

## Surge protection device - TT-2/2-M-24DC - 2920722

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>)




Modular terminal block with two-stage surge protection for two signal wires with common reference potential, disconnect knife on both signal paths, separate ground connection, nominal voltage: 24 V DC

### Your advantages

- Versions with and without disconnect knife
- Protection of two signal wires with common reference potential
- Multi-stage modular terminal blocks with screw connection technology
- Disconnection of signal circuits by disconnect knife



### Key Commercial Data

Packing unit	14 pc
GTIN	 4 046356 182850
GTIN	4046356182850

### Technical data

#### Dimensions

Height	94.8 mm
Width	6.2 mm
Depth	69.1 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-2/2-M-24DC - 2920722

## Technical data

### General

Color	jet black RAL 9005
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-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	300 mA (40 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu\text{A}$
Residual current $I_{PE}$	$\leq 10 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-line)	5 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (line-earth)	500 A
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	10 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	30 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 45 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) static	$\leq 45 \text{ V}$
Residual voltage at $I_n$ (line-earth)	$\leq 45 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	$\leq 50 \text{ V}$
Voltage protection level $U_p$ (line-earth)	$\leq 55 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 85 \text{ V}$ (C2 - 10 kV / 5 kA)
Response time $t_A$ (line-earth)	$\leq 1 \text{ ns}$
Input attenuation aE, asym.	typ. 0.5 dB ( $\leq 1.5 \text{ MHz} / 50 \Omega$ )
	typ. 0.2 dB ( $\leq 400 \text{ kHz} / 150 \Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 50 Ohm system	typ. 6 MHz
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 Ohm system	typ. 2.5 MHz
Capacity (line-earth)	$< 2.5 \text{ nF}$
Resistance in series	$4.7 \Omega \pm 20 \%$
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
Impulse durability (line-earth)	C1 - 500 V / 250 A
	C2 - 10 kV / 5 kA
	D1 - 500 A

# Surge protection device - TT-2/2-M-24DC - 2920722

## Technical data

### 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 <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section solid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 14

### Standards and Regulations

Standards/specifications	EN 61643-21 2001
	IEC 61643-21 2000

### Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Approvals

### Approvals


#### Approvals

UL Listed / EAC / EAC

#### Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
-----------	---	---	---------------

EAC		EAC-Zulassung
-----	---	---------------

## Surge protection device - TT-2/2-M-24DC - 2920722

### Approvals

EAC



RU C-  
DE.A\*30.B01561

Phoenix Contact 2019 © - 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>