

## Surge protection device - TTC-6P-3-EX-24DC-UT-I - 1064665

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Surge protection, consisting of protective plug and base element, with integrated status indicator for a 3-wire floating Ex i signal circuit.

### Your advantages

- ✓ Space-saving installation due to the narrow overall width of 6.2 mm
- ✓ Signaling without additional auxiliary power, thanks to the mechanical status indicator
- ✓ Optional remote signaling module monitors up to 40 items, without additional wiring
- ✓ The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- ✓ Error-free replacement of protective plugs, thanks to coding
- ✓ Safe behavior in the event of overload, thanks to the integrated disconnect device
- ✓ Worldwide use in potentially explosive areas, thanks to ATEX and IECEx approvals
- ✓ Simple testing and documentation with CHECKMASTER 2, thanks to pluggable protective modules



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626722733
Weight per Piece (excluding packing)	65.100 g
Custom tariff number	85363010
Country of origin	Germany
Note	Made to Order (non-returnable)

### Technical data

#### Dimensions

Height	105.8 mm
Width	6.2 mm +0.1 mm
Depth	100 mm (incl. DIN rail 7.5 mm)

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## Technical data

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP20

### General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	sky blue RAL 5015
Mounting type	DIN rail: TH 35 - 7.5 mm
Type	DIN rail module, two-section, divisible
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-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
Rated current	5 A (55 °C)
Operating effective current $I_C$ at $U_C$	≤ 5 μA
Residual current $I_{PE}$	≤ 1 μA
Nominal discharge current $I_n$ (8/20) μs (line-line)	0.5 kA
Nominal discharge current $I_n$ (8/20) μs (line-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) μs (line-earth)	0.5 kA
Total discharge current $I_{total}$ (8/20) μs	10 kA
Voltage protection level $U_p$ (line-line)	≤ 68 V (C1 - 1 kV/500 A)
	≤ 50 V (C3 - 100 A)
	≤ 50 V (C3 - 25 A)
Voltage protection level $U_p$ (line-earth)	≤ 700 V (C1 - 1 kV/500 A)
	≤ 900 V (C2 - 10 kV / 5 kA)
Response time $t_A$ (line-line)	≤ 1 ns
Response time $t_A$ (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 12 MHz / 150 Ω)
Cut-off frequency $f_g$ (3 dB), sym. in 150 Ohm system	typ. 60 MHz
Capacity (line-line)	typ. 30 pF
Capacity (line-earth)	typ. 30 pF
Resistance in series	< 0.1 Ω
Max. required back-up fuse	5 A (F)

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## Technical data

### Protective circuit

Impulse durability (line-line)	C1 - 1 kV / 500 A
	C3 - 100 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	D1 - 500 A
Pulse reset time (line-line)	≤ 30 ms
Pulse reset time (line-earth)	≤ 500 ms

### Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm ... 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 ... 12

### Standards and Regulations

Standards/specifications	EN 60079-0 2012 + A11:2013
	EN 60079-11 2012
	EN 61643-21 2001 + A1:2009 + A2:2013
	IEC 60079-0 2011 (modified) + corrigendum 2012 + corrigendum 2013
	IEC 60079-11 2008
	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012

### General

Maximum inner capacitance C <sub>i</sub>	negligible
Max. internal inductance L <sub>i</sub>	negligible
Max. input current I <sub>i</sub>	400 mA (T4 / ≤ 50 °C)
	350 mA (T6 / ≤ 35 °C)
Max. input voltage U <sub>i</sub>	30 V DC
Ambient temperature (operation)	-40 °C ... 35 °C (T6 / 85 °C)
	-40 °C ... 50 °C (T4 / 135 °C)

### Conformity / approvals

UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D T4A
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### Environmental Product Compliance

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

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## Classifications

### eCl@ss

eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

### ETIM

ETIM 5.0	EC000943
ETIM 6.0	EC000943

## Approvals

### Approvals

Approvals

UL Listed

Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / cULus Listed

### 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
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## Accessories

### Accessories

#### Labeled terminal marker

Zack Marker strip, flat - ZBF 6 CUS - 0825027



Zack Marker strip, flat, Strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

Zack Marker strip, flat - ZBF 6,QR:FORTL.ZAHLEN - 0808765



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: 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 size: 5.15 x 6.15 mm

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### Accessories

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#### Marker pen

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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#### Terminal marking

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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

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#### Additional products

Remote signaling set - TTC-6-FMRS-UT - 2907810



Module set for the optical monitoring and floating remote signaling of neighboring surge protective devices of the TERMITRAB complete product range.

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Separating plate - TTC-EX-PP - 1011977



Partition plate for NS-35/7,5 DIN rails to ensure a clearance of 50 mm between the remote signaling module and surge protection in TTC-EX systems.

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## Surge protection device - TTC-6P-3-EX-24DC-UT-I - 1064665

### Accessories

Shield connection - SSA 3-6 - 2839295



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm<sup>2</sup>, color: black

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Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm<sup>2</sup>, color: black

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### Spare parts

Surge protection plug - TTC-6P-3-EX-24DC-I-P - 1064663



Surge protection plug with integrated status indicator on the module for a 3-wire floating Ex i signal circuit. Nominal voltage: 24 V DC

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