

Surge protection device - LIT 4-12



2804704

<https://www.phoenixcontact.com/us/products/2804704>

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Surge protection in one-piece 6.2 mm wide DIN rail module for four floating signal wires.



Your advantages

- Space saving with a narrow overall width of just 6□mm
- Install quickly and error-free with DIN rail connectors
- No signal interference with reliable attenuation

Commercial Data

Item number	2804704
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C07
Product Key	CL2211
Catalog Page	Page 145 (C-4-2019)
GTIN	4046356462204
Weight per Piece (including packing)	74.85 g
Weight per Piece (excluding packing)	61.87 g
Customs tariff number	85363010
Country of origin	DE

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Technical Data

Product properties

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

Insulation characteristics

Overvoltage category	III
Pollution degree	2

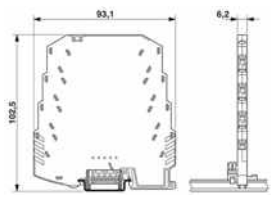
Connection data

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 solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

Ex data

Maximum inner capacitance C_i	typ. 6 nF
Max. internal inductance L_i	< 1 μ H
Max. input current I_i	500 mA ($T_4 / \leq 80^\circ\text{C}$)
	500 mA ($T_5 / \leq 50^\circ\text{C}$)
	500 mA ($T_6 / \leq 40^\circ\text{C}$)
Max. input voltage U_i	18 V DC
max. input power P_i	550 mW
Maximum inner time factor (R_i/L_i)	10 μ s

Dimensions

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

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Material specifications

Color	anthracite grey RAL 7016
Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Maximum continuous voltage U_C	18 V DC
	13 V AC
Rated current	500 mA (40 °C)
Operating effective current I_C at U_C	$\leq 2 \mu\text{A}$
Residual current I_{PE}	$\leq 4 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (line-line)	350 A
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	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-line)	350 A
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)	70 A
Nominal pulse current I_{an} (10/1000) μs (line-earth)	50 A
	200 A (in total)
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 50 \text{ V}$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 650 \text{ V}$
Residual voltage at I_n (conductor-conductor)	$\leq 50 \text{ V}$
Residual voltage with I_{an} (10/1000) μs (line-line)	$\leq 50 \text{ V}$
Voltage protection level U_p (line-line)	$\leq 50 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 35 \text{ V}$ (C3 - 10 A)
	$\leq 40 \text{ V}$ (C3 - 70 A)
Voltage protection level U_p (line-earth)	$\leq 650 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 650 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 650 \text{ V}$ (C3 - 10 A)
	$\leq 700 \text{ V}$ (C3 - 50 A)
	$\leq 700 \text{ V}$ (D1 - 500 A)
Response time t_A (line-line)	$\leq 1 \text{ ns}$
Response time t_A (line-earth)	$\leq 100 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB (1.5 MHz/50 Ω)

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	typ. 0.3 dB (500 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ω system	typ. 5 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ω system	typ. 1.7 MHz
Capacity	≤ 1.5 nF (per path)
Resistance per path	0 Ω
Surge protection fault message	none
Max. required back-up fuse	500 mA (T)
Impulse durability (line-line)	C1 - 500 V / 250 A C3 - 70 A
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

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 (above mean sea level))

Approval data

Conformity/Approvals

ATEX	<input type="checkbox"/> II 1 G Ex ia IIC T4...T6
	<input type="checkbox"/> II 1 D Ex iaD 20 T85°C...135°C
IECEX	Ga Ex ia IIC T4...T6
	Ex iaD 20 T85 °C...T135 °C

Standards and regulations

Standards/specifications	EN 61643-21
Standards/specifications	EN 60079-0
Standards/specifications	EN 60079-11
Standards/specifications	EN 60079-26
Standards/specifications	IEC 60079-0
Standards/specifications	IEC 60079-11
Standards/specifications	IEC 60079-26

