

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.

Product Features

- 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	1 pc
Weight per Piece (excluding packing)	28.0 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	79.6 mm
Width	6.2 mm
Depth	54.6 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
---------------------------------	------------------

General

Housing material	PA 6.6
------------------	--------

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

Technical data

General

Flammability rating according to UL 94	V-0
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
Nominal current I_N	10 A (40°C)
Operating effective current I_C at U_C	$\leq 1 \mu\text{A}$
Residual current I_{PE}	$\leq 1 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (Core-Core)	300 A
Nominal discharge current I_n (8/20) μs (Core-Earth)	5 kA
Pulse discharge current I_{imp} (10/350) μs (core-ground)	500 A
Total surge current (8/20) μs	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	60 A
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	100 A
Impulse discharge current (10/350) μs , peak value I_{imp}	500 A
Output voltage limitation at 1 kV/ μs (Core-Core) spike	$\leq 45 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 700 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Core) static	$\leq 45 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Earth) static	$\leq 700 \text{ V}$
Voltage protection level U_p (core-core)	$\leq 50 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 45 \text{ V}$ (C3 - 10 A)
	$\leq 50 \text{ V}$ (C3 - 25 A)
Voltage protection level U_p (core-ground)	$\leq 900 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 650 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 850 \text{ V}$ (C3 - 25 A)
	$\leq 850 \text{ V}$ (D1 - 500 A)

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

Technical data

Protective circuit

Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0 dB (≤ 1 MHz / 50 Ω)
	typ. 0 dB (≤ 200 kHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 6 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 2.2 MHz
Capacity (Core-Core)	< 4 nF
Max. required back-up fuse	10 A (T/IEC 60127-2/3)
Impulse durability (conductor-conductor)	C1 - 500 V / 250 A
	C3 - 25 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 25 A
	D1 - 500 A
Alternating current carrying capacity (conductor-conductor)	1 A - 1 s
Alternating current carrying capacity (conductor-ground)	1A - 1s

Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Tightening torque	0.6 Nm
Stripping length	8 mm
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	4 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801

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

Classifications

eCl@ss

eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals


GL / UL Listed / EAC / EAC

Ex Approvals

Approvals submitted

Approval details

GL

UL Listed 

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

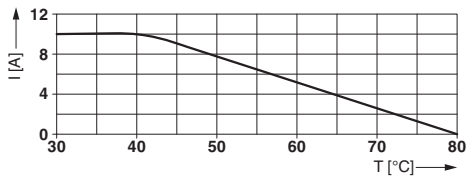
Approvals

EAC

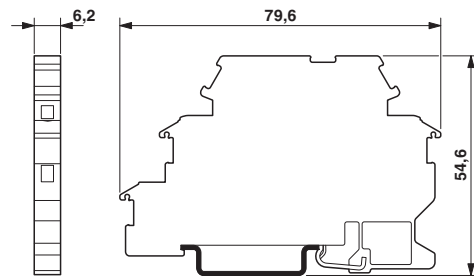
EAC

Drawings

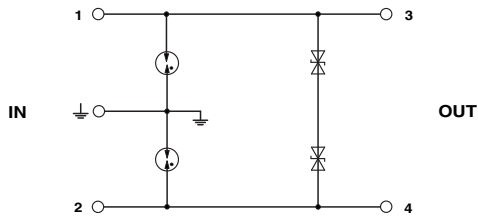
Diagram



Dimensional drawing



Circuit diagram



Schematic diagram

