

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

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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.

Your advantages

- ✓ 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

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

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

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

Technical data

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)	1 A - 1 s

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

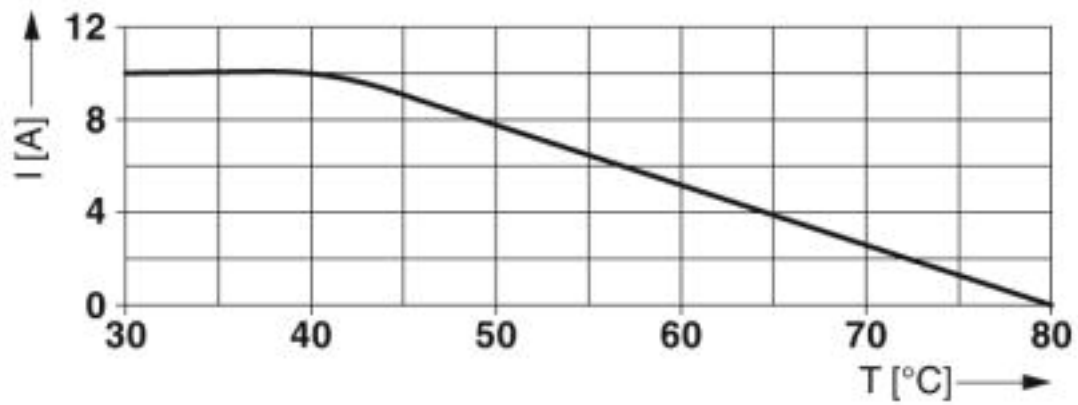
Environmental Product Compliance

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

