

ST 2,5-TWIN/ 1P BU - Feed-through terminal block



3042104

<https://www.phoenixcontact.com/us/products/3042104>

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Feed-through terminal block, nom. voltage: 500 V, nominal current: 24 A, number of connections: 3, number of positions: 1, connection method: Spring-cage/plug-in connection, Rated cross section: 2.5 mm², 1st level connection left, cross section: 0.08 mm² - 4 mm², 1st level connection right, mounting type: NS 35/7,5, NS 35/15, color: blue

Your advantages

- The plug-in ST-COMBI spring-cage terminal block series combines the system advantages of the ST standard terminal block series with those of the COMBI plug-in system
- Tested for railway applications

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3042104 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE02 |
| Product key | BE2141 |
| GTIN | 4017918927165 |
| Weight per piece (including packing) | 7.341 g |
| Weight per piece (excluding packing) | 6.748 g |
| Customs tariff number | 85369010 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-----------------------|------------------------|
| Product type | Plug-in terminal block |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| Number of positions | 1 |
| Number of connections | 3 |
| 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 | 3 |
| Nominal cross section | 2.5 mm ² |

1st level connection left

| | |
|---|--|
| Connection method | Spring-cage/plug-in connection |
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 61984 |
| Conductor cross-section rigid | 0.08 mm ² ... 4 mm ² |
| Cross section AWG | 28 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible | 0.08 mm ² ... 2.5 mm ² |
| Conductor cross-section, flexible [AWG] | 28 ... 14 (converted acc. to IEC) |
| Conductor cross-section flexible ultrasound-compressed | 0.34 mm ² ... 4 mm ² |
| Conductor cross-section, flexible [AWG] ultrasound-compressed | 22 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm ² ... 2.5 mm ² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.14 mm ² ... 2.5 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² |
| Nominal cross section | 2.5 mm ² |
| Nominal current | 24 A (observe derating) |
| Maximum load current | 24 A (For 4 mm ² conductor cross-section, see derating curve) |
| Nominal voltage | 500 V |

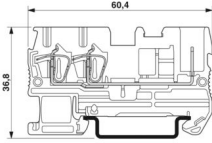
Dimensions

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| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 5.2 mm |
| End cover width | 2.2 mm |
| Height | 60.5 mm |
| Depth on NS 35/7,5 | 36.5 mm |
| Depth on NS 35/15 | 44 mm |

Material specifications

| | |
|---|-----------------|
| Color | blue (RAL 5015) |
| 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)) | 125 °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) | 27,5 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 mm ² | 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 |
|-----------------|-----|

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Mechanical tests

Attachment on the carrier

| | |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35 |
| 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 | $f_1 = 5 \text{ Hz}$ 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

| | |
|--------------------------------|-------------------------------------|
| 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 ... 100 °C (max. operating temperature range including self-heating, 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 |
|----------------------------------|-----------|

Mounting

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| | |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
| | NS 35/15 |