Mounting

Mounting type	DIN rail: 35 mm
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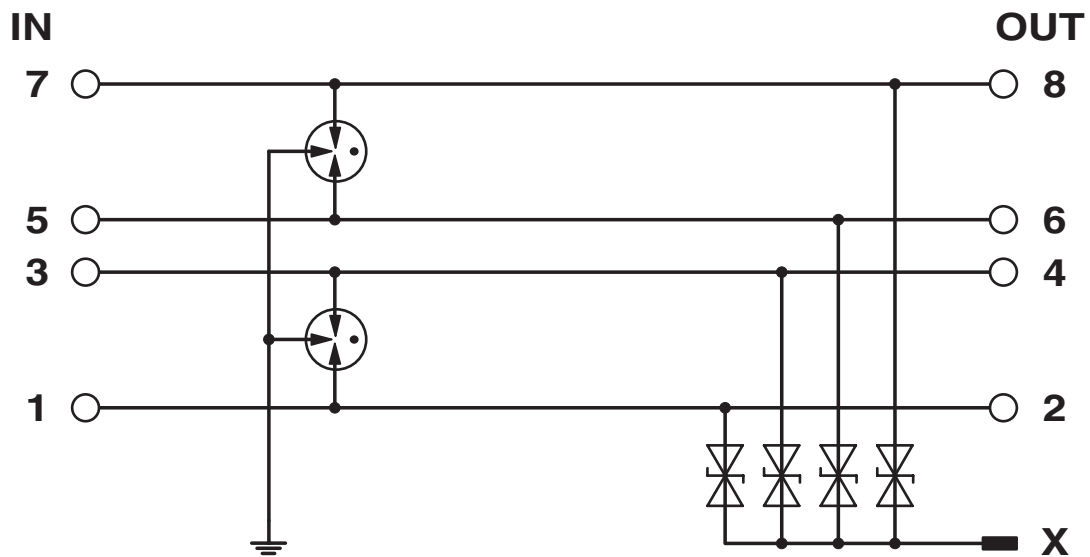
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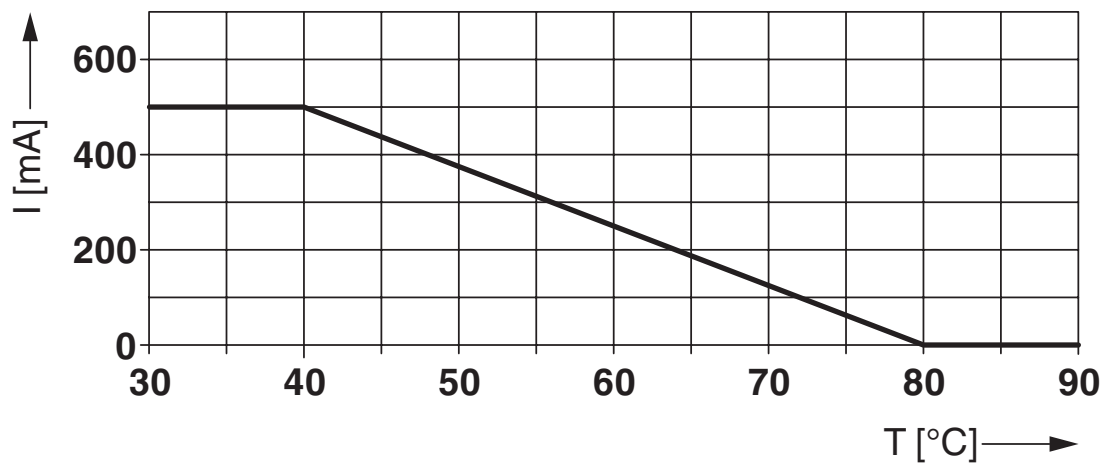
<https://www.phoenixcontact.com/us/products/2804704>

