154



Round cable set; controller: MINI-Analog, TRABTECH LINETRAB LIT; connection 1: IDC/FLK socket strip (1x 16-position, 90 °-out put); connection 2: IDC/FLK socket strip (1x 16-position, 90 °-out put); cable length: 0.5 m

Terminal marking

Marker for terminal blocks - UC-TM 6 - 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: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

Marker for terminal blocks - UC-TM 6 OG - 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: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

Marker for terminal blocks - UC-TM 6 YE - 0818331



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

Marker for terminal blocks - UC-TM 6 BU - 0818344



Marker for terminal blocks, Sheet, blue, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, 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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Accessories

Marker for terminal blocks - UC-TM 6 RD - 0818357



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

Marker for terminal blocks - UC-TM 6 GN - 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: snap into tall marker groove, 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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[2713175](#) [4B06B-EC1-150LF](#) [SRA6LC](#) [BPMA75D100LV](#) [CX06M](#) [CCTV1](#) [GUS13](#) [GUS14](#) [GUS5](#) [GUS6](#) [VAL-MS 320/3+0-FM](#) [VAL-US-](#)
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