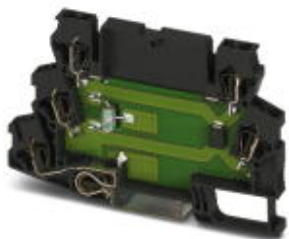


Surge protection device - TT-ST-2-PE/S1-24DC - 2801055


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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.



Key Commercial Data

Packing unit	10 STK
GTIN	 4 046356 678704
GTIN	4046356678704

Technical data

Dimensions

Height	100 mm
Width	6.2 mm
Depth	63.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Degree of protection	IP20

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	black
Standards for clearances and creepage distances	IEC 60664-1
Note on clearances and creepage distances	2007
Mounting type	DIN rail: 35 mm
Design	Double-level terminal block
Number of positions	2
Direction of action	Line-Line & Line-Earth Ground

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Technical data

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC (21 V AC)
Maximum continuous voltage U_C	30 V DC
	21 V AC
Rated current	350 mA
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	500 A (per path)
Total discharge current I_{total} (8/20) μs	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	10 A
Nominal pulse current I_{an} (10/1000) μs (Core-Earth)	50 A
Output voltage limitation at 1 kV/ μs (core-core) static	$\leq 45 \text{ V}$
Output voltage limitation at 1 kV/ μs (core-earth) static	$\leq 950 \text{ V}$
Output voltage limitation at (8/20) μs (core-core)	$\leq 50 \text{ V}$ (at 300 A)
Output voltage limitation at (8/20) μs (core-earth)	$\leq 950 \text{ V}$ (at 5 kA)
Residual voltage at I_n (conductor-conductor)	$\leq 50 \text{ V}$
Residual voltage at I_n (conductor-ground)	$\leq 950 \text{ V}$
Voltage protection level U_p (core-core)	$\leq 50 \text{ V}$ (C1 - 0,6 kV / 300 A)
	$\leq 45 \text{ V}$ (C3 - 10 A)
Voltage protection level U_p (core-ground)	$\leq 950 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 950 \text{ V}$ (C3 - 50 A)
Response time t_A (core-core)	$\leq 1 \text{ ns}$
Response time t_A (core-earth)	$\leq 100 \text{ ns}$
Input attenuation a_E , sym.	typ. 0.1 dB (500 kHz/50 Ω)
	typ. 0.1 dB (200 kHz/150 Ω)
Cut-off frequency f_g (3 dB), sym. in 50 Ohm system	3 MHz
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	1 MHz
Capacity (core-core)	$\leq 2 \text{ nF}$
Surge protection fault message	None
Max. required back-up fuse	370 mA
Impulse durability (conductor-conductor)	C1 - 0,6 kV / 300 A

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Technical data

Protective circuit

	C3 - 10 A, 50 A
Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	D1 - 500 A
Alternating current carrying capacity (conductor-ground)	5 A - 1 s (typical)

Connection data

Connection method	Spring-cage connection
Connection method IN	Spring-cage
Connection method OUT	Spring-cage
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 ... 12

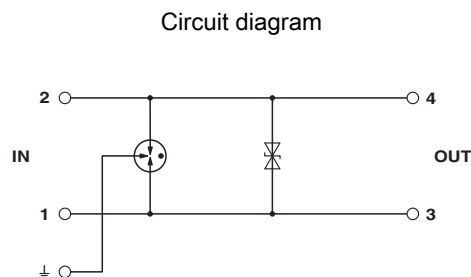
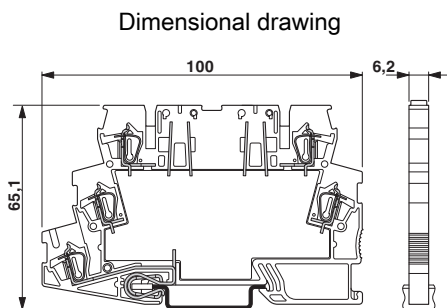
Standards and Regulations

Standards/specifications	IEC 61643-21/A1 2008
	EN 61643-21/A1 2009

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings



Approvals

Approvals

Approvals

UL Listed / EAC / DNV GL

Ex Approvals

Surge protection device - TT-ST-2-PE/S1-24DC - 2801055

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			RU C- DE.A*30.B01561
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DNV GL		http://exchange.dnv.com/tari/	TAE00001N7
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