Drawings

Circuit diagram



Diagram



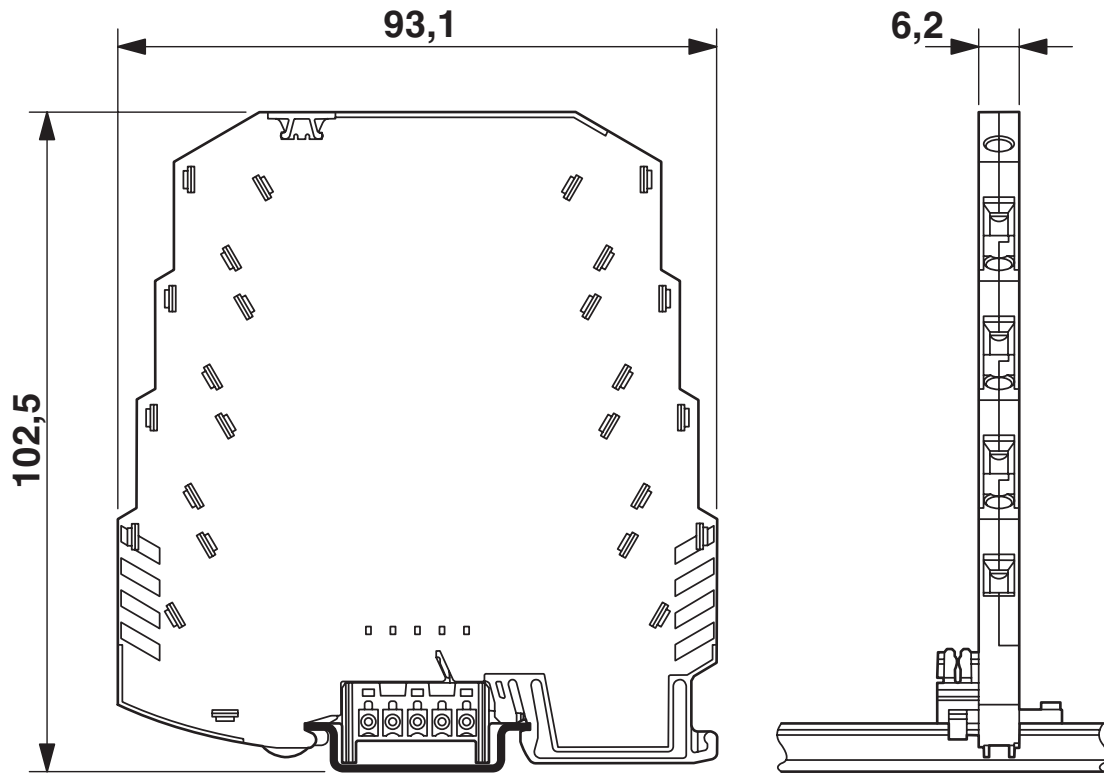
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Dimensional drawing



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Approvals



EAC

Approval ID: RU C-DE.*09.B.00169



DNV GL

Approval ID: TAE00001N8

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

-

-



UL Listed

Approval ID: FILE E 138168



ATEX

Approval ID: KEMA 09ATEX0051 X



EAC Ex

Approval ID: RU C-DE.**87.B.00420



IECEx

Approval ID: IECEx KEM 09.0018X



CCC

Approval ID: 2020322316000816



NEPSI

Approval ID: GYJ20.1176X

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Classifications

ECLASS

ECLASS-9.0	27130807
ECLASS-10.0.1	27130807
ECLASS-11.0	27130807

ETIM

ETIM 8.0	EC000943
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UNSPSC

UNSPSC 21.0	39121600
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

DIN rail bus connectors

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81KMGY - 2969401

<https://www.phoenixcontact.com/us/products/2969401>

DIN rail bus connector for potential bridging of devices arranged next to one another across all modules.



Printed-circuit board connector

Printed-circuit board connector - IMC 1,5/ 5-ST-3,81 - 1857919

<https://www.phoenixcontact.com/us/products/1857919>

PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: IMC 1,5/..-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard



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Marker for terminal blocks

Marker for terminal blocks - UC-TM 6 - 0818085

<https://www.phoenixcontact.com/us/products/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: snapped, 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

Marker for terminal blocks - UC-TM 6 OG - 0818328

<https://www.phoenixcontact.com/us/products/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: snapped, 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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Marker for terminal blocks

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

<https://www.phoenixcontact.com/us/products/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: snapped, 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

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

<https://www.phoenixcontact.com/us/products/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: snapped, 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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Marker for terminal blocks

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

<https://www.phoenixcontact.com/us/products/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: snapped, 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

Marker for terminal blocks - UC-TM 6 GN - 0818360

<https://www.phoenixcontact.com/us/products/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: snapped, 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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