

Surge protection device - TT-2-PE/S1- 24DC - 2839538

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Double-level modular terminal block with two-stage surge protection for one two-wire impedance-sensitive signal circuit, separate ground connection, nominal voltage: 24 V DC.

Why buy this product

- Versions with and without disconnect knife
- Protection of a floating double wire in which the introduction of additional resistors for decoupling the protection stages leads to problems
- Multi-stage modular terminal blocks with screw connection technology
- Disconnection of signal circuits by disconnect knife



Key Commercial Data

Packing unit	10 pc
GTIN	 4 017918 183189
GTIN	4017918183189

Technical data

Dimensions

Height	79.6 mm
Width	6.2 mm
Depth	54.6 mm

Ambient conditions

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

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0

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Technical data

General

Color	jet black RAL 9005
Standards for clearances and creepage distances	IEC 60664-1
Mounting type	DIN rail: 35 mm
Type	Double-level terminal block with PE foot – separate PE connection
Number of positions	2
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	30 V DC
	21 V AC
Rated current	10 A (40 °C)
Operating effective current I_C at U_C	$\leq 1 \mu A$
Residual current I_{PE}	$\leq 1 \mu A$
Nominal discharge current I_n (8/20) μs (line-line)	300 A
Nominal discharge current I_n (8/20) μs (line-earth)	5 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	500 A
Total discharge current I_{total} (8/20) μs	10 kA
Nominal pulse current I_{an} (10/1000) μs (line-line)	60 A
Nominal pulse current I_{an} (10/1000) μs (line-earth)	100 A
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 45 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 700 V$
Output voltage limitation at 1 kV/ μs (line-line) static	$\leq 45 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 700 V$
Voltage protection level U_p (line-line)	$\leq 50 V$ (C1 - 500 V / 250 A)
	$\leq 45 V$ (C3 - 10 A)
	$\leq 50 V$ (C3 - 25 A)
Voltage protection level U_p (line-earth)	$\leq 900 V$ (C2 - 10 kV / 5 kA)
	$\leq 650 V$ (C1 - 1 kV/500 A)
	$\leq 850 V$ (C3 - 25 A)
	$\leq 850 V$ (D1 - 500 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 dB ($\leq 1 MHz / 50 \Omega$)
	typ. 0 dB ($\leq 200 kHz / 150 \Omega$)
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. 2.2 MHz

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Protective circuit

Capacity (line-line)	< 4 nF
Surge protection fault message	none
Max. required back-up fuse	10 A (T/IEC 60127-2/3)
Impulse durability (line-line)	C1 - 500 V / 250 A C3 - 25 A
Impulse durability (line-earth)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 25 A D1 - 500 A
Alternating current carrying capacity (line-line)	1 A - 1 s
Alternating current carrying capacity (line-earth)	1A - 1s

Connection data

Connection method	Screw connection
Connection method IN	Screw terminal blocks
Connection method OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.6 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 ... 4 mm ²
Conductor cross section AWG	24 ... 14

Standards and Regulations

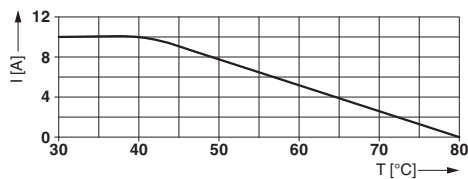
Standards/specifications	EN 61643-21 2001 + A1:2009
	IEC 61643-21 2000 + A1:2008

Environmental Product Compliance

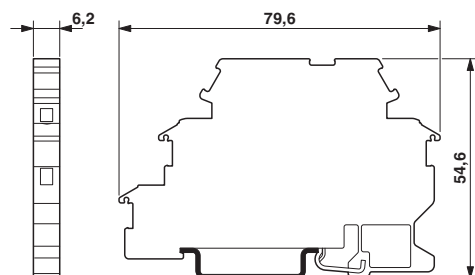
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Diagram

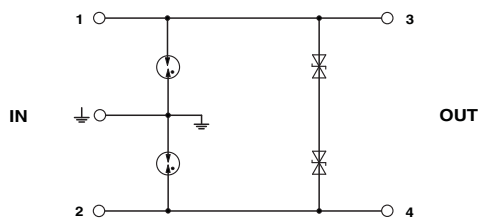


Dimensional drawing

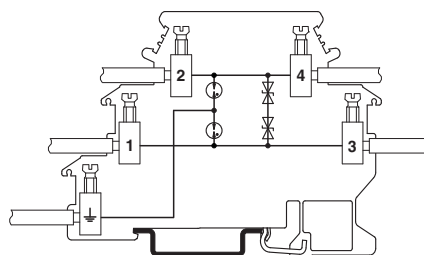


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Circuit diagram



Schematic diagram



Approvals

Approvals

Approvals

UL Listed / EAC / EAC / DNV GL

Ex Approvals

Approval details

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.A*30.B01561
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DNV GL	http://exchange.dnv.com/tari/	TAE00001N7
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