

Surge protection plug - PT 4-24AC-ST - 2800078

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>)




Protective connector PT with protective circuit for a 4-wire floating signal circuit. Nominal voltage: 24 V AC

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



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 462211
GTIN	4046356462211

Technical data

Dimensions

Height	45 mm
Width	17.7 mm
Depth	52 mm
Horizontal pitch	1 Div.
Complete module height	90 mm
Complete module width	17.7 mm
Complete module depth	65.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Surge protection plug - PT 4-24AC-ST - 2800078

Technical data

Ambient conditions

Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP20

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
Mounting type	on base element
Type	Male
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground

Additional descriptions

Note	If the maximum permissible short-circuit current at the installation location exceeds the specified values, a fuse should be selected which ensures a shutdown time of < 5 s.
	Technical data is valid in association with the following specified base elements:
	with PT 4+F-BE
	with PT 4-BE

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V AC
Maximum continuous voltage U_C	40 V DC
	28 V AC
Rated current	2 A AC (80 °C)
	500 mA DC (80 °C)
Operating effective current I_C at U_C	≤ 5 μA
Residual current I_{PE}	≤ 4 μA (with PT 4-BE)
	≤ 1 μA (with PT 4+F-BE)
Nominal discharge current I_n (8/20) μs (line-line)	187 A
Nominal discharge current I_n (8/20) μs (line-earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs	2.5 kA
Total discharge current I_{total} (8/20) μs	20 kA
Max. discharge current I_{max} (8/20) μs maximum (line-line)	187 A
Max. discharge current I_{max} (8/20) μs maximum (line-earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (line-line)	36 A
Output voltage limitation at 1 kV/μs (line-line) spike	≤ 75 V
Output voltage limitation at 1 kV/μs (line-earth) spike	≤ 450 V (with PT 4-BE)

Surge protection plug - PT 4-24AC-ST - 2800078

Technical data

Protective circuit

	≤ 1 kV (with PT 4+F-BE)
Output voltage limitation at 1 kV/μs (line-line) static	≤ 75 V
Output voltage limitation at 1 kV/μs (line-earth) static	≤ 25 kV (with PT 4-BE)
	≤ 50 V (with PT 4+F-BE)
Residual voltage at I _n (line-line)	≤ 105 V
Residual voltage with I _{an} (10/1000) μs (line-line)	≤ 80 V
Voltage protection level U _p (line-line)	≤ 85 V (C1 - 500 V / 250 A)
	≤ 70 V (C3 - 10 A)
	≤ 75 V (C3 - 25 A)
Voltage protection level U _p (line-earth)	≤ 450 V (C2 - 10 kV / 5 kA with PT 4-BE)
	≤ 1 kV (C2 - 10 kV / 5 kA with PT 4+F-BE)
Voltage protection level U _p static (line-earth)	≤ 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)	≤ 1 ns
Response time t _A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	0.1 dB (≤ 2 MHz / 50 Ω)
	0.1 dB (≤ 600 kHz / 150 Ω)
Cut-off frequency f _g (3 dB), sym. in 50 Ohm system	typ. 10 MHz
Cut-off frequency f _g (3 dB), sym. in 150 Ohm system	typ. 3 MHz
Capacity (line-line)	typ. 0.7 nF
Capacity (line-earth)	typ. 40 pF (with PT 4-BE)
	typ. 20 pF (with PT 4+F-BE)
Resistance per path	0 Ω
Surge protection fault message	none
Impulse durability (line-line)	C1 - 500 V / 250 A
	C3 - 10 A
	C3 - 25 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 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Standards and Regulations

