# PP-H 2,5/12 - Plug

3209976

https://www.phoenixcontact.com/us/products/3209976

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Plug, nom. voltage: 500 V, nominal current: 24 A, number of connections: 12, number of positions: 12, connection method: Push-in connection, Rated cross section: 2.5 mm$^2$, 1 level, cross section: 0.14 mm$^2$ - 4 mm$^2$, color: gray

## Your advantages

- Large-surface labeling option
- The Push-in technology COMBI plugs for self-assembly provide solutions that users can implement themselves
- Tested for railway applications

## Commercial data

| | |
|---|---|
| Item number | 3209976 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | BE22 |
| Product key | BE2244 |
| GTIN | 4046356366861 |
| Weight per piece (including packing) | 41.03 g |
| Weight per piece (excluding packing) | 41.03 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

# 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 |

## Product properties

| | |
|---|---|
| Product type | Terminal plug |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| Number of positions | 12 |
| Pitch | 5.2 mm |
| Number of connections | 12 |
| Number of rows | 1 |
| Potentials | 1 |

### Insulation characteristics

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

## Electrical properties

| | |
|---|---|
| Rated surge voltage | 6 kV |
| Maximum power dissipation for nominal condition | 0.77 W |

## Connection data

| | |
|---|---|
| Number of connections per level | 12 |
| Nominal cross section | 2.5 mm² |

### 1 level

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 61984 |
| Conductor cross-section rigid | 0.14 mm² ... 4 mm² |
| Cross section AWG | 26 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible | 0.14 mm² ... 2.5 mm² |
| Conductor cross-section, flexible [AWG] | 26 ... 14 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm² ... 2.5 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.14 mm² ... 2.5 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² |
| Nominal cross section | 2.5 mm² |
| Nominal current | 24 A |

| | |
|---|---|
| Maximum load current | 24 A (with 4 mm² conductor cross-section) |
| Nominal voltage | 500 V |

1 level Connection cross sections directly pluggable

| | |
|---|---|
| Conductor cross-section rigid | 0.34 mm² ... 4 mm² |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm² ... 2.5 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.34 mm² ... 2.5 mm² |

## Dimensions

| | |
|---|---|
| Width | 62.4 mm |
| Height | 15.8 mm |
| Depth | 40.2 mm |
| Pitch | 5.2 mm |

## Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |
| 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 |

## Mechanical properties

Mechanical data

| | |
|---|---|
| Open side panel | No |

## Environmental and real-life conditions

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 % |

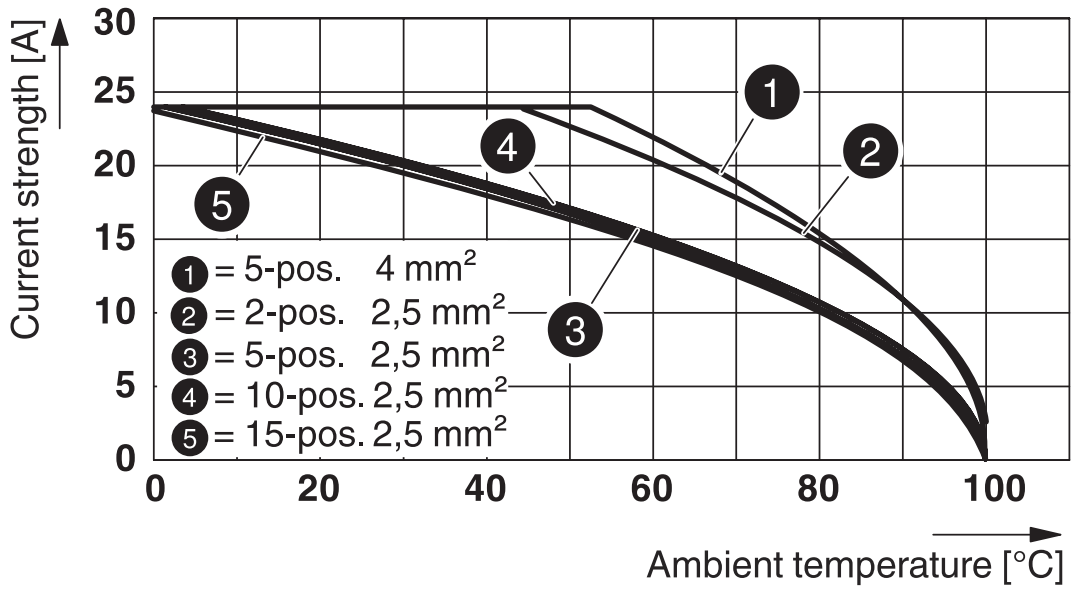
| | |
|---|---|
| Permissible humidity (storage/transport) | 30 % ... 70 % |

## Standards and regulations

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

## Drawings

Diagram




Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3209976

**CSA**
Approval ID: 158887

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 20 A | 26 - 12 | - |
| C | | | | |
| | 300 V | 20 A | 26 - 12 | - |

**cULus Recognized**
Approval ID: E60425

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| | 300 V | 20 A | 26 - 12 | - |
| C | | | | |
| | 300 V | 20 A | 26 - 12 | - |
| D | | | | |
| | 600 V | 5 A | 26 - 12 | - |

**LR**
Approval ID: LR2371832TA

**NK**
Approval ID: 14ME0912

**BV**
Approval ID: 25278/C1 BV

**ABS**
Approval ID: 21-2192245-PDA

**DNV**
Approval ID: TAE000010T

**EAC**
Approval ID: KZ7500651131219505

## Classifications

### ECLASS

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

### ETIM

| | |
|---|---|
| ETIM 10.0 | 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% |

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