

# PT 10 BK - Feed-through terminal block



1322453

<https://www.phoenixcontact.com/us/products/1322453>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 57 A, number of connections: 2, connection method: Push-in connection, Rated cross section: 10 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 16 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: black

## Your advantages

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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1322453       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE22          |
| Product key                          | BE2211        |
| GTIN                                 | 4063151609153 |
| Weight per piece (including packing) | 28.136 g      |
| Weight per piece (excluding packing) | 26.12 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | CN            |

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## Technical data

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| Product family        | PT                          |
| Area of application   | Railway industry            |
|                       | Machine building            |
|                       | Plant engineering           |
| 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 | 1.82 W |

### Connection data

|                                                                                           |                                                                 |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Number of connections per level                                                           | 2                                                               |
| Nominal cross section                                                                     | 10 mm <sup>2</sup>                                              |
| Connection method                                                                         | Push-in connection                                              |
| 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 <sup>2</sup> ... 16 mm <sup>2</sup>                      |
| Cross section AWG                                                                         | 20 ... 6 (converted acc. to IEC)                                |
| Conductor cross-section flexible                                                          | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>                      |
| Conductor cross-section, flexible [AWG]                                                   | 20 ... 6 (converted acc. to IEC)                                |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                      |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                      |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>                       |
| Nominal current                                                                           | 57 A                                                            |
| Maximum load current                                                                      | 70 A (with a 16 mm <sup>2</sup> conductor cross-section, rigid) |
| Nominal voltage                                                                           | 1000 V                                                          |
| Nominal cross section                                                                     | 10 mm <sup>2</sup>                                              |

### Connection cross sections directly pluggable

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

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## Ex data

### Rated data (ATEX/IECEx)

|                             |                                     |
|-----------------------------|-------------------------------------|
| Identification              | Ⓔ II 2 GD Ex eb IIC Gb              |
| Operating temperature range | -60 °C ... 110 °C                   |
| Ex-certified accessories    | 3212057 D-PT 10                     |
|                             | 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 mm²)                       |
| Ex temperature increase     | 40 K (52.5 A / 10 mm²)              |
| for bridging with bridge    | 550 V                               |
| Rated insulation voltage    | 500 V                               |
| output                      | (Permanent)                         |

### Ex level General

|                      |         |
|----------------------|---------|
| Rated voltage        | 550 V   |
| Rated current        | 52.5 A  |
| Maximum load current | 61.5 A  |
| Contact resistance   | 0.43 mΩ |

### Ex connection data General

|                              |                    |
|------------------------------|--------------------|
| Nominal cross section        | 10 mm²             |
| Rated cross section AWG      | 8                  |
| Connection capacity rigid    | 0.5 mm² ... 16 mm² |
| Connection capacity AWG      | 20 ... 6           |
| Connection capacity flexible | 0.5 mm² ... 10 mm² |
| Connection capacity AWG      | 20 ... 8           |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 10.2 mm |
| End cover width    | 2.2 mm  |
| Height             | 67.7 mm |
| Depth              | 49.5 mm |
| Depth on NS 35/7,5 | 50.5 mm |
| Depth on NS 35/15  | 58 mm   |

## Material specifications

|                                                |                  |
|------------------------------------------------|------------------|
| Color                                          | black (RAL 9005) |
| Flammability rating according to UL 94         | V0               |
| Insulating material group                      | I                |
| Insulating material                            | PA               |
| Static insulating material application in cold | -60 °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 |
| 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 10 mm <sup>2</sup> | 1.2 kA                              |
| Short-time withstand current 16 mm <sup>2</sup> | 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 <sup>2</sup> / 0.3 kg |
|                                | 10 mm <sup>2</sup> / 2 kg    |
|                                | 16 mm <sup>2</sup> / 2.9 kg  |
| Result                         | Test passed                  |

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## Environmental and real-life conditions

### Service life

|                             |     |
|-----------------------------|-----|
| Insertion/withdrawal cycles | 100 |
|-----------------------------|-----|

### 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               | Long life test category 1, class B, body mounted |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$   |
| ASD level              | $1.857 \text{ (m/s}^2\text{)}^2\text{/Hz}$       |
| 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 ... 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 |
|---------------|-----------|

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|  |          |
|--|----------|
|  | NS 35/15 |
|--|----------|

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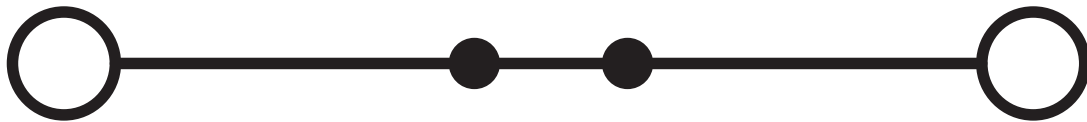
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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1322453>



### cULus Recognized

Approval ID: E60425



### cULus Recognized

Approval ID: E60425



### UL Recognized

Approval ID: E192998

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 550 V                 | 60 A                  | 20 - 6            | 20 - 6                      |



### UL Recognized

Approval ID: E192998

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 550 V                 | 60 A                  | 20 - 6            | -                           |



### IECEx

Approval ID: IECEx SEV13.0005U



### ATEX

Approval ID: SEV13ATEX0159U



### CCC

Approval ID: 2020322313000631



### EAC Ex

Approval ID: KZ 7500525010101950

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | 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%               |

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