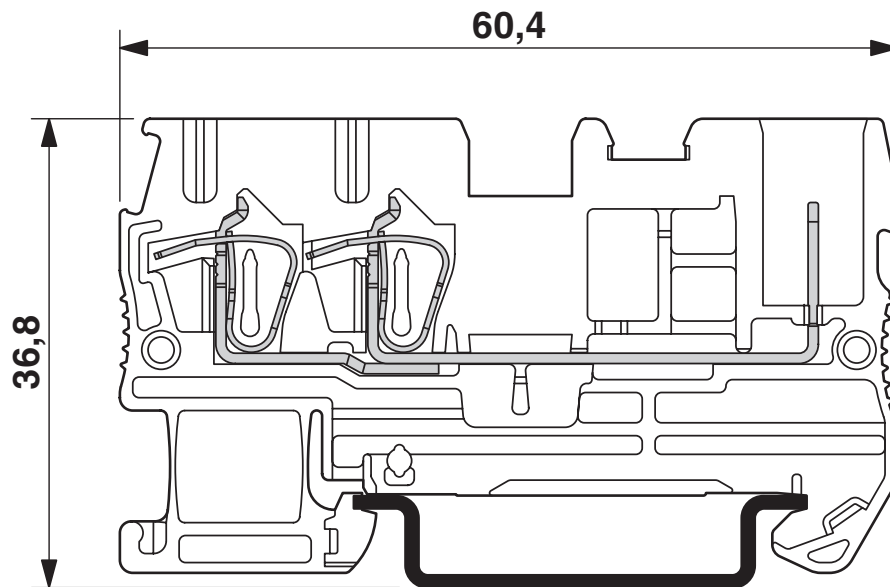
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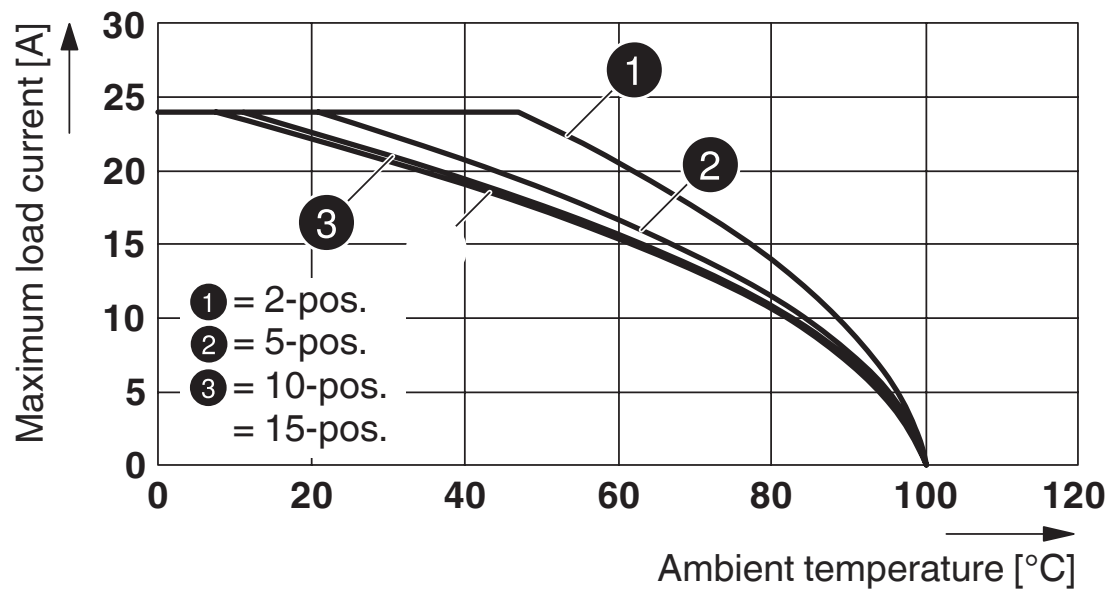
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Drawings

Dimensional drawing



Diagram



Applies to all male connector variants SP...

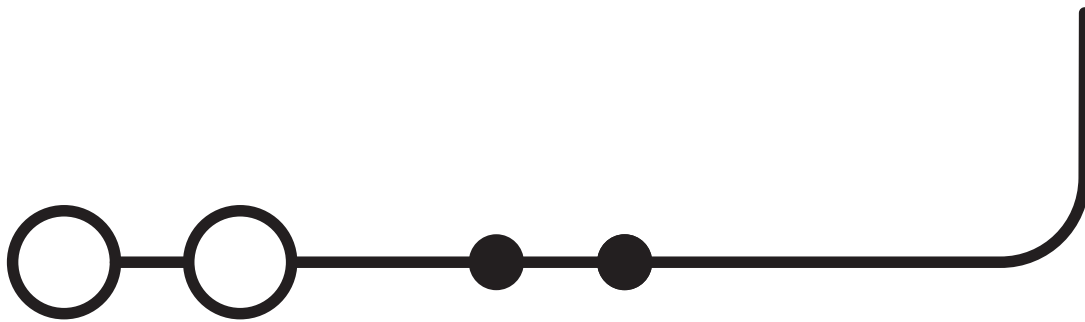
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Circuit diagram



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Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3042104>

|  CSA Approval ID: 13631 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 600 V | 20 A | 28 - 12 | - |
| C | 600 V | 20 A | 28 - 12 | - |

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

|  EAC Approval ID: RU C-DE.BL08.B.00644 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

|  VDE Zeichengenehmigung Approval ID: 40019518 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | | | | |
| Only flexible conductors | 500 V | - | - | 0.2 - 2.5 |
| Only rigid conductors | 500 V | - | - | 0.2 - 4 |

|  cULus Recognized Approval ID: E60425 | | | | |
|--|-----------------------|-----------------------|-------------------|----------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| B | 600 V | 20 A | 28 - 12 | - |
| C | 600 V | 20 A | 28 - 12 | - |
| F | 500 V | 20 A | 28 - 12 | - |

| DNV Approval ID: TAE00001CS | | | | |
|---------------------------------------|--|--|--|--|
|---------------------------------------|--|--|--|--|

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27250117 |
| ECLASS-15.0 | 27250117 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC000897 |
|-----------|----------|

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 | 0.035 kg CO2e |
|---------|---------------|

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com