

PT 10-TWIN - Feed-through terminal block



3208746

<https://www.phoenixcontact.com/gb/products/3208746>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 57 A, number of connections: 3, connection method: Push-in connection, Rated cross section: 10 mm², cross section: 0.5 mm² - 16 mm², mounting type: NS 35/7,5, NS 35/15, color: gray

Your advantages

- In addition to the testing facility in the double function shaft, all terminal blocks provide an additional test connection
- The compact design and front connection enable wiring in a confined space
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors
- Tested for railway applications

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Technical data

Product properties

| | |
|-----------------------|--------------------------------|
| Product type | Multi-conductor terminal block |
| Area of application | Railway industry |
| | Machine building |
| | Plant engineering |
| Number of connections | 3 |
| 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 | 1.82 W |

Connection data

| | |
|---|---|
| Number of connections per level | 3 |
| Nominal cross section | 10 mm ² |
| Stripping length | 18 mm ... 20 mm |
| Internal cylindrical gage | A6 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.5 mm ² ... 16 mm ² |
| Cross section AWG | 20 ... 6 (converted acc. to IEC) |
| Conductor cross section flexible | 0.5 mm ² ... 16 mm ² |
| Conductor cross section, flexible [AWG] | 20 ... 6 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.5 mm ² ... 10 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.5 mm ² ... 10 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 1.5 mm ² ... 4 mm ² |
| Nominal current | 57 A |
| Maximum load current | 70 A (with a 16 mm ² conductor cross section, rigid) |
| Nominal voltage | 1000 V |
| Nominal cross section | 10 mm ² |

Connection cross sections directly pluggable

| | |
|---|--|
| Conductor cross section rigid | 1 mm ² ... 16 mm ² |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 4 mm ² ... 10 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 2.5 mm ² ... 10 mm ² |

Ex data

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Rated data (ATEX/IECEX)

| | |
|-----------------------------|-------------------------------------|
| Identification | ⊕ II 2 GD Ex eb IIC Gb |
| Operating temperature range | -60 °C ... 110 °C |
| Ex-certified accessories | 3208748 D-PT 10-TWIN |
| | 1204517 SZF 1-0,6X3,5 |
| | 3022276 CLIPFIX 35-5 |
| | 3022218 CLIPFIX 35 |
| List of bridges | Plug-in bridge / FBS 2-10 / 3005947 |
| | Plug-in bridge / FBS 5-10 / 3005948 |
| Bridge data | 48 A / 10 mm ² |
| Ex temperature increase | 40 K (48.5 A / 10 mm ²) |
| Rated voltage | 550 V |
| for bridging with bridge | 550 V |
| Rated insulation voltage | 500 V |
| output | (Permanent) |

Ex level General

| | |
|----------------------|---------|
| Rated current | 48.5 A |
| Maximum load current | 61 A |
| Contact resistance | 0.52 mΩ |

Ex connection data General

| | |
|------------------------------|--|
| Nominal cross section | 10 mm ² |
| Rated cross section AWG | 8 |
| Connection capacity rigid | 0.5 mm ² ... 16 mm ² |
| Connection capacity AWG | 20 ... 6 |
| Connection capacity flexible | 0.5 mm ² ... 10 mm ² |
| Connection capacity AWG | 20 ... 8 |

Dimensions

| | |
|--------------------|---------|
| Width | 10.2 mm |
| End cover width | 2.2 mm |
| Height | 88.9 mm |
| Depth | 49.5 mm |
| Depth on NS 35/7,5 | 50.5 mm |
| Depth on NS 35/15 | 58 mm |

Material specifications

| | |
|---|--------|
| Color | gray |
| 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 |

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| | |
|--|-------------|
| 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 |
| Short-time withstand current 10 mm ² | 1.2 kA |
| Short-time withstand current 16 mm ² | 1.92 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 | 5 N |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|--------------------------------|------------------------------|
| Rotation speed | 10 rpm |
| Revolutions | 135 |
| Conductor cross section/weight | 0.5 mm ² / 0.3 kg |
| | 10 mm ² / 2 kg |
| | 16 mm ² / 2.9 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):2008-03 |
| Spectrum | Service life test category 1, class B, body mounted |
| Frequency | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$ |
| ASD level | $1.857 \text{ (m/s}^2\text{)}/\text{Hz}$ |
| Acceleration | 0.8g |
| 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 ... 105 °C (max. short-term operating temperature 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 (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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