

ST 2,5 BK - Feed-through terminal block



3037122

<https://www.phoenixcontact.com/us/products/3037122>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 2, connection method: Spring-cage connection, Rated cross section: 2.5 mm², cross section: 0.08 mm² - 4 mm², mounting type: NS 35/7,5, NS 35/15, color: black

Your advantages

- Simple wiring of very small, flexible conductors
- Enables one-handed wiring
- No restriction on cross-sections when using conductors with ferrules
- Reliable vibration resistance thanks to spring-loaded contact elements
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3037122 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE02 |
| Product key | BE2111 |
| GTIN | 4017918599553 |
| Weight per piece (including packing) | 6.096 g |
| Weight per piece (excluding packing) | 5.44 g |
| Customs tariff number | 85369010 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-----------------------|-----------------------------|
| Product type | Feed-through terminal block |
| Product family | ST |
| Number of connections | 2 |
| Number of rows | 1 |
| Potentials | 1 |

Insulation characteristics

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

Electrical properties

| | |
|---|--------|
| Rated surge voltage | 8 kV |
| Maximum power dissipation for nominal condition | 0.77 W |

Connection data

| | |
|---|---|
| Number of connections per level | 2 |
| Nominal cross section | 2.5 mm ² |
| Connection method | Spring-cage connection |
| Stripping length | 8 mm ... 10 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 60947-7-1 |
| 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 (at 2.5 mm ²) |
| Maximum load current | 31 A (with 4 mm ² conductor cross-section) |
| Nominal voltage | 800 V |

Ex data

Rated data (ATEX/IECEx)

| | |
|-----------------------------|------------------------|
| Identification | Ⓜ II 2 GD Ex eb IIC Gb |
| Operating temperature range | -60 °C ... 85 °C |
| | 3030417 D-ST 2,5 |

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| | |
|--|--------------------------------------|
| Ex-certified accessories | 3030721 ATP-ST 4 |
| | 1204517 SZF 1-0,6X3,5 |
| | 3022276 CLIPFIX 35-5 |
| | 3022218 CLIPFIX 35 |
| List of bridges | Plug-in bridge / FBS 2-5 / 3030161 |
| | Plug-in bridge / FBS 3-5 / 3030174 |
| | Plug-in bridge / FBS 4-5 / 3030187 |
| | Plug-in bridge / FBS 5-5 / 3030190 |
| | Plug-in bridge / FBS 10-5 / 3030213 |
| | Plug-in bridge / FBS 20-5 / 3030226 |
| Bridge data | 23 A (2.5 mm ²) |
| Ex temperature increase | 40 K (22.8 A / 2.5 mm ²) |
| for bridging with bridge | 550 V |
| - At bridging between non-adjacent terminal blocks | 352 V |
| - At bridging between non-adjacent terminal blocks via PE terminal block | 352 V |
| - At cut-to-length bridging with cover | 220 V |
| - At cut-to-length bridging with partition plate | 275 V |
| Rated insulation voltage | 500 V |
| output | (Permanent) |

Ex level General

| | |
|----------------------|---------|
| Rated voltage | 550 V |
| Rated current | 20.5 A |
| Maximum load current | 26.5 A |
| Contact resistance | 1.04 mΩ |

Ex connection data General

| | |
|------------------------------|--|
| Nominal cross section | 2.5 mm ² |
| Rated cross section AWG | 14 |
| Connection capacity rigid | 0.08 mm ² ... 4 mm ² |
| Connection capacity AWG | 28 ... 12 |
| Connection capacity flexible | 0.08 mm ² ... 2.5 mm ² |
| Connection capacity AWG | 28 ... 14 |

Dimensions

| | |
|--------------------|---------|
| Width | 5.2 mm |
| End cover width | 2.2 mm |
| Height | 48.5 mm |
| Depth on NS 35/7,5 | 36.5 mm |
| Depth on NS 35/15 | 44 mm |

Material specifications

| | |
|--|------------------|
| Color | black (RAL 9005) |
| Flammability rating according to UL 94 | V0 |

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| | |
|--|-------------|
| Insulating material group | I |
| Insulating material | PA |
| Static insulating material application in cold | -60 °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 |
| 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 | 9.8 kV |
| Result | Test passed |

Temperature-rise test

| | |
|--|-------------------------------------|
| Requirement temperature-rise test | Increase in temperature \leq 45 K |
| Result | Test passed |
| Short-time withstand current 2.5 mm ² | 0.3 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

Mechanical strength

| | |
|--------|-------------|
| Result | Test passed |
|--------|-------------|

Attachment on the carrier

| | |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35 |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|--------------------------------|-------------------------------|
| Rotation speed | 9 rpm |
| Revolutions | 135 |
| Conductor cross-section/weight | 0.14 mm ² / 0.2 kg |
| | 2.5 mm ² / 0.7 kg |
| | 4 mm ² / 0.9 kg |

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| | |
|--------|-------------|
| Result | Test passed |
|--------|-------------|

Environmental and real-life conditions

Aging

| | |
|--------------------|-------------|
| Temperature cycles | 192 |
| Result | Test passed |

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 2, bogie-mounted |
| Frequency | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level | $6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$ |
| Acceleration | 3.12g |
| 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 ... 110 °C (Operating temperature range incl. self-heating; for max. short-term operating temperature, see RTI Elec.) |
| 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 60947-7-1 |
|----------------------------------|---------------|

Mounting

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

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Drawings

Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3037122>


|  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: DE1-66179_A1 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | 800 V | 24 A | - | 0.2 - 2.5 |

|  KR Approval ID: HMB17372-EL002 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  NK Approval ID: 09 ME 140 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

|  VDE Zeichengenehmigung Approval ID: 40009033 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| keine | 800 V | 24 A | - | 0.2 - 2.5 |

|  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 | - |

|  ATEX Approval ID: KEMA00ATEX2052U | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

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| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|--------------------------|-----------------------|-----------------------|-------------------|----------------------|
| keine | | | | |
| Only flexible conductors | 550 V | 20.5 A | - | 0.08 - 2.5 |
| Only rigid conductors | 550 V | 26.5 A | - | 0.08 - 4 |



IECEX

Approval ID: IECEX KEM 06.0051U

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|--------------------------|-----------------------|-----------------------|-------------------|----------------------|
| keine | | | | |
| Only flexible conductors | 550 V | 20.5 A | - | 0.08 - 2.5 |
| Only rigid conductors | 550 V | 26.5 A | - | 0.08 - 4 |



CCC

Approval ID: 2020322313000621



UKCA-EX

Approval ID: DEKRA 21UKEX0300U



EAC Ex

Approval ID: KZ 7500525010101950

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27250101 |
| ECLASS-15.0 | 27250101 |

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 | 0.028 kg CO2e |
|---------|---------------|

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