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Surge protection plug - PT 4-12DC-ST - 2839237

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Protective plug PT with protective circuit for a 4-core floating signal circuit. Nominal voltage: 12 V DC

Your advantages

☑ Plugs can be checked with CHECKMASTER

☑ Maximum ease of maintenance thanks to the two-piece design

☑ Base element remains an integral part of the installation

☑ Consistent plug-in signal circuit protection

☑ Impedance-neutral disconnection of plug for test and maintenance purposes

RoHS   IP20

2A IEC   12V IEC   2,5 mm²   SIL evaluated IEC 61508   CHECKMASTER   H D W

Key Commercial Data

Packing unit	1 pc
GTIN	(barcode) 4 017918 182779
GTIN	4017918182779
Weight per Piece (excluding packing)	24.960 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	45 mm
Width	17.7 mm
Depth	52 mm
Horizontal pitch	1 Div.
Complete module height	90 mm

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Technical data

Dimensions

Complete module width	17.7 mm
Complete module depth	65.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Degree of protection	IP20

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	black
Standards for cearances and creepage distances	VDE 0110-1
	IEC 60664-1
Mounting type	on base element
Type	Male
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. 1.00

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
VDE requirement class	C1
	C2
	C3
	D1
Nominal voltage U_N	12 V DC
Maximum continuous voltage U_C	12.8 V DC
	9 V AC
Rated current	2 A (80 °C)
Operating effective current I_C at U_C	$\leq$ 1 mA
Residual current I_{PE}	$\leq$ 4 µA (Directly grounded)
	$\leq$ 1 µA (with PT 4+F-BE)
Nominal discharge current I_n (8/20) µs (line-line)	690 A
Nominal discharge current I_n (8/20) µs (line-earth)	10 kA
Pulse discharge current I_{imp} (10/350) µs	2.5 kA (per path)
Total discharge current I_{total} (8/20) µs	20 kA

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Technical data

Protective circuit

Max. discharge current I_{max} (8/20) µs maximum (line-line)	690 A
Max. discharge current I_{max} (8/20) µs maximum (line-earth)	10 kA
Nominal pulse current Ian (10/1000) µs (line-line)	128 A
Output voltage limitation at 1 kV/µs (line-line) spike	$\leq$ 20 V
Output voltage limitation at 1 kV/µs (line-earth) spike	$\leq$ 450 V
	$\leq$ 1 kV (with PT 4+F-BE)
Output voltage limitation at 1 kV/µs (line-line) static	$\leq$ 18 V
Residual voltage at I_n (line-line)	$\leq$ 50 V
Residual voltage with Ian (10/1000) µs (line-line)	$\leq$ 25 V
Voltage protection level U_p (line-line)	$\leq$ 40 V (C1 - 1 kV/500 A)
Voltage protection level U_p (line-earth)	$\leq$ 450 V
	$\leq$ 1 kV (with PT 4+F-BE)
Response time t_A (line-line)	$\leq$ 1 ns
Response time t_A (line-signalground)	$\leq$ 1 ns
Response time t_A (line-earth)	$\leq$ 100 ns
Input attenuation aE, sym.	0.1 dB ($\leq$ 600 kHz)
Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 3 MHz
Surge protection fault message	none
Max. required back-up fuse	2 A (T)
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C3 - 100 A
Impulse durability (line-earth)	C2 - 10 kV / 5 kA
	D1 - 2.5 kA

Connection data

Connection method	Screw connection (in connection with the base element)
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section solid	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 12

Standards and Regulations

Standards/regulations	IEC 61643-21
	DIN EN 61643-21
	UL 497B
Standards/specifications	IEC 61643-21 2000

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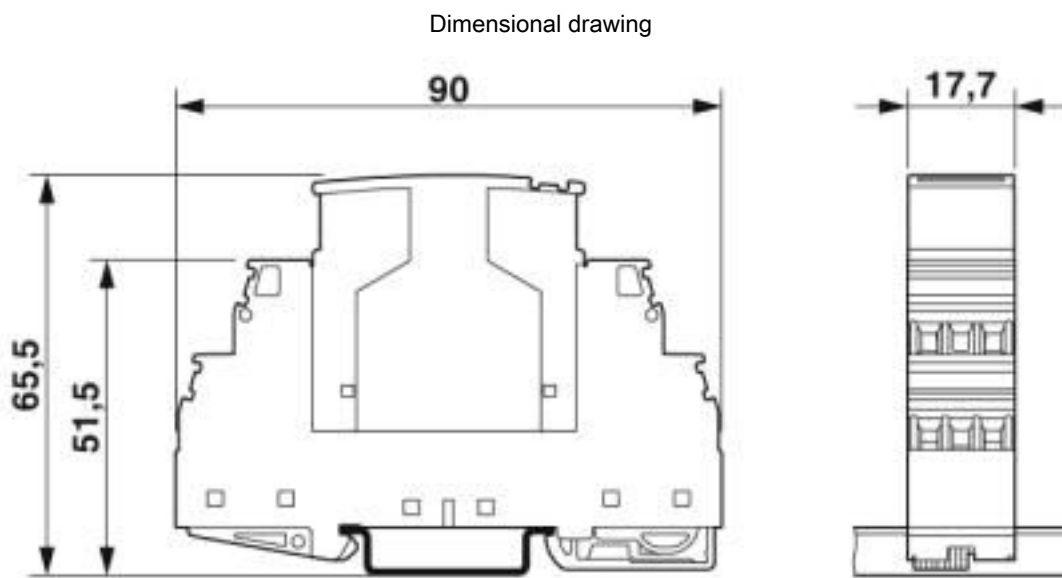# Surge protection plug - PT 4-12DC-ST - 2839237

