# SC 2,5/12 - COMBI coupling

3042324

https://www.phoenixcontact.com/us/products/3042324

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COMBI coupling, nom. voltage: 500 V, nominal current: 24 A, number of connections: 1, number of positions: 12, connection method: Spring-cage connection, Rated cross section: 2.5 mm$^2$, cross section: 0.08 mm$^2$ - 4 mm$^2$, color: gray

## Your advantages

- Standard strain relief can be used
- Tested for railway applications

## Commercial data

| | |
|---|---|
| Item number | 3042324 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | BE02 |
| Product key | BE2145 |
| GTIN | 4017918922597 |
| Weight per piece (including packing) | 33.003 g |
| Weight per piece (excluding packing) | 30 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

## Technical data

### Product properties

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

| | |
|---|---|
| Nominal cross section | 2.5 mm² |
| Connection method | Spring-cage connection |
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 61984 |
| Conductor cross-section rigid | 0.08 mm² ... 4 mm² |
| Cross section AWG | 28 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible | 0.08 mm² ... 2.5 mm² |
| Conductor cross-section, flexible [AWG] | 28 ... 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 |

### Dimensions

| | |
|---|---|
| Width | 62.4 mm |
| End cover width | 2.2 mm |
| Height | 37.2 mm |
| Depth | 18.8 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 |

## Electrical tests

Surge voltage test

| | |
|---|---|
| Test voltage setpoint | 7.3 kV |
| Result | Test passed |
| Short-time withstand current 2.5 mm² | 0.3 kA |
| Result | Test passed |

Power-frequency withstand voltage

| | |
|---|---|
| Test voltage setpoint | 1.89 kV |
| Result | Test passed |

## Mechanical properties

Mechanical data

| | |
|---|---|
| Open side panel | Yes |

## Mechanical tests

Attachment on the carrier

| | |
|---|---|
| DIN rail/fixing support | Metal wall 6 mm |
| Test force setpoint | 1 N |
| 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):2008-03 |
| Spectrum | Long life test category 1, class B, body mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 150 Hz |
| ASD level | 0.964 $(m/s^2)^2/Hz$ |
| Acceleration | 0.58g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Result | Test passed |

Shocks

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2008-03 |
| 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

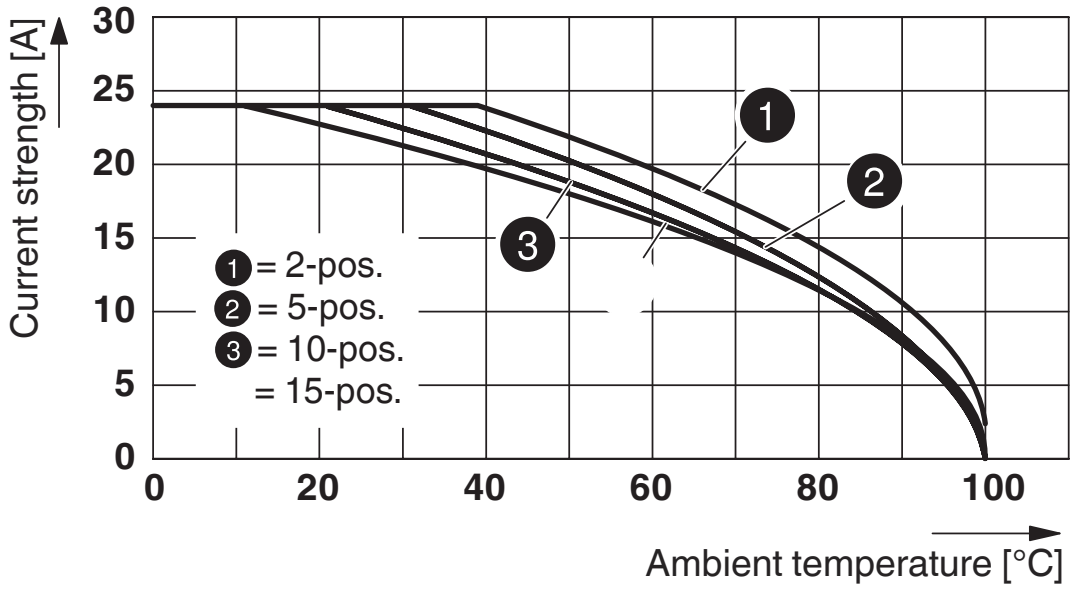
| | |
|---|---|
| Ambient temperature (operation) | -60 °C (max. operating temperature see derating curve) |
| Ambient temperature (storage/transport) | -25 °C ... 60 °C (for a short time, not exceeding 24 h, -60 °C to +70 °C) |
| Ambient temperature (assembly) | -5 °C ... 70 °C |
| Ambient temperature (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 |

## Drawings

Diagram




Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3042324

**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 | 28 - 12 | - |
| C | | | | |
| | 300 V | 20 A | 28 - 12 | - |

**DNV**
Approval ID: TAE00001CS

**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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