

PT 4-24DC-ST - Surge protection plug



2839240

<https://www.phoenixcontact.com/gb/products/2839240>

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 documentation. Our general terms of use for downloads are valid.



Protective plug PT with protective circuit for a 4-core floating signal circuit. Nominal voltage: 24 V DC

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 | 2839240 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL2111 |
| Product key | CL2111 |
| Catalog page | Page 144 (C-4-2019) |
| GTIN | 4017918182786 |
| Weight per piece (including packing) | 26.87 g |
| Weight per piece (excluding packing) | 21.783 g |
| Customs tariff number | 85363010 |
| Country of origin | DE |

PT 4-24DC-ST - Surge protection plug

2839240

<https://www.phoenixcontact.com/gb/products/2839240>

Technical data

Product properties

| | |
|--|-------------------------------------|
| Product type | Surge protection for MCR technology |
| Product family | PLUGTRAB PT |
| IEC test classification | C1 |
| | C2 |
| | C3 |
| | D1 |
| VDE requirement class | C1 |
| | C2 |
| | C3 |
| | D1 |
| Type | Male |
| Surge protection fault message | none |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.00 |

Data management status

| | |
|------------------|----|
| Article revision | 11 |
|------------------|----|

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree | 2 |

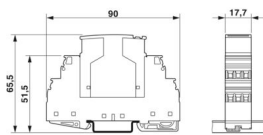
Electrical properties

| | |
|-----------------------|---------|
| Nominal voltage U_N | 24 V DC |
|-----------------------|---------|

Connection data

| | |
|----------------------------------|--|
| Connection method | Screw connection (in connection with the base element) |
| Screw thread | M3 |
| Tightening torque | 0.8 Nm |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section rigid | 0.2 mm ² ... 4 mm ² |
| Conductor cross section AWG | 24 ... 12 |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 17.7 mm |
| Height | 45 mm |

PT 4-24DC-ST - Surge protection plug



2839240

<https://www.phoenixcontact.com/gb/products/2839240>

| | |
|------------------------|---------|
| Depth | 52 mm |
| Horizontal pitch | 1 Div. |
| Complete module width | 17.7 mm |
| Complete module height | 90 mm |
| Complete module depth | 65.5 mm |

Material specifications

| | |
|--|------------------|
| Color | black (RAL 9005) |
| | Copper color |
| 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 & optional Signal Ground/Shield-Earth Ground |
| Maximum continuous voltage U_C | 27 V DC |
| | 19 V AC |
| Rated current | 2 A (80 °C) |
| Operating effective current I_C at U_C | $\leq 5 \mu A$ |
| Residual current I_{PE} | $\leq 4 \mu A$ (with PT 4-BE) |
| | $\leq 1 \mu A$ (with PT 4+F-BE) |
| Nominal discharge current I_n (8/20) μs (line-line) | 365 A |
| Nominal discharge current I_n (8/20) μs (line-ground) | 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 |
| Max. discharge current I_{max} (8/20) μs maximum (line-line) | 365 A |
| Max. discharge current I_{max} (8/20) μs maximum (line-earth) | 10 kA |
| Nominal pulse current I_{an} (10/1000) μs (line-line) | 67 A |
| Output voltage limitation at 1 kV/ μs (line-line) spike | $\leq 40 V$ |
| Output voltage limitation at 1 kV/ μs (line-earth) spike | $\leq 450 V$ (with PT 4-BE) |
| | $\leq 1 kV$ (with PT 4+F-BE) |
| Output voltage limitation at 1 kV/ μs (line-line) static | $\leq 40 V$ |
| Residual voltage at I_n (conductor-conductor) | $\leq 60 V$ |
| Residual voltage with I_{an} (10/1000) μs (line-line) | $\leq 45 V$ |
| Voltage protection level U_p (line-line) | $\leq 50 V$ (C1 - 500 V / 250 A) |
| | $\leq 45 V$ (C3 - 67 A) |
| Voltage protection level U_p (line-earth) | $\leq 500 V$ (C2 - 10 kV / 5 kA with PT 4-BE) |
| | $\leq 1 kV$ (C2 - 10 kV / 5 kA with PT 4+F-BE) |
| | $\leq 500 V$ (6 kV / 3 kA) |
| Response time t_A (line-line) | $\leq 1 ns$ |

