

## Surge protection device - PT-IQ-2X1+F-24DC-UT - 2800788

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for two signal wires with common reference potential. Indirect grounding via gas-filled surge arrester.

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)	140.0 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-2X1+F-24DC-UT - 2800788

### 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 $U_N$	24 V
Maximum continuous operating voltage $U_C$	30 V DC
	21 V AC
Nominal current $I_N$	1000 mA ( $U_p$ to 45°C)
Operating effective current $I_C$ at $U_C$	$\leq 1$ mA (per path)
Residual current $I_{PE}$	$\leq 1$ $\mu$ A
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-Earth)	$\leq 800$ V (C1 - 1 kV/500 A)
	$\leq 950$ V (C2 - 10 kV / 5 kA)
	$\leq 780$ V (C3 - 25 A)
	$\leq 950$ V (C3 - 50 A)
Voltage protection level $U_p$ (Core-GND)	$\leq 75$ V (C1 - 1 kV/500 A)
	$\leq 135$ V (C2 - 10 kV / 5 kA)
	$\leq 55$ V (C3 - 25 A)
	$\leq 60$ V (C3 - 50 A)

## Surge protection device - PT-IQ-2X1+F-24DC-UT - 2800788

### Technical data

#### Protective circuit

Response time $t_A$ (Core-Earth)	$\leq 1$ ns
	$\leq 100$ ns
Input attenuation $a_E$ , asym.	typ. 0.3 dB ( $\leq 300$ kHz)
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 Ohm system	typ. 1.1 MHz
Capacity (Core-Earth)	2 nF
Resistance in series	1.2 $\Omega \pm 5\%$
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	1 A (FF)
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)
	D1 - 2,5 kA
Surge carrying capacity in acc. with IEC 61643-21 (Core-GND)	C1 (1 kV/500 A)
	C2 (10 kV/5 kA)
	C2 (10 kA)
	C3 (25 A)
	C3 (50 A)
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-Earth)	$\leq 30$ ms
Pulse reset time $t_r$ in acc. with IEC 61643-21 (Core-GND)	$\leq 350$ ms
Overload failure mode as per IEC 61643-21 (plug)	Mode 2
Overload failure mode as per IEC 61643-21 (GND-Ground base element)	Mode 2

#### Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	4 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12

#### Connection, equipotential bonding

# Surge protection device - PT-IQ-2X1+F-24DC-UT - 2800788

## Technical data

### Connection, equipotential bonding

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

## 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-2X1+F-24DC-UT - 2800788

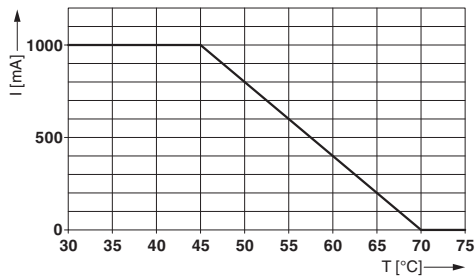
## Approvals

### Approval details

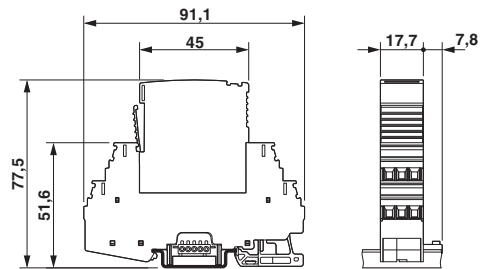


## Drawings

Diagram



Dimensioned drawing



Circuit diagram

