

UT 2,5-FE - Feed-through terminal block



3245121

<https://www.phoenixcontact.com/us/products/3245121>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 24 A, number of connections: 2, connection method: Screw connection, Rated cross section: 2.5 mm², cross section: 0.14 mm² - 4 mm², mounting type: NS 35/7,5, NS 35/15, color: black/yellow

Your advantages

- Globally recognized: Internationally proven screw connection
- Maintenance-free and vibration-resistant thanks to the patented Reakdyn principle
- Space savings and flexibility with the connection of two identical conductors
- Long-term stable connections with the use of high-quality materials
- Low self-heating due to high contact forces
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Vibration-resistant and maintenance-free conductor connection

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 3245121 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales key | BE01 |
| Product key | BE1111 |
| GTIN | 4046356572545 |
| Weight per piece (including packing) | 7.88 g |
| Weight per piece (excluding packing) | 7.966 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 | UT |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| | Process industry |
| 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 |
| Rated cross section AWG | 12 |

Level 1 above 1 below 1

| | |
|---|--|
| Connection method | Screw connection |
| Screw thread | M3 |
| Tightening torque | 0.5 ... 0.6 Nm |
| Stripping length | 9 mm |
| Internal cylindrical gage | A3 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross-section rigid | 0.14 mm ² ... 4 mm ² |
| Cross section AWG | 26 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible | 0.14 mm ² ... 4 mm ² |
| Conductor cross-section, flexible [AWG] | 26 ... 12 (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 same cross section, rigid | 0.14 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible | 0.14 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.14 mm ² ... 1.5 mm ² |

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| | |
|---|--|
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1.5 mm ² |
| Nominal cross section | 2.5 mm ² |
| Nominal current | 24 A |
| Maximum load current | 32 A (with 4 mm ² conductor cross-section) |
| Nominal voltage | 1000 V |
| Note | Note: Product releases, connection cross sections and notes on connecting aluminum cables can be found in the download area. |

Ex data

Rated data (ATEX/IECEx)

| | |
|--|--------------------------------------|
| Identification | ⊕ II 2 GD Ex eb IIC Gb |
| Operating temperature range | -60 °C ... 110 °C |
| Ex-certified accessories | 3047028 D-UT 2,5/10 |
| | 3047167 ATP-UT |
| | 1205053 SZS 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 | 21 A (2.5 mm ²) |
| Ex temperature increase | 40 K (23.3 A / 2.5 mm ²) |
| for bridging with bridge | 690 V |
| - At bridging between non-adjacent terminal blocks | 352 V |
| - At bridging between non-adjacent terminal blocks via PE terminal block | 275 V |
| - At cut-to-length bridging with cover | 220 V |
| - At cut-to-length bridging with partition plate | 275 V |
| Rated insulation voltage | 630 V |
| output | (Permanent) |

Ex level General

| | |
|----------------------|---------|
| Rated voltage | 690 V |
| Rated current | 21 A |
| Maximum load current | 28 A |
| Contact resistance | 0.41 mΩ |

Ex connection data General

| | |
|-------------------------|---------------------|
| Torque range | 0.5 Nm ... 0.6 Nm |
| Nominal cross section | 2.5 mm ² |
| Rated cross section AWG | 14 |

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| | |
|---|--|
| Connection capacity rigid | 0.14 mm ² ... 4 mm ² |
| Connection capacity AWG | 26 ... 12 |
| Connection capacity flexible | 0.14 mm ² ... 2.5 mm ² |
| Connection capacity AWG | 26 ... 14 |
| 2 conductors with same cross section, solid | 0.14 mm ² ... 1.5 mm ² |
| 2 conductors with the same cross-section AWG rigid | 26 ... 16 |
| 2 conductors with same cross section, stranded | 0.14 mm ² ... 1.5 mm ² |
| 2 conductors with the same cross-section AWG flexible | 26 ... 16 |

Dimensions

| | |
|--------------------|---------|
| Width | 5.2 mm |
| End cover width | 2.2 mm |
| Height | 47.7 mm |
| Depth on NS 35/7,5 | 47.5 mm |
| Depth on NS 35/15 | 55 mm |

Material specifications

| | |
|---|----------------------|
| Color | multicolored (RAL -) |
| | black (RAL 9005) |
| | yellow (RAL 1018) |
| 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 | 9.8 kV |
| Result | Test passed |

Temperature-rise test

| | |
|-----------------------------------|--------------------------------|
| Requirement temperature-rise test | Increase in temperature ≤ 45 K |
| Result | Test passed |

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| | |
|--|-------------|
| Short-time withstand current 2.5 mm ² | 0.3 kA |
| Short-time withstand current 4 mm ² | 0.48 kA |
| Result | Test passed |

Power-frequency withstand voltage

| | |
|-----------------------|-------------|
| Test voltage setpoint | 2.2 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 |
| Test force setpoint | 1 N |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|--------------------------------|-------------------------------|
| Rotation speed | 10 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 |
| 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 | 1.857 (m/s ²) ² /Hz |
| Acceleration | 0.8g |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |
| Result | Test passed |

Shocks

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| | |
|--------------------------------|-------------------------------------|
| 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/3245121>

DNV

Approval ID: TAE00001S9



CSA

Approval ID: 13631



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 | 26 - 12 | - |
| Multi-conductor connection | 600 V | 20 A | 26 - 16 | - |
| C | | | | |
| | 600 V | 20 A | 26 - 12 | - |
| Multi-conductor connection | 600 V | 20 A | 26 - 16 | - |



CSA

Approval ID: 13631



ATEX

Approval ID: KEMA04ATEX2048U

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|--------------------------|-----------------------|-----------------------|-------------------|----------------------|
| keine | | | | |
| Only flexible conductors | 690 V | 21 A | - | 0.14 - 2.5 |
| Only rigid conductors | 690 V | 28 A | - | 0.14 - 4 |



EAC Ex

Approval ID: KZ 7500525010101950



IECEx

Approval ID: IECEx KEM 06.0027U

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|---------------|-----------------------|-----------------------|-------------------|----------------------|
| keine | | | | |
| Only flexible | 690 V | 21 A | - | 0.14 - 2.5 |

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| conductors | | | | |
|-----------------------|-------|------|---|----------|
| Only rigid conductors | 690 V | 28 A | - | 0.14 - 4 |



CCC

Approval ID: 2020322313000622



UKCA-EX

Approval ID: DEKRA 21UKEX0304U

UL Comp Hazloc CA US

Approval ID: UL-US-2552444-2

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

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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 |
| Exemption | 6(c) |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 6bfac406-ebdc-4118-bc98-94aa13860ba3 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.015 kg CO2e |
|---------|---------------|

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