PT 4-24DC-ST - Surge protection plug



2839240

<https://www.phoenixcontact.com/gb/products/2839240>

| | |
|---|--|
| Response time t_A (line-earth) | ≤ 100 ns |
| Response time t_A (line-signalground) | ≤ 1 ns |
| Input attenuation aE, sym. | 0.1 dB (≤ 1 MHz) |
| | 0.1 dB (≤ 1 MHz / 50 Ω) |
| | 0.2 dB (≤ 400 kHz / 150 Ω) |
| Cut-off frequency f_g (3 dB), sym. in 50 Ω system | typ. 4.5 MHz |
| Cut-off frequency f_g (3 dB), sym. in 150 Ω system | typ. 1.5 MHz |
| Resistance per path | 0 Ω |
| Surge protection fault message | none |
| Impulse durability (line-line) | C1 - 500 V / 250 A |
| | C3 - 25 A |
| Impulse durability (line-earth) | C2 - 10 kV / 5 kA |
| | D1 - 2.5 kA |

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

| | |
|-----------------------|----|
| VDE requirement class | C1 |
| | C2 |
| | C3 |
| | D1 |

Air clearances and creepage distances

| | |
|-----------------------|--------------------------|
| Standards/regulations | VDE 0110-1 / IEC 60664-1 |
|-----------------------|--------------------------|

Standards Information technology specification

| | |
|--------------------------|-----------------|
| Standards/regulations | IEC 61643-21 |
| | DIN EN 61643-21 |
| | UL 497B |
| | IEC 61643-21 |
| | DIN EN 61643-21 |
| | UL 497B |
| Standards/specifications | EN 61643-21/A1 |
| Note | 2009 |
| Standards/specifications | IEC 61643-21/A1 |
| Note | 2008 |
| Standards/specifications | UL 497B |

Mounting

| | |
|---------------|-----------------|
| Mounting type | on base element |
|---------------|-----------------|

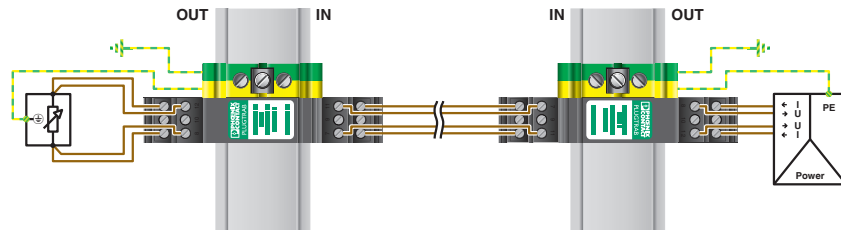
PT 4-24DC-ST - Surge protection plug

2839240

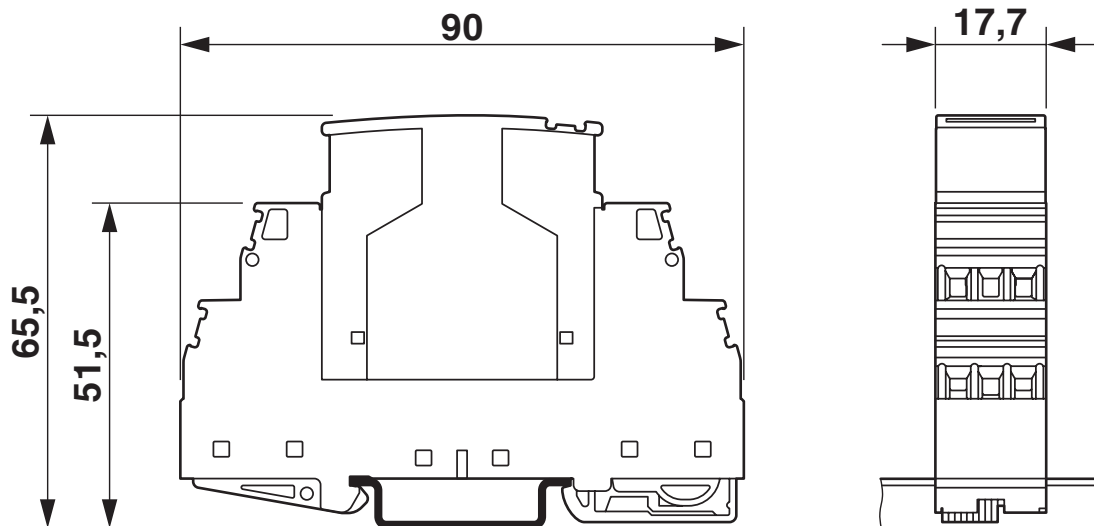
<https://www.phoenixcontact.com/gb/products/2839240>

