PT 4-F-ST - Surge protection plug

2858441

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Surge protection plug for the base element, coarse protection for four signal lines grounded on one side.

Your advantages

- Easy testing and documentation with CHECKMASTER 2 with pluggable protective modules
- Maximum ease of maintenance, thanks to the 2-piece design
- Easy selection for all possible demands in MCR applications with a complete product portfolio
- The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs

Commercial data

Item number	2858441
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL21
Product key	CL2111
GTIN	4017918892364
Weight per piece (including packing)	22.29 g
Weight per piece (excluding packing)	19.22 g
Customs tariff number	85363010
Country of origin	DE

Technical data

Product properties

Product type	Surge protection for MCR technology
Product family	PLUGTRAB PT
IEC test classification	C1
	C2
	C3
	D1
Type	Male
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Wire pairs per module	2

Insulation characteristics

Overvoltage category	III
Pollution degree	2

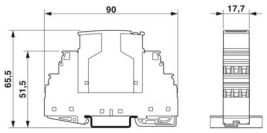
Electrical properties

Nominal voltage U_N	110 V AC

Connection data

Connection method	Screw connection (in connection with the base element)
Screw thread	M3
Tightening torque	0.5 Nm
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section rigid	0.2 mm² ... 4 mm²
Conductor cross-section AWG	24 ... 12

Dimensions

Dimensional drawing	
Width	17.7 mm
Height	45 mm
Depth	52 mm
Horizontal pitch	1 HP
Complete module width	17.7 mm
Complete module height	90 mm
Complete module depth	65.5 mm

Material specifications

Color	black (RAL 9005)
Flammability rating according to UL 94	V-0
Housing material	PA 6.6

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & Signal Ground/Shield-Earth Ground
Nominal voltage U_N	110 V AC
Maximum continuous operating voltage U_C	60 V DC
	120 V AC
Rated current	2 A AC (80 °C)
	150 mA DC (80 °C)
Operating effective current I_C at U_C	≤ 2 µA
Protective conductor current I_{PE}	≤ 8 µA (with PT 4-BE)
	≤ 2 µA (with PT 4+F-BE)
Nominal discharge current I_n (8/20) µs (line-line)	10 kA
Nominal discharge current I_n (8/20) µs (line-ground)	10 kA
Pulse discharge current I_{imp} (10/350) µs (line-earth)	2.5 kA
Total discharge current I_{Total} (8/20) µs	20 kA
Output voltage limitation at 1 kV/µs (line-earth) spike	≤ 450 V (with PT 4-BE)
	≤ 600 V (with PT 4+F-BE)
Output voltage limitation at 1 kV/µs (line-earth) static	≤ 25 V (with PT 4-BE)
	≤ 50 V (with PT 4+F-BE)
Voltage protection level U_p (line-earth)	≤ 550 V (C1 - 1 kV / 500 A with PT 4-BE)
	≤ 950 V (C1 - 1 kV / 500 A with PT 4+F-BE)
	≤ 600 V (C2 - 10 kV / 5 kA with PT 4-BE)
	≤ 1350 V (C2 - 10 kV / 5 kA with PT 4+F-BE)
Voltage protection level U_p static (line-earth)	≤ 50 V (C1 - 1 kV / 500 A with PT 4-BE)
	≤ 100 V (C1 - 1 kV / 500 A with PT 4+F-BE)
	≤ 50 V (C2 - 10 kV / 5 kA with PT 4-BE)
	≤ 100 V (C2 - 10 kV / 5 kA with PT 4+F-BE)
Response time t_A (line-line)	≤ 100 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, asym.	typ. 0.1 dB (≤ 1 MHz / 50 Ω)
Cut-off frequency fg (3 dB), asym. (siganl ground) in 50 Ω system	typ. 100 MHz
Capacity (Core-Earth)	typ. 2 pF (with PT 4-BE)
	typ. 2 pF (with PT 4+F-BE)
Resistance per path	0 Ω
Surge protection fault message	none
Max. required back-up fuse	2 A AC (T)

	150 mA DC (T)
Impulse durability (line-earth)	C2 - 10 kV / 5 kA
	C1 - 1 kV / 500 A
	C3 - 100 A
	D1 - 2.5 kA

