

SP 4/ 1-L GNYE - Plug

3042777

<https://www.phoenixcontact.com/us/products/3042777>

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Plug, nom. voltage: 800 V, nominal current: 32 A, number of positions: 1, connection method: Spring-cage connection, Rated cross section: 4 mm², cross section: 0.08 mm²- 6 mm², color: green-yellow

Product description

Connector element left, left housing without engagement pin, right opened without cover

Your advantages

- Cable housing can be snapped on to the plugs, see figure below
- The plug with spring-cage connection is assembled directly on site by snapping together single-position plug elements
- The ST-COMBI plugs for self-assembly provide solutions that users can implement themselves
- Tested for railway applications

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3042777 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE02 |
| Product key | BE2144 |
| GTIN | 4017918956073 |
| Weight per piece (including packing) | 4.33 g |
| Weight per piece (excluding packing) | 4.33 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

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Technical data

Notes

| | |
|--------------------|---|
| Notes on operation | COMBI connectors are connectors without switching power in accordance with IEC 61984 and can be connected or disconnected without load or voltage when used as intended |
|--------------------|---|

General

| | |
|------|---|
| Note | With a free-hanging connection, an insulating foil has to be placed between the plug connection and electrically conductive surfaces. |
|------|---|

Product properties

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

Dimensions

| | |
|--------|--------|
| Width | 6.2 mm |
| Height | 21 mm |

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| | |
|--------|---------|
| Depth | 41.5 mm |
| Length | 21 mm |
| Pitch | 6.2 mm |

Material specifications

| | |
|---|--------------|
| Color | green-yellow |
| 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 mm ² | 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 | Long life test category 1, class B, body mounted |

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| | |
|------------------------|--|
| Frequency | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$ |
| ASD level | $0.964 \text{ (m/s}^2\text{)}^2\text{/Hz}$ |
| 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, not exceeding 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 |
|----------------------------------|-----------|

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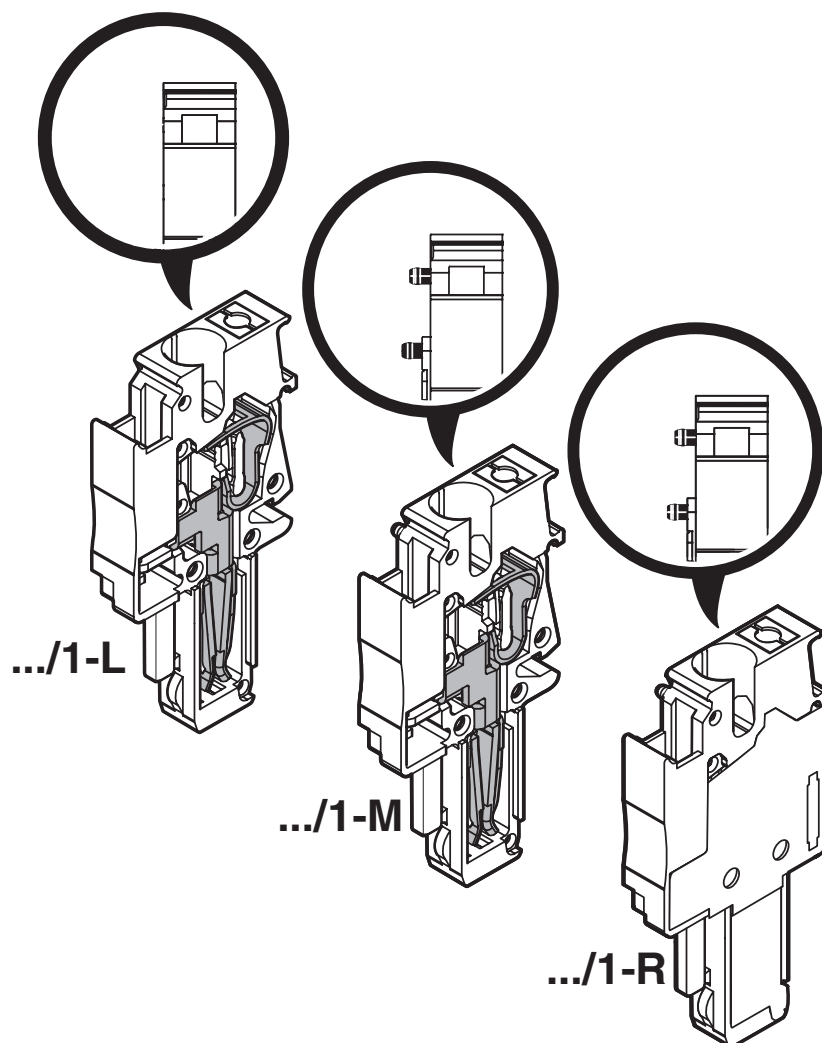
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Drawings

