

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.

Product Features

- ✓ 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

package_quantity	10
GTIN	4046356428330

Technical data

Dimensions

Height	93 mm
Width	6.2 mm
Depth	102.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Degree of protection	IP20

General

Housing material	PBT
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	IEC 60664-1
Standards for air and creepage distances	EN 60079-11
Mounting type	DIN rail: 35 mm
Design	Rail-mountable module, one-piece
Direction of action	Line-Line & Line-Earth Ground

Protective circuit

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Technical data

Protective circuit

IEC test classification	C1
IEC test classification	C2
IEC test classification	C3
IEC test classification	D1
Nominal voltage U_N	24 V DC
Maximum continuous operating voltage U_C	25 V AC
Maximum continuous operating voltage U_C	36 V DC
Nominal current I_N	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 (Core-Core)	5 kA
Nominal discharge current I_n (8/20) μs (Core-Earth)	5 kA
Nominal discharge current I_n (8/20) μs (Core-Earth)	10 kA (Total)
Total surge current (8/20) μs	20 kA
Total surge current (10/350) μs	1 kA
Max. discharge current I_{max} (8/20) μs maximum (Core-Core)	10 kA
Max. discharge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA
Max. discharge current I_{max} (8/20) μs maximum (Core-Earth)	20 kA (Total)
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	50 A
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	50 A
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	100 A (Total)
Impulse discharge current (10/350) μs , peak value I_{imp}	500 A
Output voltage limitation at 1 kV/ μs (Core-Core) spike	$\leq 60 V$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 650 V$
Residual voltage at I_n , (conductor-conductor)	$\leq 70 V$
Residual voltage with I_{an} (10/1000) μs (conductor-conductor)	$\leq 50 V$
Voltage protection level U_p (Core-Core)	$\leq 70 V$ (C2 - 10 kV / 5 kA)
Voltage protection level U_p (Core-Core)	$\leq 50 V$ (C3 - 10 A)
Voltage protection level U_p (Core-Core)	$\leq 80 V$ (D1 - 500 A)
Voltage protection level U_p (Core-Earth)	$\leq 650 V$ (C1 - 500 V / 250 A)
Voltage protection level U_p (Core-Earth)	$\leq 700 V$ (C2 - 10 kV / 5 kA)
Voltage protection level U_p (Core-Earth)	$\leq 700 V$ (D1 - 500 A)
Response time t_A (Core-Core)	$\leq 1 ns$
Response time t_A (Core-Earth)	$\leq 100 ns$
Input attenuation a_E , sym.	typ. 0.7 dB (1 MHz / 50 Ω)
Input attenuation a_E , sym.	typ. 0.3 dB (350 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 2 MHz
Capacity	$\leq 1.3 nF$ (per channel)
Resistance in series	3.3 Ω 20 %

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Protective circuit

Max. required back-up fuse	315 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (500 A)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	5 A - 1 s

Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	12

Connection, equipotential bonding

Connection method	DIN rail NS35
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Standards and Regulations

