# SP 4/ 3 - Plug

3042900

https://www.phoenixcontact.com/us/products/3042900

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Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 3, connection method: Spring-cage connection, Rated cross section: 4 $mm^2$, cross section: 0.08 $mm^2$- 6 $mm^2$, color: gray

## Your advantages

- Large-surface labeling option
- Practical coding option
- Tested for railway applications

## Commercial data

| | |
|---|---|
| Item number | 3042900 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE02 |
| Product key | BE2144 |
| Catalog page | Page 345 (C-1-2019) |
| GTIN | 4017918956257 |
| Weight per piece (including packing) | 13.005 g |
| Weight per piece (excluding packing) | 13.005 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Terminal plug |
| Number of positions | 3 |
| Pitch | 6.2 mm |

### Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |
| Degree of pollution | 3 |

## Electrical properties

| | |
|---|---|
| Rated surge voltage | 8 kV |

## Connection data

| | |
|---|---|
| Nominal cross section | 4 mm² |
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A4 |
| Connection in acc. with standard | IEC 61984 |
| Conductor cross section rigid | 0.08 mm² ... 6 mm² |
| Cross section AWG | 28 ... 10 (converted acc. to IEC) |
| Conductor cross section flexible | 0.08 mm² ... 4 mm² |
| Conductor cross section, flexible [AWG] | 28 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm² ... 4 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.14 mm² ... 4 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 1 mm² |
| Nominal current | 32 A |
| Maximum load current | 32 A (with 6 mm² conductor cross section) |
| Nominal voltage | 800 V |
| Nominal cross section | 4 mm² |

## Dimensions

| | |
|---|---|
| Width | 18.6 mm |
| Height | 21 mm |
| Depth | 41.5 mm |
| Length | 21 mm |
| Pitch | 6.2 mm |

## Material specifications

| | |
|---|---|
| Color | gray |
| Flammability rating according to UL 94 | V0 |
| Insulating material group | I |
| Insulating material | PA |

| | |
|---|---|
| Static insulating material application in cold | -60 °C |
| Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21)) | 130 °C |
| Relative insulation material temperature index (Elec., UL 746 B) | 130 °C |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 3 |
| Fire protection for rail vehicles (DIN EN 45545-2) R26 | HL 1 - HL 3 |
| Calorimetric heat release NFPA 130 (ASTM E 1354) | 28 MJ/kg |
| Surface flammability NFPA 130 (ASTM E 162) | passed |
| Specific optical density of smoke NFPA 130 (ASTM E 662) | passed |
| Smoke gas toxicity NFPA 130 (SMP 800C) | passed |

## Electrical tests

Surge voltage test

| | |
|---|---|
| Result | Test passed |
| Short-time withstand current 4 mm² | 0.48 kA |
| Result | Test passed |

Power-frequency withstand voltage

| | |
|---|---|
| Test voltage setpoint | 2 kV |
| Result | Test passed |

## Mechanical tests

Attachment on the carrier

| | |
|---|---|
| Result | Test passed |

## Environmental and real-life conditions

Needle-flame test

| | |
|---|---|
| Time of exposure | 30 s |
| Result | Test passed |

Oscillation/broadband noise

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2018-05 |
| Spectrum | Service life test category 1, class B, body mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 150 Hz |
| ASD level | 0.964 (m/s²)²/Hz |
| Acceleration | 0.58g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Result | Test passed |

Shocks

| | |
|---|---|
| Pulse shape | Half-sine |

| | |
|---|---|
| Acceleration | 5g |
| Shock duration | 30 ms |
| Number of shocks per direction | 3 |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |
| Result | Test passed |