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

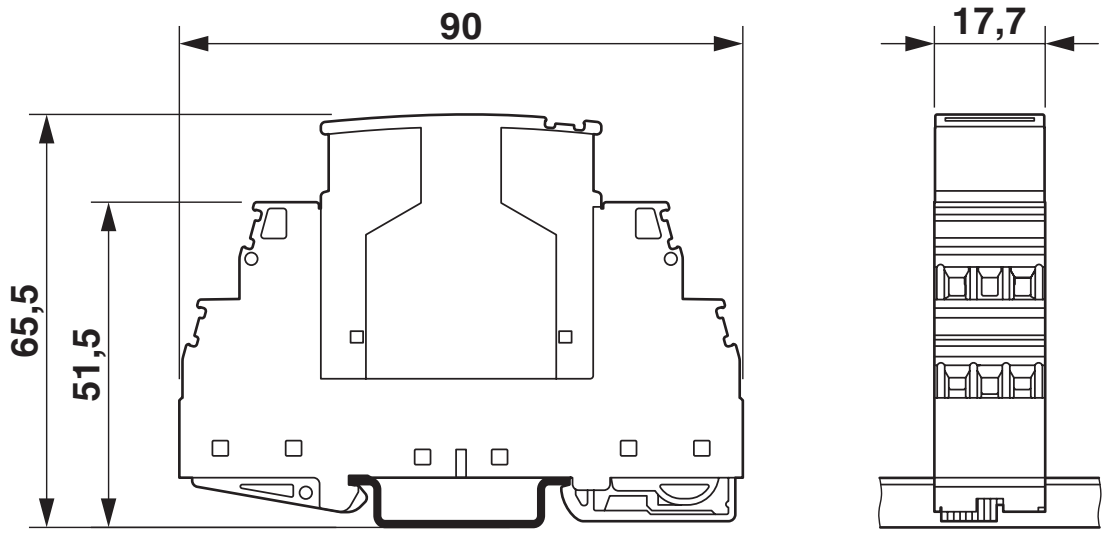
Standards/specifications	IEC 61643-21
Note	2000 + corrigendum 2001 + A1:2008, modified + A2:2012
Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

Mounting

Mounting type	on base element

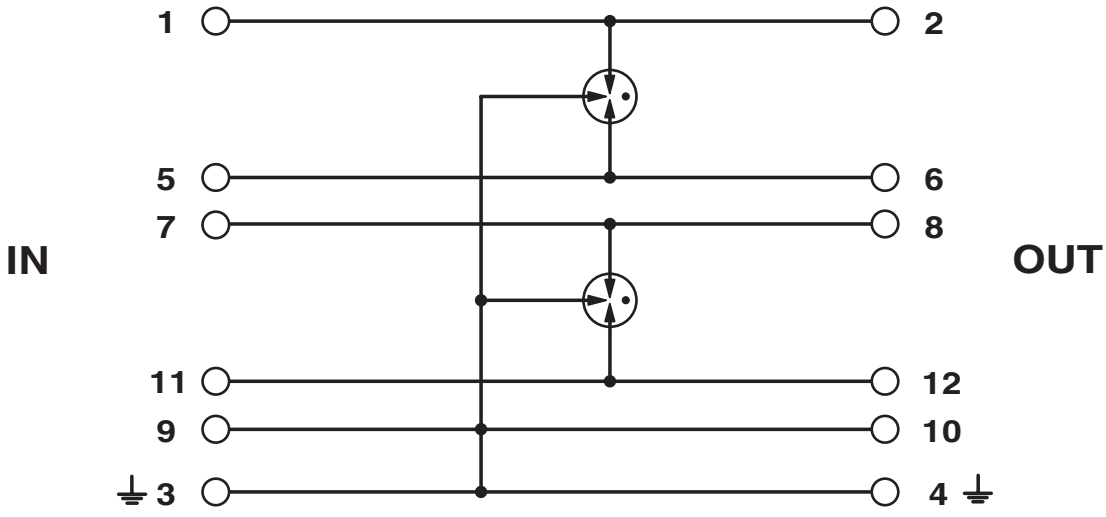
Drawings

Dimensional drawing



The figure shows the complete module consisting of a base element and connector

Circuit diagram



Classifications

ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

ETIM

ETIM 10.0	EC001466

UNSPSC

UNSPSC 21.0	39121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

EF3.1 Climate Change

CO2e kg	0.404 kg CO2e

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