Drawings

Application drawing



Dimensional drawing



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

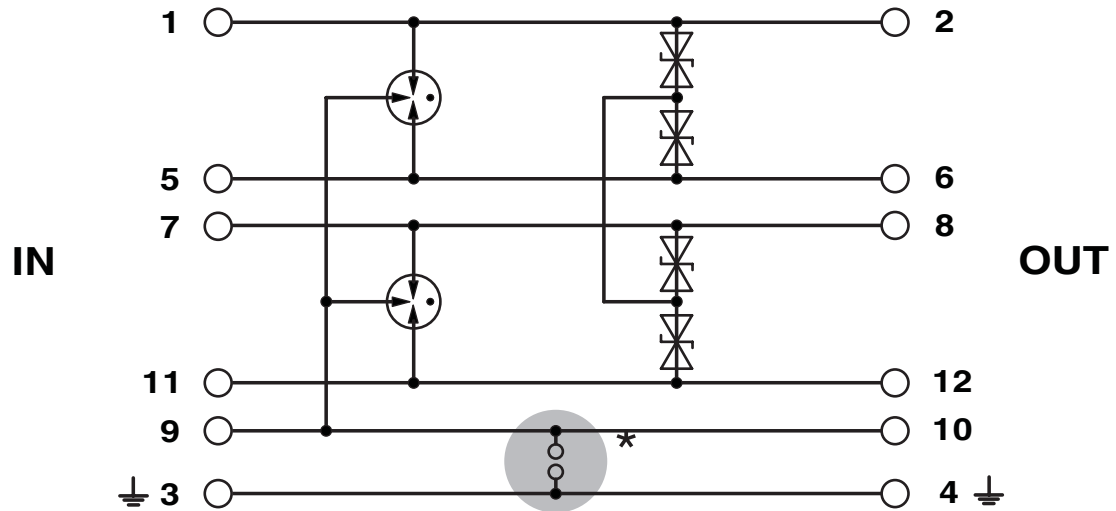
PT 4-24DC-ST - Surge protection plug

2839240

<https://www.phoenixcontact.com/gb/products/2839240>



Circuit diagram



PT 4-24DC-ST - Surge protection plug



2839240

<https://www.phoenixcontact.com/gb/products/2839240>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2839240>



EAC

Approval ID: EAC-Zulassung



DNV GL

Approval ID: TAE00001N6



EAC

Approval ID: RU C-DE.*09.B.00169



UL Listed

Approval ID: FILE E 138168

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 24 V | 2 A | - | - |



cUL Listed

Approval ID: FILE E 333250



UL Listed

Approval ID: FILE E 333250

cULus Listed

PT 4-24DC-ST - Surge protection plug



2839240

<https://www.phoenixcontact.com/gb/products/2839240>

Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27130807 |
| ECLASS-13.0 | 27171501 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC000943 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

PT 4-24DC-ST - Surge protection plug



2839240

<https://www.phoenixcontact.com/gb/products/2839240>

Environmental product compliance

EU RoHS

| | |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 941e6df2-f5dd-4933-9209-e903b00180a5 |

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk