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## Surge protection device - PT-IQ-1X2-5DC-UT - 2800791

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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for one 2-wire floating signal circuit.

The figure shows the PT-IQ-1x2-24DC-UT version

### Product Features

- ✓ Surge protection system
- ✓ Multi-level state monitoring
- ✓ Collective message about supply and remote module
- ✓ System supplied via DIN rail bus
- ✓ Up to 28 protection modules per supply module
- ✓ Maximum ease of maintenance thanks to the two-piece design
- ✓ Codable plug
- ✓ Impedance-neutral disconnection of plug for maintenance purposes
- ✓ Base element remains an integral part of the installation



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	134.4 GRM
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

Height	91.1 mm
Width	17.7 mm

# Surge protection device - PT-IQ-1X2-5DC-UT - 2800791

## Technical data

### Dimensions

Depth	77.5 mm
Horizontal pitch	1 Div.

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

### General

Housing material	PA 6.6
Inflammability class according to UL 94	V0
Color	black
Mounting type	DIN rail mounting
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 $U_N$	5 V DC
Maximum continuous operating voltage $U_C$	6 V DC
	4 V AC
Nominal current $I_N$	1000 mA (Up to 45°C)
Operating effective current $I_C$ at $U_C$	$\leq 2$ mA (per system)
Residual current $I_{PE}$	$\leq 2$ $\mu$ A (per system)
Nominal discharge current $I_n$ (8/20) $\mu$ s (Core-Core)	10 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s (Core-Earth)	10 kA
Total surge current (8/20) $\mu$ s	20 kA
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	2.5 kA
Voltage protection level $U_P$ (Core-Core)	$\leq 85$ V (C1 - 1 kV/500 A)
	$\leq 110$ V (C2 - 10 kV / 5 kA)
	$\leq 140$ V (C2 - 10 kA)
	$\leq 25$ V (C3 - 25 A)
	$\leq 25$ V (C3 - 50 A)
Voltage protection level $U_P$ (Core-Earth)	$\leq 600$ V (C1 - 1 kV/500 A)
	$\leq 750$ V (C2 - 10 kV / 5 kA)

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## Technical data

### Protective circuit

	$\leq 800 \text{ V (C2 - 10 kA)}$
	$\leq 700 \text{ V (C3 - 25 A)}$
	$\leq 800 \text{ V (C3 - 100 A)}$
Voltage protection level $U_p$ static (core-core)	$\leq 26 \text{ V (C1 - 1 kV/500 A)}$
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. $0.3 \text{ dB } (\leq 40 \text{ kHz})$
Cut-off frequency $f_g$ (3 dB), sym. in $150 \text{ Ohm}$ system	typ. $300 \text{ kHz}$
Capacity (Core-Earth)	$7.5 \text{ nF}$
Resistance in series	$1.2 \text{ } \Omega \pm 5 \%$
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	$1 \text{ A (FF)}$
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (1 kV/500 A)
	C2 (10 kV/5 kA)
	C2 (10 kA)
	C3 - 25 A
	C3 (50 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C1 (1 kV / 500 A)
	C2 (10 kV / 5 kA)
	C2 (10 kA)
	C3 (25 A)
	C3 (50 A)
	C3 - 100 A
	D1 - 2,5 kA
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-Core)	$\leq 10 \text{ ms}$
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-Earth)	$\leq 10 \text{ ms}$
Overload failure mode as per IEC 61643-21 (plug)	Mode 2

### Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Tightening torque	$0.5 \text{ Nm}$
Stripping length	$8 \text{ mm}$
Conductor cross section solid min.	$0.2 \text{ mm}^2$
Conductor cross section solid max.	$4 \text{ mm}^2$
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12



## Surge protection device - PT-IQ-1X2-5DC-UT - 2800791

### Technical data

#### Connection, equipotential bonding

Connection method	NS 35 DIN rail or connection terminal block
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### 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 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

Approvals

UL Listed

Ex Approvals

Approvals submitted

## Surge protection device - PT-IQ-1X2-5DC-UT - 2800791

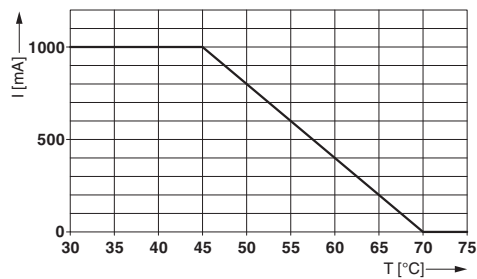
### Approvals

#### Approval details

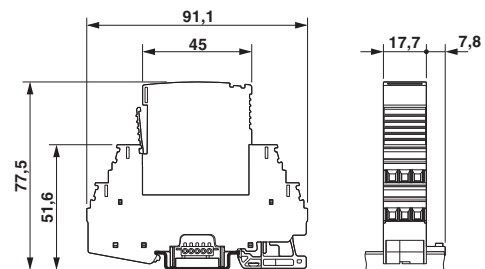
UL Listed 

### Drawings

Diagram



Dimensioned drawing



Circuit diagram

