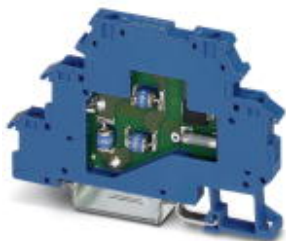


Surge protection device - TT-EX(I)- 24DC - 2832124

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Modular terminal block with three-stage surge protection for a floating Ex-i signal circuit, separate PE connection, nominal voltage: 24 V DC, for mounting on NS 35/7.5, terminal block width: 6.2 mm, terminal block height: 54.6 mm. HART-compatible

Why buy this product

- Versions with and without disconnect knife
- To terminate a row of TERMITRAB TT... devices, covers are available in the corresponding colors
- Other voltage levels available on request
- Protection of a floating double wire in intrinsically safe circuits
- Multi-stage modular terminal blocks with screw connection technology
- Disconnection of signal circuits by disconnect knife



Key Commercial Data

Packing unit	10 STK
GTIN	
GTIN	4017918172831

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

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Technical data

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	sky blue RAL 5015
Standards for clearances and creepage distances	EN 60079-11
Mounting type	DIN rail: 35 mm
Type	Double-level terminal block with PE foot – separate PE connection
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	250 mA (40 °C)
Operating effective current I_C at U_C	$\leq 5 \mu A$
Residual current I_{PE}	$\leq 1 \mu A$
Nominal discharge current I_n (8/20) μs (line-line)	5 kA
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)	100 A
Nominal pulse current I_{an} (10/1000) μs (line-earth)	100 A
Output voltage limitation at 1 kV/ μs (line-line) spike	$\leq 50 V$
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 1.7 kV$
Output voltage limitation at 1 kV/ μs (line-line) static	$\leq 50 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 1.7 kV$
Voltage protection level U_p (line-line)	$\leq 55 V$ (C1 - 1 kV/500 A)
	$\leq 75 V$ (C2 - 10 kV / 5 kA)
	$\leq 50 V$ (C3 - 10 A)
	$\leq 50 V$ (C3 - 100 A)
Voltage protection level U_p (line-earth)	$\leq 2.2 kV$ (C2 - 10 kV / 5 kA)
	$\leq 1.5 kV$ (C3 - 10 A)
	$\leq 2 kV$ (C3 - 100 A)
	$\leq 2 kV$ (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. 0.7 dB ($\leq 400 kHz/50 \Omega$)
	typ. 0.3 dB ($\leq 200 kHz / 150 \Omega$)

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Technical data

Protective circuit

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 MHz
Capacity (line-line)	≤ 2 nF
Resistance in series	$4.7 \Omega \pm 20 \%$
Surge protection fault message	none
Max. required back-up fuse	250 mA (T)
Impulse durability (line-line)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
Impulse durability (line-earth)	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 500 A
Alternating current carrying capacity (line-earth)	0.5 A - 1 s

Connection data

Connection method	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 + A2:2013
	EN 60079-0 2012
	EN 60079-11 2012
	EN 60079-26 2007
	IEC 60079-0 2011
	IEC 60079-11 2011
	IEC 60079-26 2006

General

Maximum inner capacitance C_i	2 nF
Max. internal inductance L_i	1 μ H
Maximum inner time factor (R_i/L_i)	0.1 μ s
Max. input current I_i	250 mA ($T_A < 40$ °C)
Max. input voltage U_i	30 V DC
max. input power P_i	0.75 W
Ambient temperature (operation)	-40 °C ... 40 °C (T6 / 85 °C)
	-40 °C ... 50 °C (T5 / T 100 °C)
	-40 °C ... 80 °C (T4 / 135 °C)

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Conformity / approvals

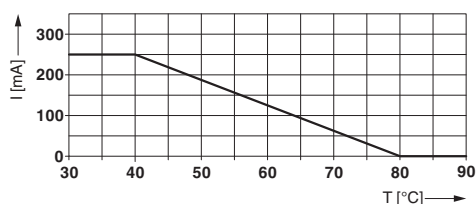
ATEX	# II 1G Ex ia IIC T4...T6 Ga
	# II 1D Ex ia IIIC T135°C...T85°C Da
IECEX	Ex ia IIC T4...T6 Ga
	Ex ia IIIC T135 °C...T85 °C Da

Environmental Product Compliance

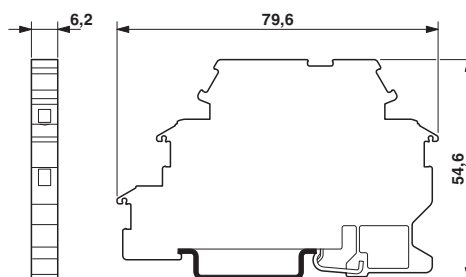
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

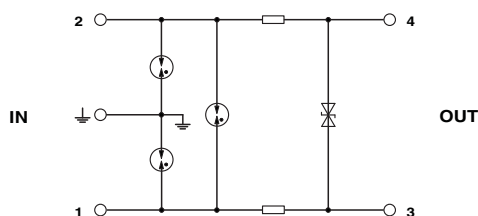
Diagram



Dimensional drawing



Circuit diagram



Approvals

Approvals

Approvals

UL Listed / EAC / EAC

Ex Approvals

IECEX / ATEX / UL Listed / cUL Listed / cULus Listed

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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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