

# LIT 1X2-24

Order No.: 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.



## Commercial data

GTIN (EAN)	 4 046356 428330
sales group	J342
Pack	10 pcs.
Customs tariff	85363010
Catalog page information	Page 102 (TT-2011)

## Product notes

WEEE/RoHS-compliant since:  
06/24/2008



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## Technical data

### General

Housing material	PBT
Inflammability class acc. to UL 94	V0
Color	black

Standards for air and creepage distances	IEC 60664-1
	EN 60079-11
Total surge current (8/20) $\mu$ s	20 kA
Total surge current (10/350) $\mu$ s	1 kA
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Mounting type	DIN rail: 35 mm
Design	Rail-mountable module, one-piece
Degree of protection	IP20
Direction of action	Line-Line & Line-Earth Ground
Width	6.20 mm
Height	102.50 mm
Length	93.00 mm

**Protective circuit**

IEC category	C1
	C2
	C3
	D1
Nominal voltage $U_N$	24 V DC
Maximum continuous operating voltage $U_C$	25 V AC
	36 V DC
Nominal current $I_N$	350 mA (40°C)
Operating effective current $I_C$ at $U_C$	$\leq 2 \mu$ A
Ground conductor current $I_{PE}$	$\leq 2 \mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Core)	5 kA
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)	5 kA
	10 kA (Total)
Total surge current (8/20) $\mu$ s	20 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Core)	10 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Earth)	10 kA
	20 kA (Total)
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Core)	50 A

Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Earth)	50 A
	100 A (Total)
Lightning test current (10/350) $\mu$ s, peak value $I_{imp}$	500 A
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) spike	$\leq 60$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 650$ V
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 70$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-conductor)	$\leq 50$ V
Protection level $U_p$ (Core-Core)	$\leq 70$ V (C2 - 10 kV / 5 kA)
	$\leq 50$ V (C3 - 10 A)
	$\leq 80$ V (D1 - 500 A)
Protection level $U_p$ (Core-Earth)	$\leq 650$ V (C1 - 500 V / 250 A)
	$\leq 700$ V (C2 - 10 kV / 5 kA)
	$\leq 700$ V (D1 - 500 A)
Response time $t_A$ (Core-Core)	$\leq 1$ ns
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
Input attenuation aE, sym.	Typ. 0.7 dB (1 MHz / 50 $\Omega$ )
	Typ. 0.3 dB (350 kHz / 150 $\Omega$ )
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 $\Omega$ 20 %
Max. required back-up fuse	315 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	C3 (25 A)
	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 <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
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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**Connection, protective circuit**

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

**Certificates / Approvals**

Certification	UL Listed
Certification Ex:	IECEX, KEMA-EX

**Accessories**

Item	Designation	Description
<b>Cable/conductor</b>		
2900154	VIP-CAB-FLK16/FR/FR/0,14/0,5M	Assembled round cable with two molded 16-pos. socket strips <b>(1:1 connection)</b> . The cable has 90° connectors on both sides for connecting MINI-Analog and TRABTECH LINETRAB LIT; cable length: 0.5 m

2900155	VIP-CAB-FLK16/FR/FR/0,14/1,0M	Assembled round cable with two molded 16-pos. socket strips <b>(1:1 connection)</b> . The cable has 90° connectors on both sides for connecting MINI-Analog and TRABTECH LINETRAB LIT; cable length: 1 m
2900156	VIP-CAB-FLK16/FR/FR/0,14/2,0M	Assembled round cable with two molded 16-pos. socket strips <b>(1:1 connection)</b> . The cable has 90° connectors on both sides for connecting MINI-Analog and TRABTECH LINETRAB LIT; cable length: 2 m

**General**

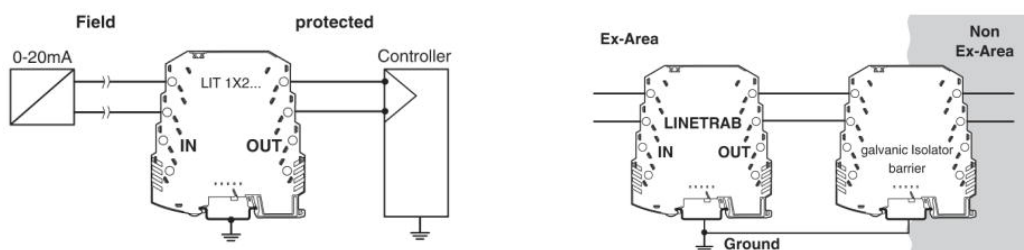
2811268	MINI MCR-SL-V8-FLK 16-A	Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.
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**Marking**

0818085	UC-TM 6	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK and CMS-P1-PLOTTER, color: white
0818344	UC-TM 6 BU	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK and CMS-P1-PLOTTER, color: blue
0818360	UC-TM 6 GN	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK and CMS-P1-PLOTTER, color: green
0818328	UC-TM 6 OG	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK and CMS-P1-PLOTTER, color: orange
0818357	UC-TM 6 RD	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK and CMS-P1-PLOTTER, color: red
0818331	UC-TM 6 YE	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK and CMS-P1-PLOTTER, color: yellow

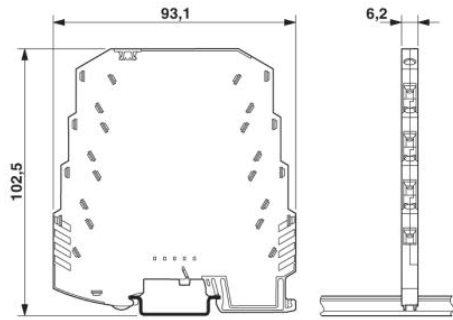
**Diagrams/Drawings**

## Application drawing



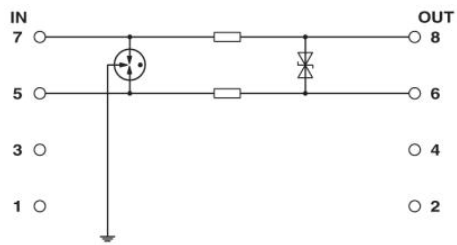
Dimensioned drawing

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Circuit diagram

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