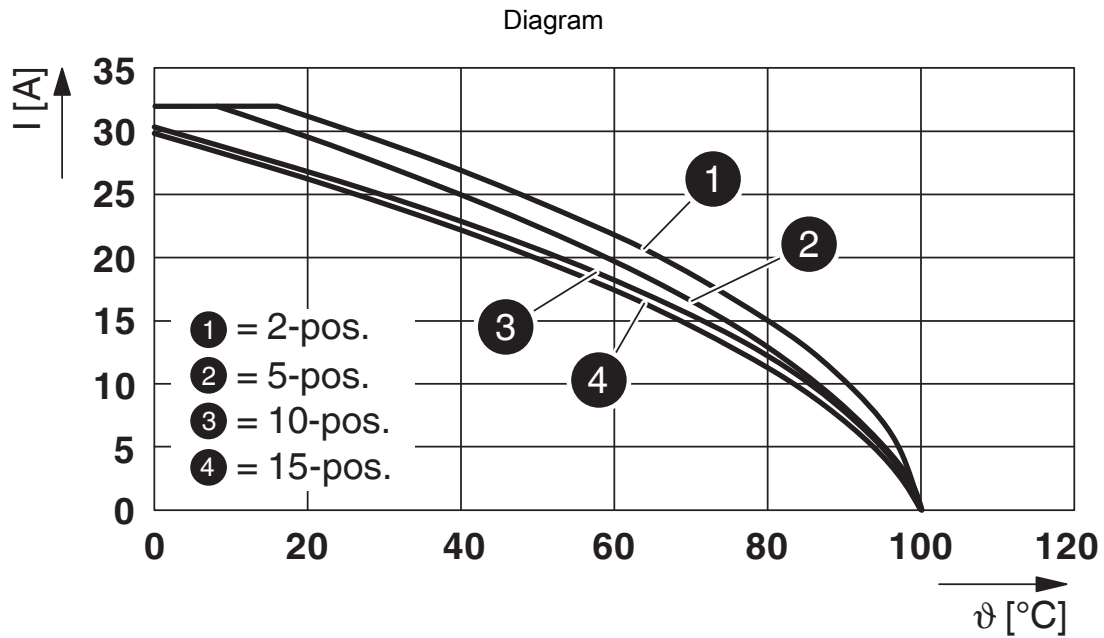
Schematic diagram



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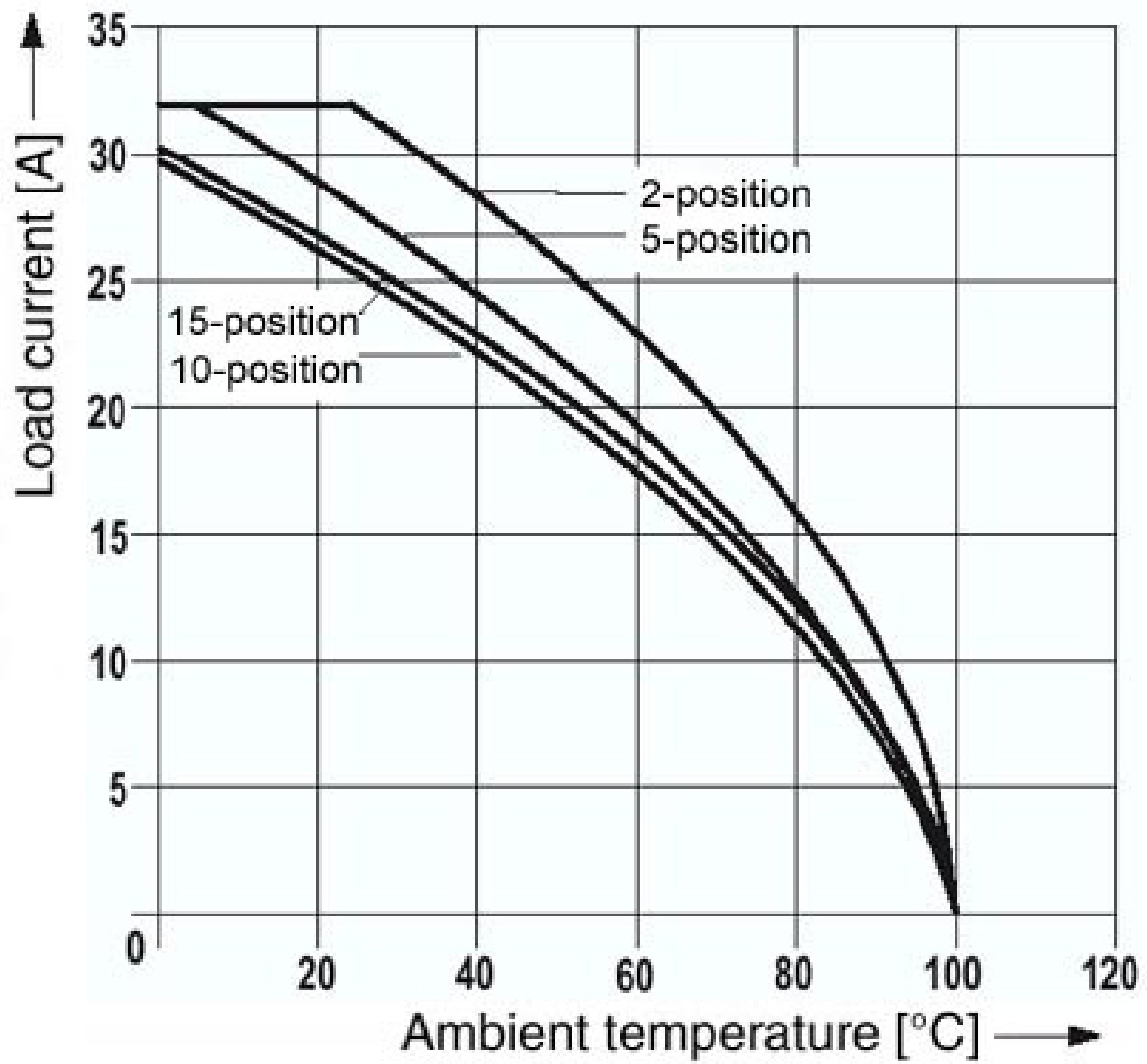
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Derating curve for spring-cage terminals ST 4/1P.. and ST 4/2P.. with all plug versions SP 4/... . The derating curves are determined by multiplying the values of the base curves by the factor 0.8.