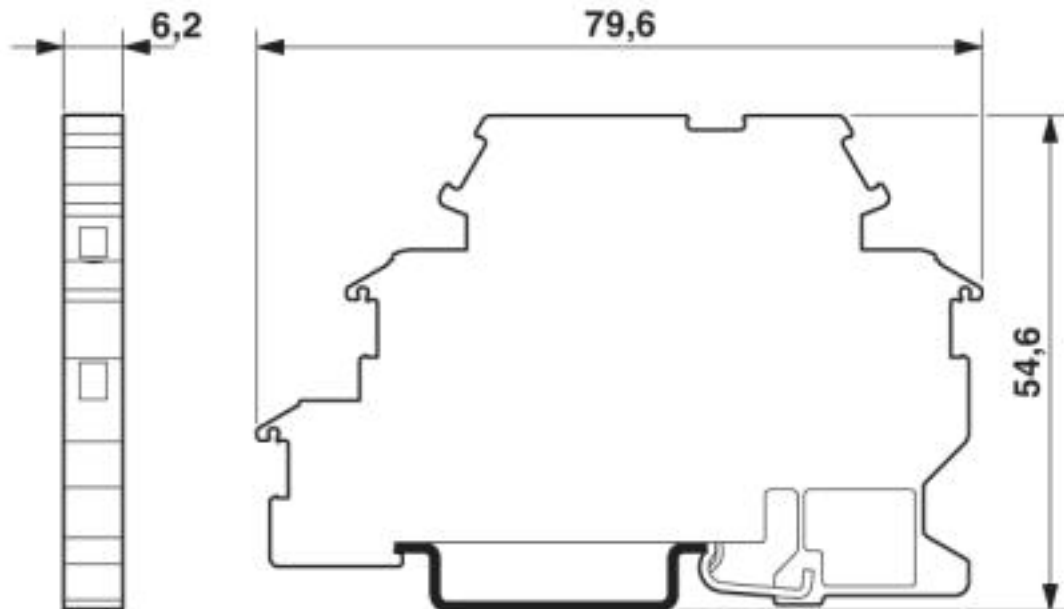
Drawings

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

Diagram

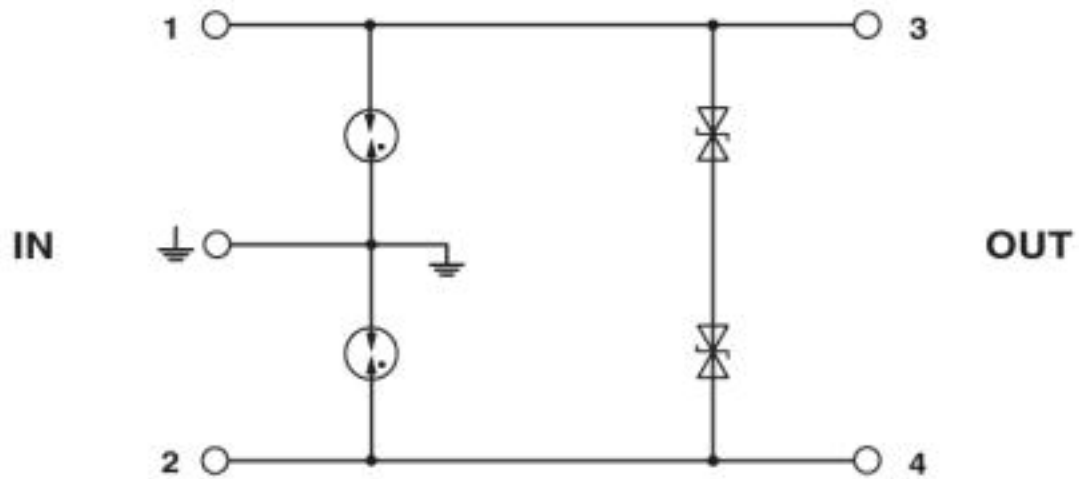


Dimensional drawing

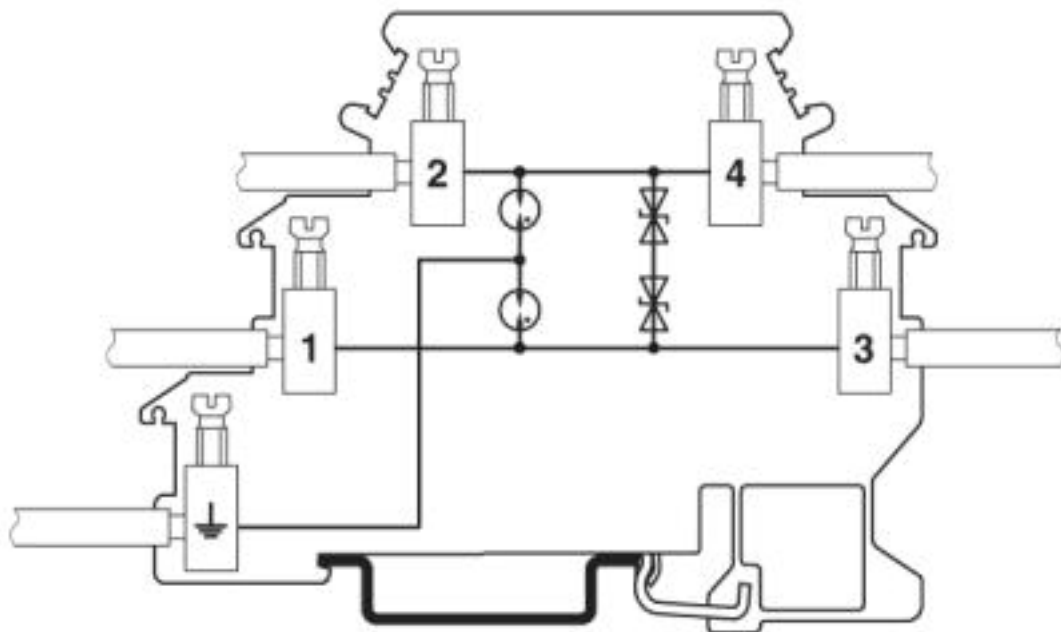


Surge protection device - TT-2-PE/S1- 24DC - 2839538

Circuit diagram



Schematic diagram



Approvals

Approvals

Approvals

DNV GL / UL Listed / EAC / EAC

Ex Approvals

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

Approvals

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAE00001N7
UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 138168
EAC			EAC-Zulassung
EAC			RU C- DE.A*30.B01561

Phoenix Contact 2020 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>