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

Surge protection plug - PT 4-24AC-ST - 2800078

Technical data

Standards and Regulations

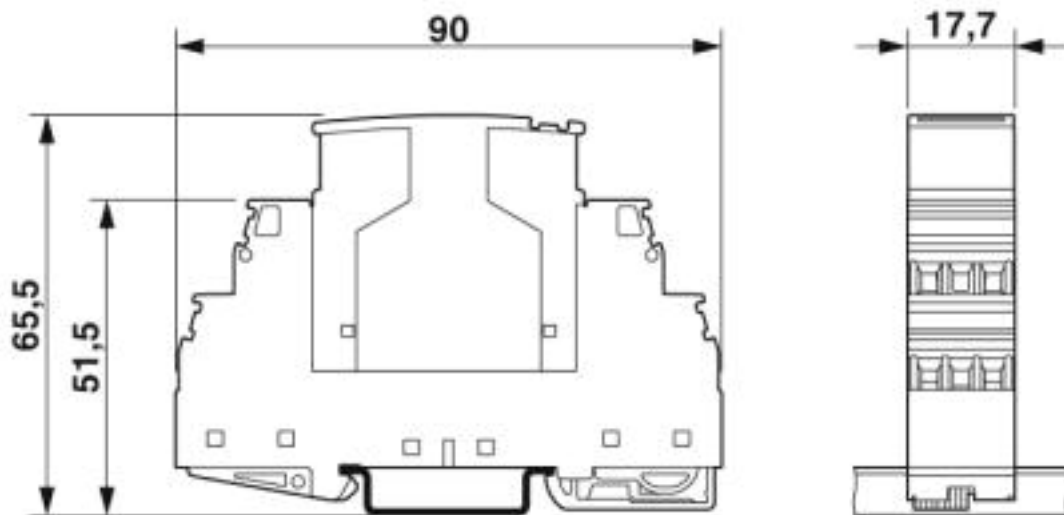
	EN 61643-21 2001 + A1:2009 + A2:2013
--	--------------------------------------

