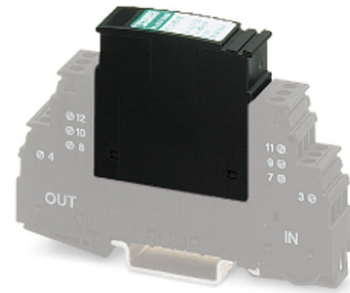


PT 3-PB-ST


Order No.: 2858030



Surge protection plug for the base element, normal mode voltage coarse and fine protection for two floating signal wires in IT, common mode voltage coarse protection to ground.



Commercial data	
EAN	4017918878030
Pack	10 pcs.
Customs tariff	85363090
Weight/Piece	0.02068 KG
Catalog page information	Page 77 (TT-2007)

Product notes
<p>WEEE/RoHS-compliant since: 05/23/2006</p> 

Technical data	
General	
Housing material	PA
Inflammability class acc. to UL 94	V0
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10

Total surge current (8/20) μ s	20 kA
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	On base element
Design	DIN rail module, two-section, divisible
Number of positions	2
Degree of protection	IP20
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/ Shield-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Width	17.70 mm
Height	52.00 mm
Length	45.00 mm
Pitch unit	1 Div.
Protective circuit	
IEC category	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage U_N	5 V DC
Max. operating voltage U_{max}	5.2 V DC
Arrester rated voltage U_C	5.2 V DC
	3.6 V AC
Arrester rated voltage U_C (Core-Core)	5.2 V DC
	3.6 V AC
Arrester rated voltage U_C (Core-Earth)	5.2 V DC (PT 1x2-BE)
	3.6 V AC (PT 1x2-BE)
Nominal current I_N	450 mA (45°C)
Operating effective current I_C at U_C	$\leq 300 \mu$ A
Discharge current to PE at U_C	$\leq 300 \mu$ A (with PT 2x2-BE)
	$\leq 1 \mu$ A (with PT 2x2+F-BE)

Nominal discharge surge current I_n (8/20) μs (Core-Core)	10 kA
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	10 kA
Total surge current (8/20) μs	20 kA
Max. discharge surge current I_{max} (8/20) μs maximum (Core-Core)	10 kA
Max. discharge surge current I_{max} (8/20) μs maximum (Core-Earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (Core-Core)	90 A
Lightning test current (10/350) μs , peak value I_{imp}	2.5 kA
Output voltage limitation at 1 kV/ μs (Core-Core) spike	≤ 55 V
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	≤ 55 V
	≤ 700 V (with PT 2x2+F-BE)
Output voltage limitation at 1 kV/ μs (Core-Core) static	≤ 15 V
Output voltage limitation at 1 kV/ μs (Core-Earth) static	≤ 15 V
Output voltage limitation at 1 kV/ μs (Core-GND) static	≤ 30 V
Residual voltage at I_n , (conductor-conductor)	≤ 15 V
Residual voltage at I_n , (conductor-ground)	≤ 30 V
Residual voltage at I_n , (conductor-GND)	≤ 15 V (with PT 2x2-BE)
Residual voltage with I_{an} (10/1000) μs (conductor-conductor)	≤ 15 V
Residual voltage with I_{an} (10/1000) μs (conductor-GND)	≤ 15 V
Protection level U_p (Core-Core)	≤ 100 V (C2 (10 kV/5 kA))
Protection level U_p (Core-Earth)	≤ 100 V (C2 (10 kV/5 kA))
Response time t_A (Core-Core)	≤ 500 ns
Response time t_A (Core-Earth)	≤ 500 ns
	≤ 500 ns
Input attenuation aE, sym.	0.2 dB (≤ 5 MHz)
Cut-off frequency f_g (3 dB), sym. in 100 Ohm system	Typ. 70 MHz
Capacity (Core-Core)	Typ. 30 pF
Resistance in series	2.2 Ω

Message surge protection faulty	Optical
Max. required back-up fuse	500 mA (e.g. T in acc. with IEC 127-2/III)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C2 (10 kV/5 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	D1 (2.5 kA)

Connection data

Type of connection	Screw connection (in connection with the base element)
Connection type IN	PLUGTRAB plug-in system
Connection type OUT	PLUGTRAB plug-in system
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	12

Connection, protective circuit

Standards/regulations	IEC 61643-21
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Certificates / Approvals



Certification GOST

Accessories

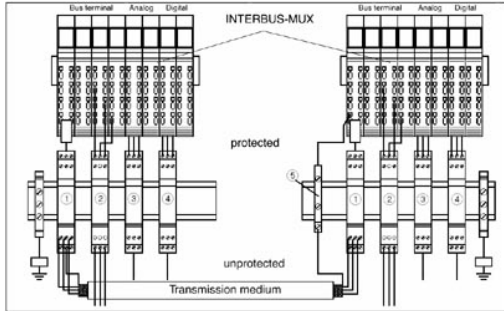
Item	Designation	Description
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Marking

0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm
0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm
0811228	X-PEN 0,35	Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

Drawings

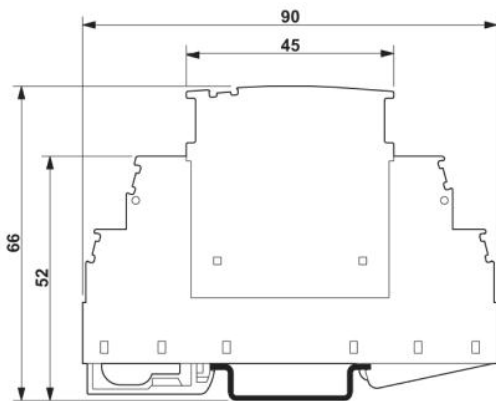
Application drawing



Connecting M-UFB IBS-MUX to the field multiplexer

- ① PT 3-PB-ST to PT 1x2+F-BE
- ② PT 2-PE/S-24AC-ST to PT BE/FM
- ③ PT 2x2-24DC-ST to PT 2x2-BE
- ④ PT 4x1-24DC-ST to PT 4x1-BE
- ⑤ TT-SLKK5-F/110AC
When the ground potential is the same, the shield can be connected to terminal 3 of the PT 3-PB. The TT-SLKK5-F.. is no longer necessary

Dimensioned drawing



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

Circuit diagram