Technical data

Environmental Product Compliance

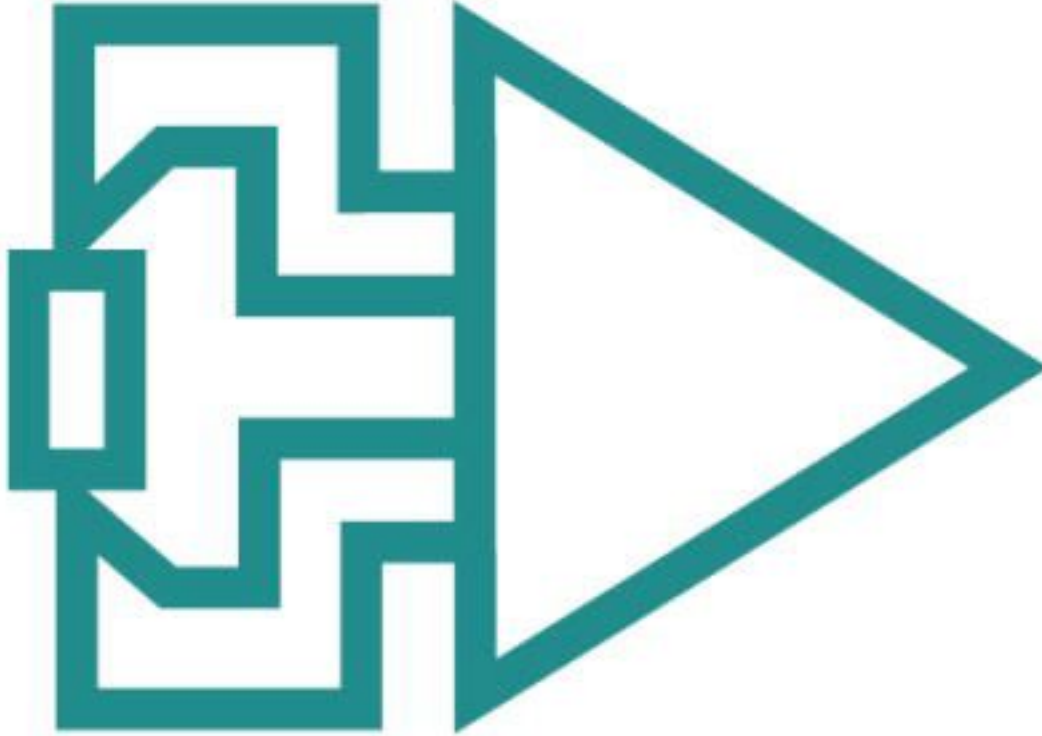| REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Dimensional drawing

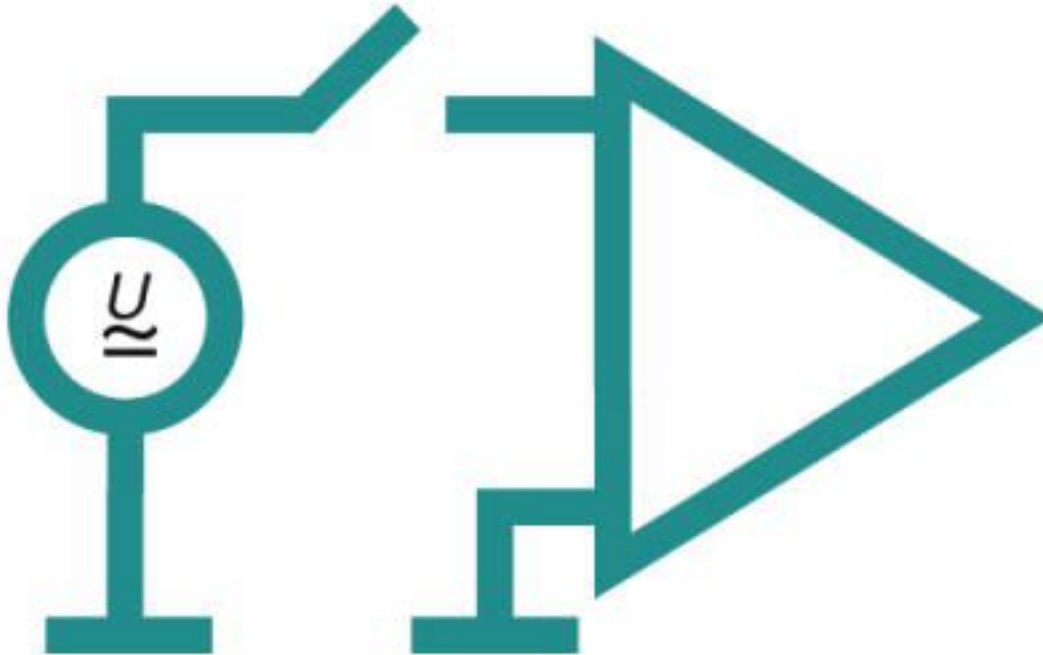The figure shows the complete module consisting of a base element and connector