Ambient conditions

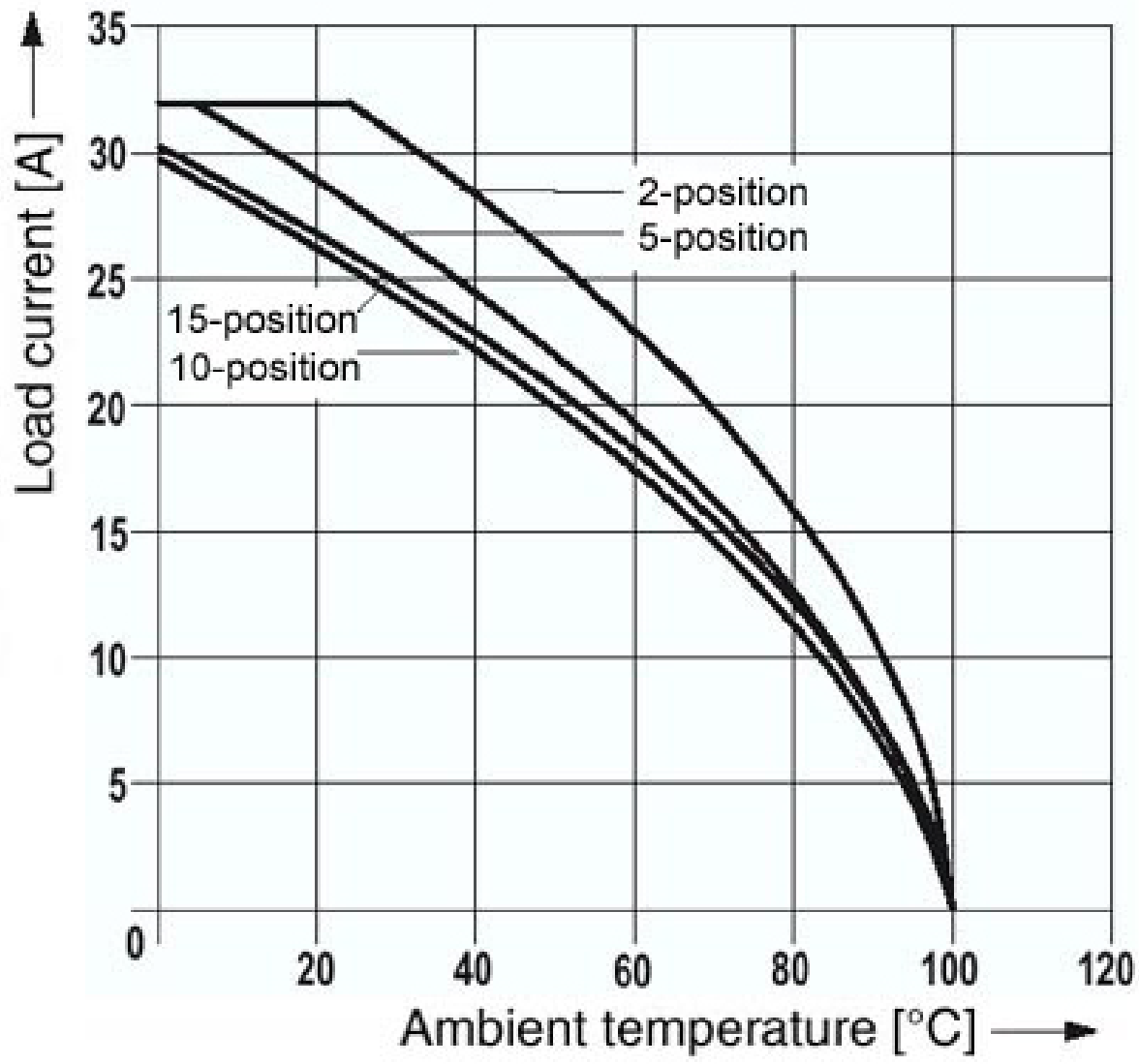
| | |
|---|---|
| Ambient temperature (operation) | -60 °C (max. operating temperature see derating curve) |
| Ambient temperature (storage/transport) | -25 °C ... 60 °C (for a short time, no longer than 24 h, -60°C to +70°C) |
| Ambient temperature (assembly) | -5 °C ... 70 °C |
| Ambient temperature (actuation) | -5 °C ... 70 °C |
| Permissible humidity (operation) | 20 % ... 90 % |
| Permissible humidity (storage/transport) | 30 % ... 70 % |