Diagram



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

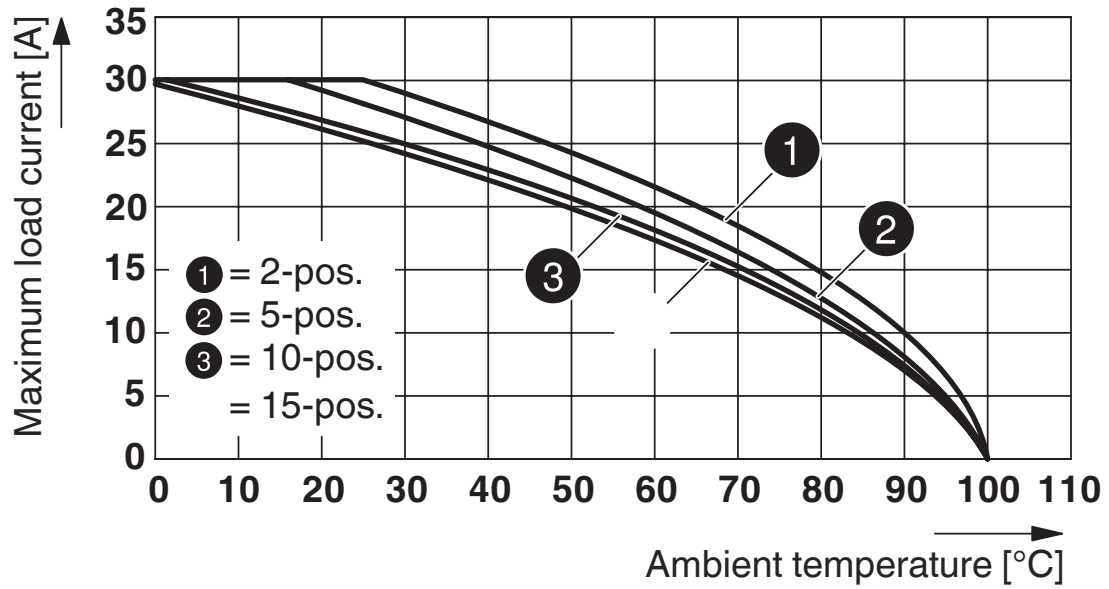
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Diagram



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

Circuit diagram



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Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3042777>

|  CSA Approval ID: 13631 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 600 V | 30 A | 24 - 12 | - |
| C | 600 V | 30 A | 24 - 12 | - |

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

|  cULus Recognized Approval ID: E60425 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 600 V | 30 A | 28 - 10 | - |
| 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 |
| keine | | | | |
| Only flexible conductors | 800 V | - | - | 0.2 - 4 |
| Only rigid conductors | 800 V | - | - | 0.2 - 6 |

|  EAC Approval ID: KZ7500651131219505 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27250306 |
| ECLASS-15.0 | 27250306 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002021 |
|-----------|----------|

UNSPSC

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

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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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.033 kg CO2e |
|---------|---------------|

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