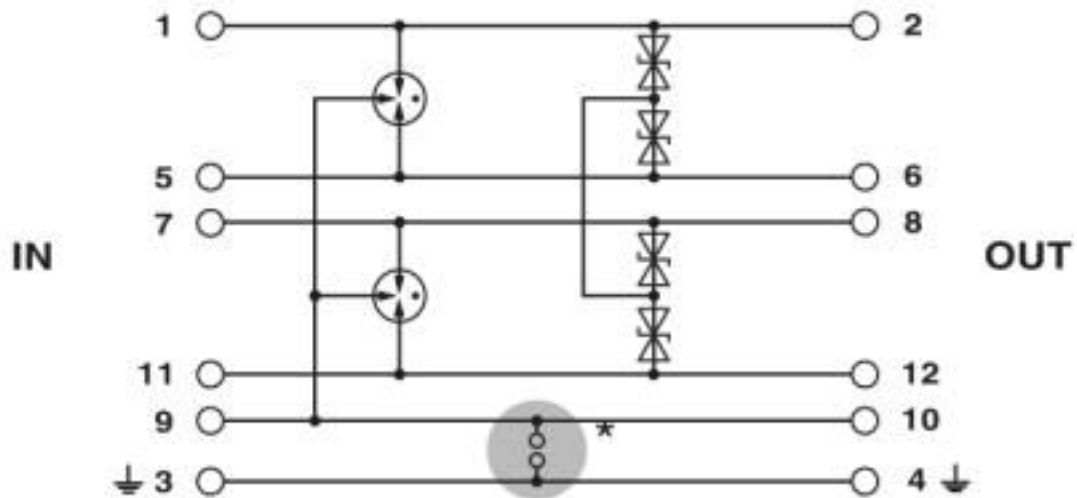# Surge protection plug - PT 4-12DC-ST - 2839237

Pictogram

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Pictogram

Circuit diagram

IN

OUT

Classifications

eCl@ss

eCl@ss 10.0.1	27130807
eCl@ss 4.0	27130800

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Classifications

eCl@ss

eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943
ETIM 6.0	EC000943
ETIM 7.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

Approvals

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UL Listed / EAC / EAC

Ex Approvals

UL Listed / cUL Listed / cULus Listed

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Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 138168
Nominal voltage UN		12 V	
Nominal current IN		2 A	

EAC		EAC-Zulassung

EAC		RU C-DE.A*30.B01561

Accessories

Accessories

Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Labeled terminal marker

Zack Marker strip, flat - ZBF 5,LGS:FORTL.ZAHLEN - 0808671

Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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Accessories

Zack Marker strip, flat - ZBF 5,LGS:GERADE ZAHLEN - 0810821

Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

Zack Marker strip, flat - ZBF 5,LGS:UNGERADE ZAHLEN - 0810863

Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

Zack Marker strip, flat - ZBF 5,QR:FORTL.ZAHLEN - 0808697

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: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

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

Terminal marking

Zack Marker strip, flat - ZBF 5:UNBEDRUCKT - 0808642

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: 5 mm, lettering field size: 5.1 x 5.2 mm, Number of individual labels: 10

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Accessories

Zack Marker strip, flat - ZBF 5/WH-100:UNBEDRUCKT - 0808668

Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5 mm, lettering field size: 5.15 x 5.15 mm, Number of individual labels: 10

Necessary add-on products

Surge protection base element - PT 4-BE - 2839402

Base element for protective plug PT with protective circuit for a 4-wire floating signal circuit, bridge between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS 35/15, housing width: 17.5 mm

Surge protection base element - PT 4+F-BE - 2839415

Base element for protective plug PT with protective circuit for a 4-wire floating signal circuit, gas-filled surge arrester between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS35/15, housing width: 17.5 mm

Additional products

Shield connection - SSA 3-6 - 2839295

Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

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Accessories

Shield connection - SSA 5-10 - 2839512

Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black