## Standards and regulations

| | |
|---|---|
| Connection in acc. with standard | IEC 61984 |

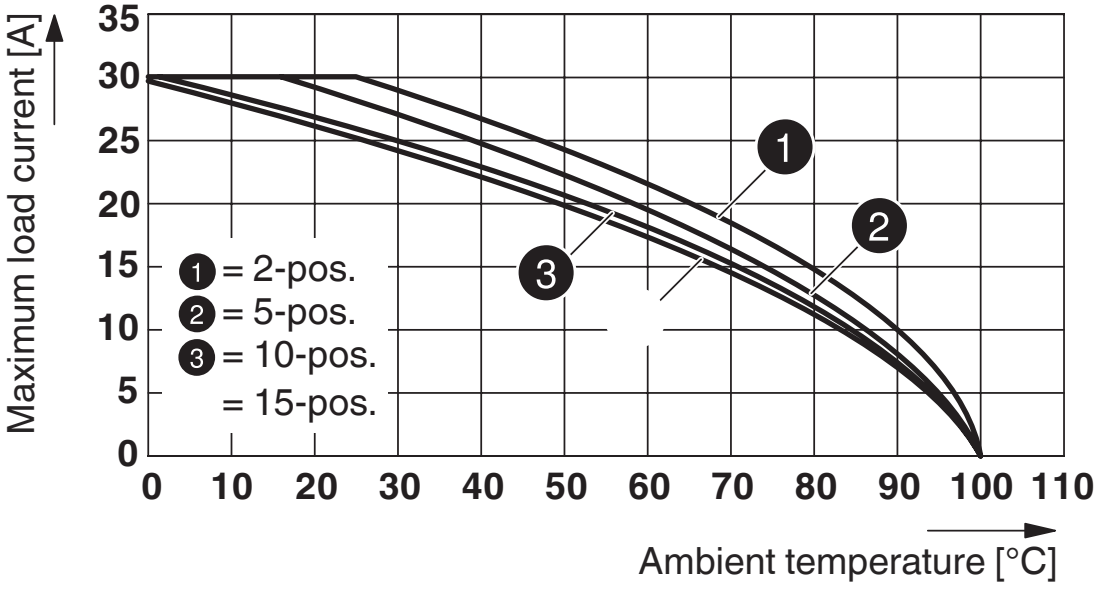
## Drawings

Diagram



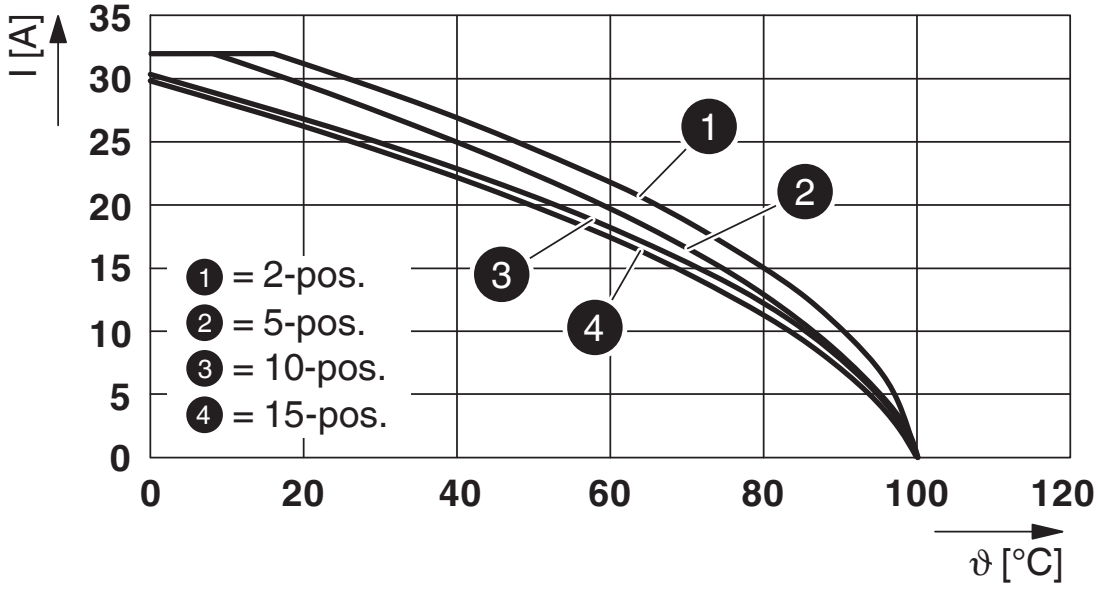

Derating curve for the spring-cage terminal with all plug versions SP 4/... .

Diagram




Derating curve for ST 4/ 1P and for all plug versions SP... .

Diagram




Derating curve for spring-cage terminals ST 4/1P.. and ST 4/2P.. with all plug versions SP 4/... . The derating curves are determined by multiplying the values of the base curves by the factor 0.8.

