# PT 6-TWIN - Feed-through terminal block

3211929

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 41 A, number of connections: 3, connection method: Push-in connection, Rated cross section: 6 $mm^2$, cross section: 0.5 $mm^2$ - 10 $mm^2$, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- The compact design and front connection enable wiring in a confined space<br/>
- 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

# Technical data

## Product properties

| | |
|---|---|
| Product type | Multi-conductor terminal block |
| Product family | PT |
| 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 | 1.31 W |

## Connection data

| | |
|---|---|
| Number of connections per level | 3 |
| Nominal cross section | 6 mm² |
| Stripping length | 10 mm ... 12 mm |
| Internal cylindrical gage | A5 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.5 mm² ... 10 mm² |
| Cross section AWG | 20 ... 8 (converted acc. to IEC) |
| Conductor cross section flexible | 0.5 mm² ... 10 mm² |
| Conductor cross section, flexible [AWG] | 20 ... 8 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.5 mm² ... 6 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.5 mm² ... 6 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 2.5 mm² When using TWIN ferrules, we recommend a minimum ferrule length of 13 mm. |
| Nominal current | 41 A |
| Maximum load current | 52 A (with 10 mm² conductor cross section, rigid) |
| Nominal voltage | 1000 V |
| Nominal cross section | 6 mm² |

### Connection cross sections directly pluggable

| | |
|---|---|
| Conductor cross section rigid | 1 mm² ... 10 mm² |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 1 mm² ... 6 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 1 mm² ... 6 mm² |

## Ex data

Rated data (ATEX/IECEx)

| | |
|---|---|
| Identification | Ⓔx II 2 GD Ex eb IIC Gb |
| Operating temperature range | -60 °C ... 110 °C |
| Ex-certified accessories | 3211508 D-PT 6-TWIN |
| | 1204520 SZF 2-0,8X4,0 |
| | 3022276 CLIPFIX 35-5 |
| | 3022218 CLIPFIX 35 |
| List of bridges | Plug-in bridge / FBS 2-8 / 3030284 |
| | Plug-in bridge / FBS 3-8 / 3030297 |
| | Plug-in bridge / FBS 4-8 / 3030307 |
| | Plug-in bridge / FBS 5-8 / 3030310 |
| | Plug-in bridge / FBS 6-8 / 3032470 |
| | Plug-in bridge / FBS 10-8 / 3030323 |
| Bridge data | 35 A / 6 mm² |
| Ex temperature increase | 40 K (35.5 A / 6 mm²) |
| Rated voltage | 550 V |
| for bridging with bridge | 550 V |
| - At bridging between non-adjacent terminal blocks | 275 V |
| - At bridging between non-adjacent terminal blocks via PE terminal block | 275 V |
| - At cut-to-length bridging | 220 V |
| - At cut-to-length bridging with cover | 275 V |
| - At cut-to-length bridging with partition plate | 550 V |
| Rated insulation voltage | 500 V |
| output | (Permanent) |

Ex level General

| | |
|---|---|
| Rated current | 35.5 A |
| Maximum load current | 44.5 A |
| Contact resistance | 0.65 mΩ |

Ex connection data General

| | |
|---|---|
| Nominal cross section | 6 mm² |
| Rated cross section AWG | 10 |
| Connection capacity rigid | 0.5 mm² ... 10 mm² |
| Connection capacity AWG | 20 ... 8 |
| Connection capacity flexible | 0.5 mm² ... 6 mm² |
| Connection capacity AWG | 20 ... 10 |

## Dimensions

| | |
|---|---|
| Width | 8.2 mm |
| End cover width | 2.2 mm |
| Height | 74.2 mm |
| Depth | 42.2 mm |
| Depth on NS 35/7,5 | 43.5 mm |

| | |
|---|---|
| Depth on NS 35/15 | 51 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 |
| 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 |
| | Test passed |
| Short-time withstand current 6 mm² | 0.72 kA |
| | 0.72 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 mm² / 0.3 kg |
| | 6 mm² / 1.4 kg |
| | 10 mm² / 2 kg |
| 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 | Service life test category 2, bogie-mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 250 Hz |
| ASD level | 6.12 (m/s²)²/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):2018-05 |
| Pulse shape | Half-sine |
| Acceleration | 30g |
| Shock duration | 18 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, no longer than 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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