

# LIT 2-12

Order No.: 2804694



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2804694>

Surge protection in one-piece 6.2 mm wide DIN rail module for two floating signal wires. Tested in acc. with the protection types in Ex areas: Ex ia IIC / Ex iaD.



Commercial data	
GTIN (EAN)	 4 046356 462198
Note	Made-to-order
sales group	J342
Pack	10 pcs.
Customs tariff	85363010
Catalog page information	Page 98 (TT-2009)

**Product notes**

WEEE/RoHS-compliant since: 10/27/2008

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Technical data	
<b>General</b>	
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 $U_N$	12 V DC
Maximum continuous operating voltage $U_C$	13 V AC
	18 V DC
Nominal current $I_N$	500 mA (40°C)
Operating effective current $I_C$ at $U_C$	$\leq 2 \mu$ A (per path)
Ground conductor current $I_{PE}$	$\leq 2 \mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Core)	350 A
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)	350 A
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)	70 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	$\leq 50$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 650$ V
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 50$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-conductor)	$\leq 50$ V
Protection level $U_p$ (Core-Core)	$\leq 50$ V (C1 - 500 V / 250 A)
	$\leq 50$ V (C3 - 10 A)
Protection level $U_p$ (Core-Earth)	$\leq 650$ V (C1 - 500 V / 250 A)
	$\leq 650$ 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 $a_E$ , sym.	Typ. 0.1 dB (1 MHz / 50 $\Omega$ )
	Typ. 0.1 dB (300 kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 50 Ohm system	Typ. 5 MHz
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 100 Ohm system	Typ. 1.5 MHz
Capacity	$\leq 1.5$ nF (per path)
Resistance in series	0 $\Omega$
Max. required back-up fuse	500 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (500 V / 250 A)
	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
<b>Connection data</b>	
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**

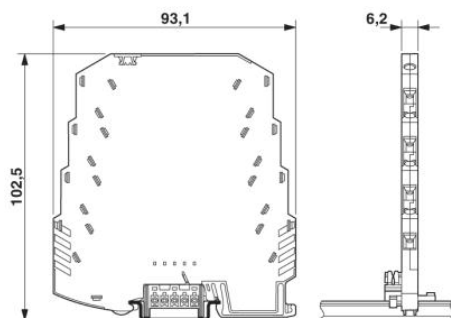
Item	Designation	Description
<b>General</b>		
1857919	IMC 1,5/ 5-ST-3,81	Plug component, Nominal current: 8 A, Rated voltage (III/2): 160 V, Number of positions: 5, Pitch: 3.81 mm, Connection method: Screw connection, Color: green
2969401	ME 6,2 TBUS-2 1,5/5-ST-3,81KMGY	DIN rail bus connector for potential bridging of devices arranged next to one another across all modules.

**Marking**

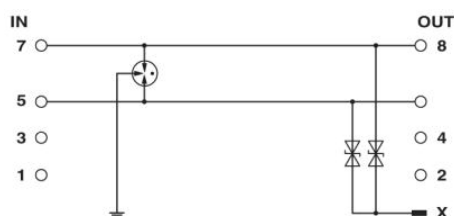
0818085	UC-TM 6	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK X1 and CMS-P1-PLOTTER, color: white
0818344	UC-TM 6 BU	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK X1 and CMS-P1-PLOTTER, color: blue
0818360	UC-TM 6 GN	UniCard materials for labeling terminal blocks with a marker groove,80-section, can be labeled with BLUEMARK X1 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 X1 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 X1 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 X1 and CMS-P1-PLOTTER, color: yellow

**Diagrams/Drawings**

## Dimensioned drawing



## Circuit diagram



**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



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#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.