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3042900

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 600 V | 30 A | 24 - 12 | - |
| Use group C | | | | |
| | 600 V | 30 A | 24 - 12 | - |

**IECEE CB Scheme**
Approval ID: DE1-62736/B1/B2

**EAC**
Approval ID: RU C-DE.BL08.B.00511

**cULus Recognized**
Approval ID: E60425

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| Use group B | | | | |
| | 600 V | 30 A | 28 - 10 | - |
| Use group C | | | | |
| | 600 V | 30 A | 28 - 10 | - |

**VDE Zeichengenehmigung**
Approval ID: 40019518

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| Only flexible conductors | 800 V | - | - | 0.2 - 4 |
| Only rigid conductors | 800 V | - | - | 0.2 - 6 |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27141151 |
| ECLASS-12.0 | 27141151 |
| ECLASS-13.0 | 27250306 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC002021 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## 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% |

## Accessories

### PZ/2 - Strain relief

3040627

https://www.phoenixcontact.com/us/products/3040627



Strain relief, width: 9.3 mm, height: 48.7 mm, number of positions: 2, color: black

### PR - Latching

3040559

https://www.phoenixcontact.com/us/products/3040559



Latching, width: 4.4 mm, height: 29.8 mm, number of positions: 1, color: orange

## PR/2 - Latching

3040630

https://www.phoenixcontact.com/us/products/3040630



Latching, width: 10 mm, height: 29.8 mm, number of positions: 2, color: orange

## PRT/2 - Latching

3040631

https://www.phoenixcontact.com/us/products/3040631



Latching, can only be released using a screwdriver, width: 9 mm, height: 23.2 mm, number of positions: 2, color: orange

## PRZ - Latching

3040614

https://www.phoenixcontact.com/us/products/3040614



Latching, number of positions: 2, length: 64 mm, color: orange

## ISH 4/0,5 - Insulating sleeve

3002885

https://www.phoenixcontact.com/us/products/3002885



Insulating sleeve, color: gray

## ISH 4/1,0 - Insulating sleeve

3002898

https://www.phoenixcontact.com/us/products/3002898



Insulating sleeve, color: black

## ZBF 6:UNBEDRUCKT - Zack Marker strip, flat

0808710

https://www.phoenixcontact.com/us/products/0808710



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

## ZBF 6 CUS - Zack Marker strip, flat

0825027

https://www.phoenixcontact.com/us/products/0825027



Zack Marker strip, flat, Strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

## UC-TMF 6 - Marker for terminal blocks

0818140

https://www.phoenixcontact.com/us/products/0818140



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 5.1 mm, Number of individual labels: 80

## UC-TMF  6 CUS - Marker for terminal blocks

0824646

https://www.phoenixcontact.com/us/products/0824646



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 5.1 mm, Number of individual labels: 80

## UCT-TMF 6 - Marker for terminal blocks

0828746

https://www.phoenixcontact.com/us/products/0828746



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.4 x 4.7 mm, Number of individual labels: 60

## UCT-TMF 6 CUS - Marker for terminal blocks

0829665

https://www.phoenixcontact.com/us/products/0829665



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.4 x 4.7 mm, Number of individual labels: 60

## ZBF 6,LGS:FORTL.ZAHLEN - Zack Marker strip, flat

0808749

https://www.phoenixcontact.com/us/products/0808749




Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

## ZBF 6,QR:FORTL.ZAHLEN - Zack Marker strip, flat

0808765

https://www.phoenixcontact.com/us/products/0808765




Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

## ZBF 6,LGS:GERADE ZAHLEN - Zack Marker strip, flat

0810834

https://www.phoenixcontact.com/us/products/0810834




Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive even numbers 2 ... 20, 22 ... 40, etc. up to 82 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

## ZBF 6,LGS:UNGERADE ZAHLEN - Zack Marker strip, flat

0810876

https://www.phoenixcontact.com/us/products/0810876




Zack Marker strip, flat, Strip, white, labeled, printed horizontally: Odd numbers 1 - 19, 21 - 39, etc. up to 81 - 99, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

## B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/us/products/1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

## X-PEN 0,35 - Marker pen

0811228

https://www.phoenixcontact.com/us/products/0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

## ST-BW - Actuation tool

1207608

https://www.phoenixcontact.com/us/products/1207608



Actuation tool, for all 2.5 $mm^2$ - 4.0 $mm^2$ spring-cages

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