

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

Product Features

- ✓ 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	1 pc
Weight per Piece (excluding packing)	25.67 GRM
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
Degree of protection	IP20

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Technical data

General

Housing material	PA 6.6
Inflammability class according to UL 94	V-0
Color	blue
Standards for air 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
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC
Maximum continuous operating voltage U_c	30 V DC
Maximum continuous voltage U_C (wire-wire)	30 V DC
Nominal current I_N	250 mA (40°C)
Operating effective current I_C at U_C	$\leq 5 \mu\text{A}$
Residual current I_{PE}	$\leq 1 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (Core-Core)	5 kA
Nominal discharge current I_n (8/20) μs (Core-Earth)	5 kA
Total surge current (8/20) μs	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	100 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	$\leq 50 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 1.7 \text{ kV}$
Voltage protection level U_p (Core-Core)	$\leq 75 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 55 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 50 \text{ V}$ (C3 - 10 A)
	$\leq 50 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p (Core-Earth)	$\leq 2.2 \text{ kV}$ (C2 - 10 kV / 5 kA)
	$\leq 1.5 \text{ kV}$ (C3 - 10 A)

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Protective circuit

	≤ 2 kV (C3 - 100 A)
	≤ 2 kV (D1 - 500 A)
Response time t_A (Core-Core)	≤ 1 ns
Response time t_A (Core-Earth)	≤ 100 ns
Input attenuation a_E , sym.	typ. 0.7 dB (≤ 400 kHz/50 Ω)
	typ. 0.3 dB (≤ 200 kHz / 150 Ω)
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 (Core-Core)	≤ 2 nF
Resistance in series	4.7 Ω ± 20 %
	4.7 Ω
Surge protection fault message	None
Max. required back-up fuse	250 mA (T/IEC 60127-2/3)
Surge current resistance (conductor-conductor)	C2 - 10 kV/5 kA
	C1 - 1 kV/500 A
	C3 - 100 A
Surge current resistance (conductor-ground)	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 500 A
Alternating current carrying capacity (conductor-conductor)	0.5 A/1s

Connection data

Connection method	Screw terminal blocks
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 stranded min.	0.2 mm ²
Conductor cross section stranded 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/kcmil min.	24
Conductor cross section AWG/kcmil max	14

General

Maximum inner capacitance C_i	2 nF
Maximum inner inductance L_i	1 μ H

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General

Maximum inner time factor (R/L _i)	0.1 µs
Max. input current I _i	250 mA (T _A < 40 °C)
Max. input voltage U _i	30 V
Maximum input power P _i	0.75 W
Insulation voltage to ground	500 V +10 %

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

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	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

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Approvals

Approvals

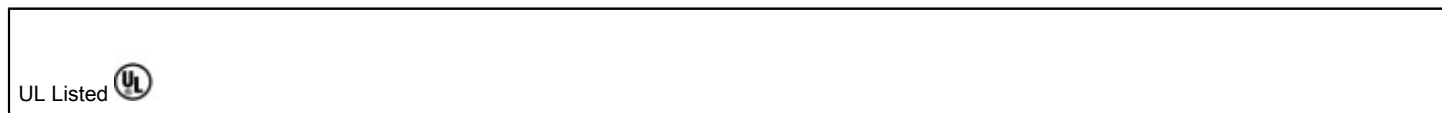
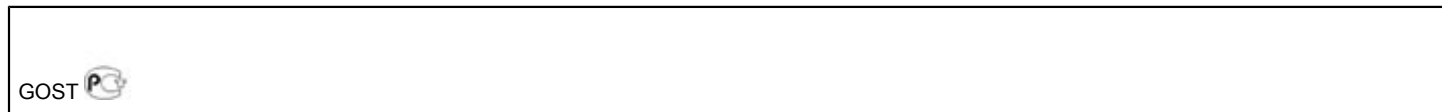
GOST / UL Listed

Ex Approvals

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

Approvals submitted

Approval details



Accessories

Accessories

End cover

End cover - D-DEK 1,5 BK - 2838995



Cover for setting the end of a TERMITRAB TT-2-PE... and TT-2/2 row of terminal blocks, color: black

Labeled terminal marker

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Accessories

Zack Marker strip, flat - ZBF 6,LGS:FORTL.ZAHLEN - 0808749



Zack Marker strip, flat, Strip, white, labeled, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, Mounting type: Snap into flat marker groove, for terminal block width: 6.2 mm, Lettering field: 5.15 x 6.15 mm

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Terminal marking

Zack Marker strip, flat - ZBF 6:UNBEDRUCKT - 0808710



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 6.2 mm, Lettering field: 5.15 x 6.15 mm

Zack Marker strip, flat - ZBF 6/WH-100:UNBEDRUCKT - 0808736

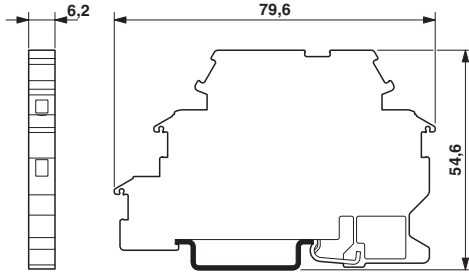


Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 6.2 mm, Lettering field: 5.15 x 6.15 mm

Drawings

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Dimensioned drawing



Circuit diagram

