

# SC 4/10 - COMBI coupling

3042531

<https://www.phoenixcontact.com/us/products/3042531>



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COMBI coupling, nom. voltage: 800 V, nominal current: 32 A, number of connections: 2, number of positions: 10, connection method: Spring-cage connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.08 mm<sup>2</sup> - 6 mm<sup>2</sup>, color: gray

## Your advantages

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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3042531       |
| Packing unit                         | 25 pc         |
| Minimum order quantity               | 25 pc         |
| Sales key                            | BE02          |
| Product key                          | BE2145        |
| GTIN                                 | 4046356012676 |
| Weight per piece (including packing) | 52.14 g       |
| Weight per piece (excluding packing) | 52.14 g       |
| Customs tariff number                | 85366990      |
| Country of origin                    | PL            |

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## Technical data

### Notes

#### 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 coupling |
| Area of application   | Railway industry  |
|                       | Machine building  |
|                       | Plant engineering |
| Number of positions   | 10                |
| Pitch                 | 6.2 mm            |
| Number of connections | 2                 |
| Number of rows        | 1                 |

#### Insulation characteristics

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

### Electrical properties

|                                                 |        |
|-------------------------------------------------|--------|
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 1.02 W |

### Connection data

|                                                                                           |                                                       |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Nominal cross section                                                                     | 4 mm <sup>2</sup>                                     |
| 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 <sup>2</sup> ... 6 mm <sup>2</sup>            |
| Cross section AWG                                                                         | 28 ... 10 (converted acc. to IEC)                     |
| Conductor cross-section flexible                                                          | 0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>            |
| Conductor cross-section, flexible [AWG]                                                   | 28 ... 12 (converted acc. to IEC)                     |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>            |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>            |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup>             |
| Nominal current                                                                           | 32 A                                                  |
| Maximum load current                                                                      | 32 A (with 6 mm <sup>2</sup> conductor cross-section) |
| Nominal voltage                                                                           | 800 V                                                 |
| Nominal cross section                                                                     | 4 mm <sup>2</sup>                                     |

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## Dimensions

|                 |         |
|-----------------|---------|
| Width           | 62 mm   |
| End cover width | 3.2 mm  |
| Height          | 48.6 mm |
| Depth           | 22.3 mm |
| Pitch           | 6.2 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

|                                                |             |
|------------------------------------------------|-------------|
| Result                                         | Test passed |
| Short-time withstand current 4 mm <sup>2</sup> | 0.48 kA     |
| Result                                         | Test passed |

### Power-frequency withstand voltage

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

## Mechanical properties

### Mechanical data

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

## 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 |
| 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

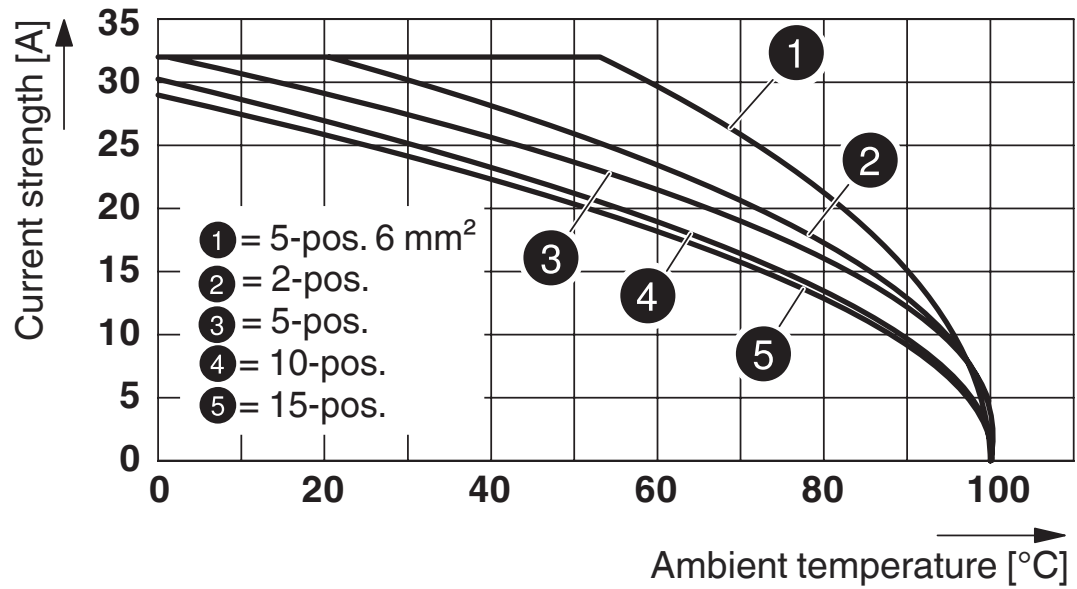
|                                          |                                                                           |
|------------------------------------------|---------------------------------------------------------------------------|
| Ambient temperature (operation)          | -60 °C (max. operating 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 |
|----------------------------------|-----------|

## Drawings

Diagram



Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3042531>

|                                                                                                                                              |                       |                       |                   |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>cULus Recognized</b><br/>Approval ID: E60425</div> |                       |                       |                   |                             |
|                                                                                                                                              | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                            |                       |                       |                   |                             |
|                                                                                                                                              | 600 V                 | 30 A                  | 28 - 10           | -                           |
| C                                                                                                                                            |                       |                       |                   |                             |
|                                                                                                                                              | 600 V                 | 30 A                  | 28 - 10           | -                           |

|                                                                                                                                             |  |
|---------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div> <b>EAC</b><br/>Approval ID: KZ7500651131219505</div> |  |
|---------------------------------------------------------------------------------------------------------------------------------------------|--|

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | 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%               |

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