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

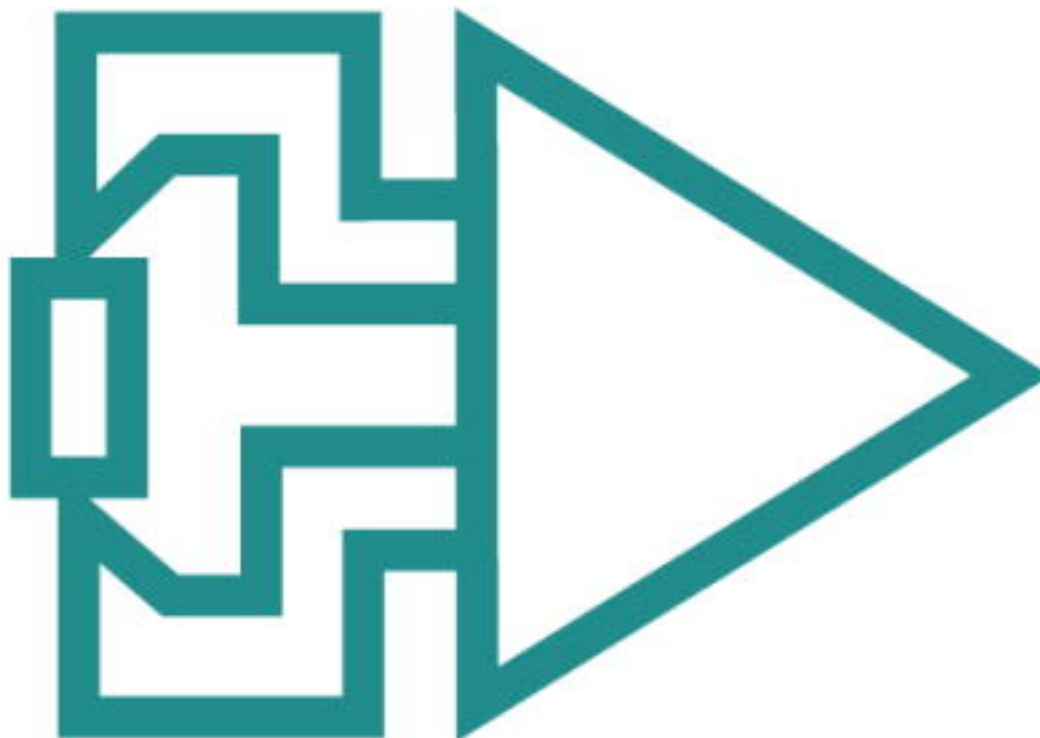
Dimensional drawing



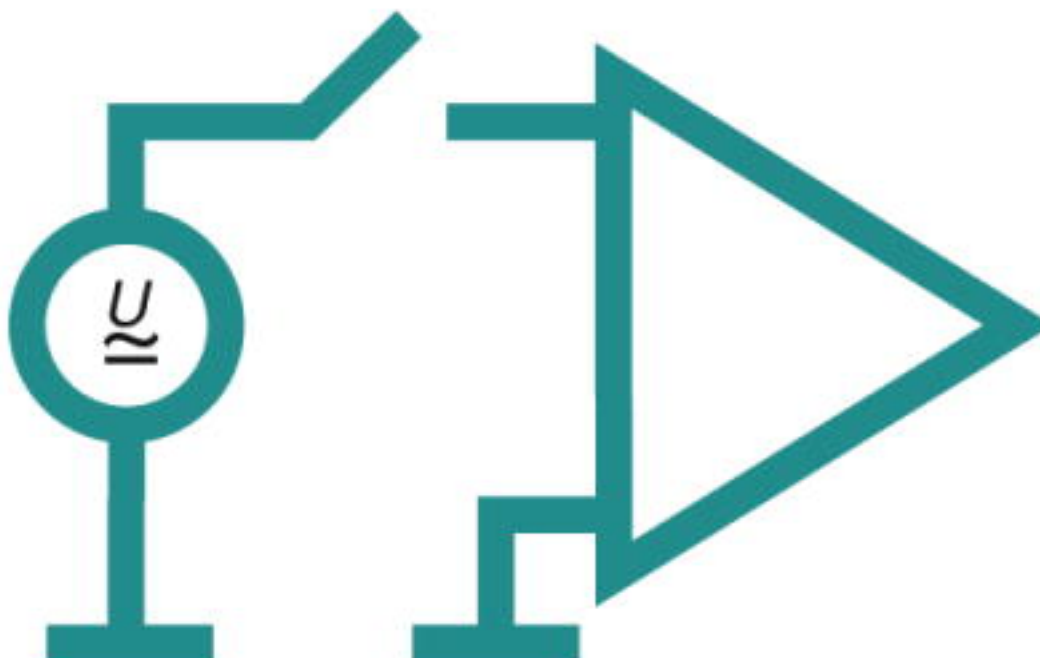
The figure shows the complete module consisting of a base element and connector

Surge protection plug - PT 4-24AC-ST - 2800078

Pictogram

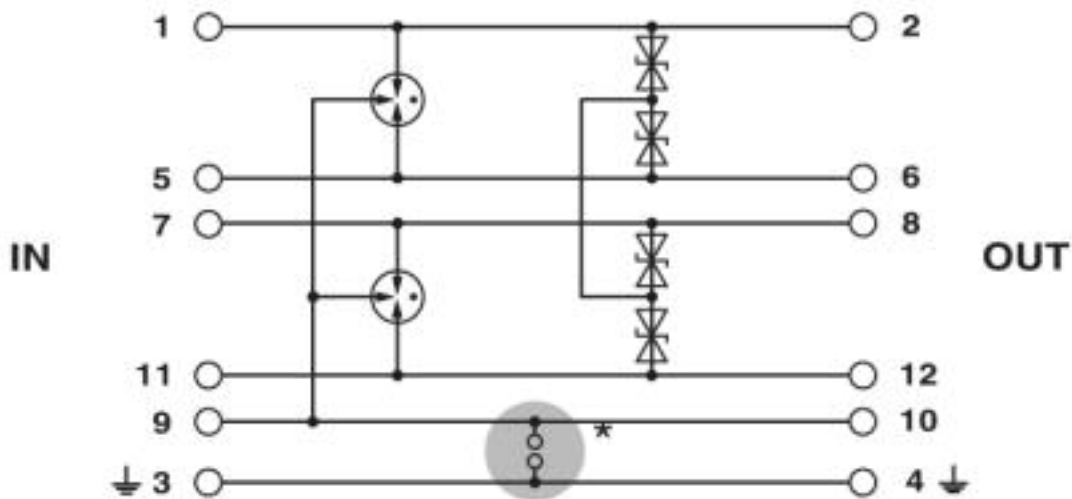


Pictogram



Surge protection plug - PT 4-24AC-ST - 2800078

Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27130807
eCl@ss 4.0	27130800
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

Surge protection plug - PT 4-24AC-ST - 2800078

Classifications

UNSPSC

UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

Approvals

Approvals

Approvals

EAC

Ex Approvals

Approval details

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

Surge protection plug - PT 4-24AC-ST - 2800078

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

Surge protection plug - PT 4-24AC-ST - 2800078

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

Shield connection - SSA 5-10 - 2839512



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

Phoenix Contact 2020 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>