Standards/regulations	IEC 61643-21
Standards/regulations	DIN EN 61643-21

classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

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classifications

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

approvals

IECEX / ATEX / UL Listed / GL /

Approval details

IECEX

ATEX 
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UL Listed 

GL

accessories

System adapter

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



System cable

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accessories

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



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



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



Terminal marking

UC-TM 6 - 0818085



UC-TM 6 OG - 0818328



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accessories

UC-TM 6 YE - 0818331



UC-TM 6 BU - 0818344



UC-TM 6 RD - 0818357



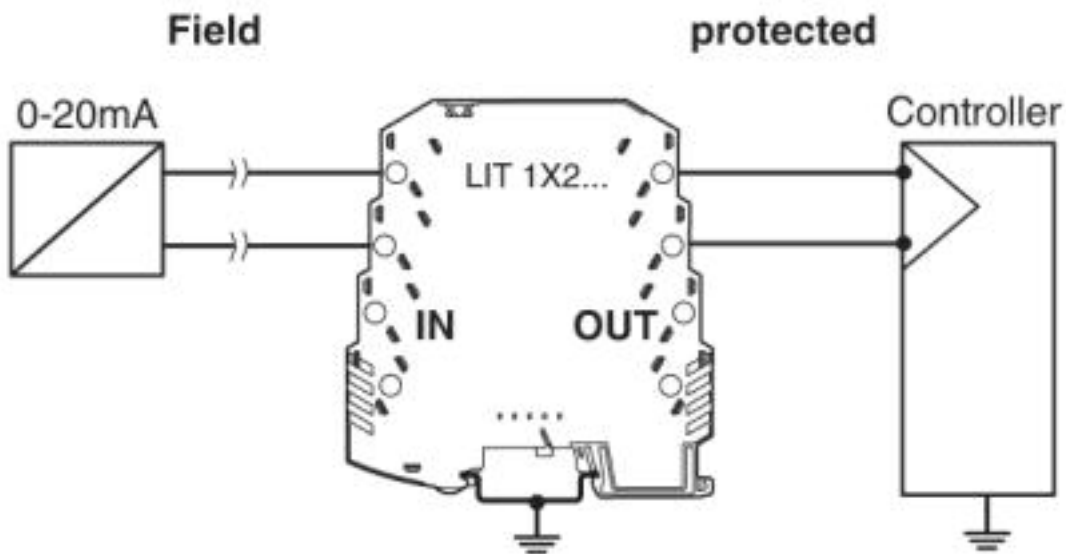
UC-TM 6 GN - 0818360



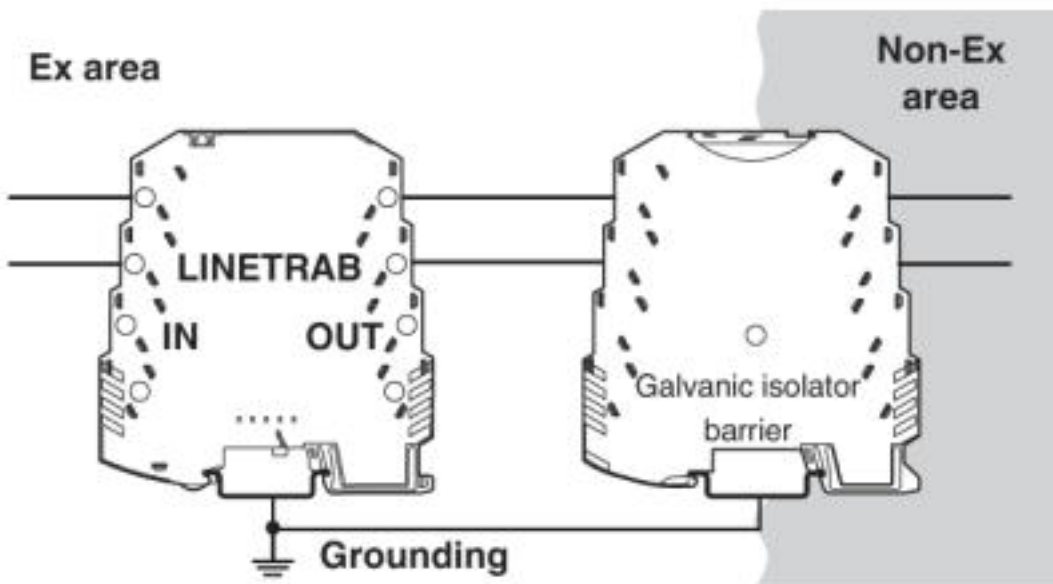
Drawings

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Application drawing

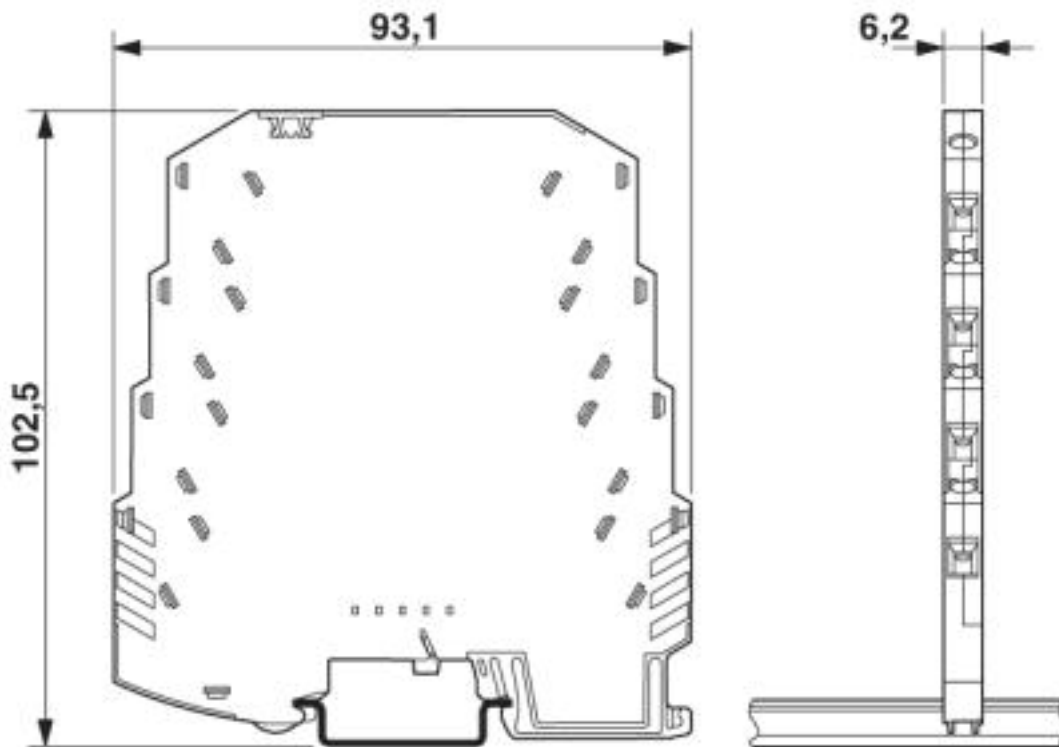


Application drawing



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Dimensioned drawing



Circuit diagram

