

# PTV 6-TWIN BK - Feed-through terminal block



1291918

<https://www.phoenixcontact.com/us/products/1291918>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 41 A, number of connections: 3, number of positions: 1, connection method: Push-in connection, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: black

## Your advantages

- Clear wiring, thanks to lateral conductor entry
- The compact design enables wiring in a confined space
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1291918       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE23          |
| Product key                          | BE2312        |
| GTIN                                 | 4063151524364 |
| Weight per piece (including packing) | 19.737 g      |
| Weight per piece (excluding packing) | 25.039 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | CN            |

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## Technical data

### Notes

#### General

|      |  |
|------|--|
| Note | The max. load current must not be exceeded by the total current of all connected conductors. |
|------|--|

## Product properties

|                       |   |
|-----------------------|---|
| Product type          | Feed-through terminal block   |
| Product family        | PTV   |
| Area of application   | Railway industry<br>Machine building<br>Plant engineering<br>Process industry |
| Number of positions   | 1   |
| Number of connections | 3   |
| Number of rows        | 1   |

#### Insulation characteristics

|                     |     |
|---------------------|-----|
| Ovvoltage 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 mm <sup>2</sup>   |
| Connection method   | Push-in connection  |
| 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 mm <sup>2</sup> ... 10 mm <sup>2</sup>                    |
| Cross section AWG   | 20 ... 8 (converted acc. to IEC)                              |
| Conductor cross-section flexible  | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                    |
| Conductor cross-section, flexible [AWG]   | 20 ... 8 (converted acc. to IEC)                              |
| Conductor cross-section flexible (ferrule without plastic sleeve)   | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>                     |
| Flexible conductor cross-section (ferrule with plastic sleeve)  | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>                     |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>                     |
| Nominal current   | 41 A  |
| Maximum load current  | 52 A (with 10 mm <sup>2</sup> conductor cross-section, rigid) |
| Nominal voltage   | 1000 V  |

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|   |  |
|---|--|
| Nominal cross section   | 6 mm <sup>2</sup>                          |
| Connection cross sections directly pluggable                      |  |
| Conductor cross-section rigid                                     | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross-section, rigid [AWG]                              | 16 ... 8 (converted acc. to IEC)           |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 4 mm <sup>2</sup> ... 6 mm <sup>2</sup>    |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |

## Ex data

|  |   |
|--|---|
| Rated data (ATEX/IECEx)  |   |
| Identification   | Ex II 2 G Ex eb IIC Gb  |
| Operating temperature range  | -60 °C ... 110 °C   |
| Ex-certified accessories   | 1180923 D-PTV 6-TWIN<br>1182214 DS-PTV 6<br>3022276 CLIPFIX 35-5<br>1212602 SZS 0,6X3,5 VDE   |
| List of bridges  | Plug-in bridge / FBS 2-8 / 3030284<br>Plug-in bridge / FBS 3-8 / 3030297<br>Plug-in bridge / FBS 4-8 / 3030307<br>Plug-in bridge / FBS 5-8 / 3030310<br>Plug-in bridge / FBS 6-8 / 3032470<br>Plug-in bridge / FBS 10-8 / 3030323 |
| Bridge data  | 36 A (6 mm <sup>2</sup> )   |
| Ex temperature increase  | 40 K (35 A/6 mm <sup>2</sup> )  |
| 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  | 220 V   |
| - At cut-to-length bridging with cover                                   | 275 V   |
| Rated insulation voltage   | 500 V   |
| output   | (Permanent)   |

## Ex level General

|                      |                            |
|----------------------|----------------------------|
| Rated voltage        | 550 V                      |
| Rated current        | 35 A (6 mm <sup>2</sup> )  |
| Maximum load current | 45 A (10 mm <sup>2</sup> ) |
| Contact resistance   | 0.6 mΩ                     |

## Ex connection data General

|                              |  |
|------------------------------|--|
| Nominal cross section        | 6 mm <sup>2</sup>                          |
| Rated cross section AWG      | 10   |
| Connection capacity rigid    | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Connection capacity AWG      | 20 ... 8                                   |
| Connection capacity flexible | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |

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|                         |          |
|-------------------------|----------|
| Connection capacity AWG | 20 ... 8 |
|-------------------------|----------|

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 8.2 mm  |
| End cover width    | 2.2 mm  |
| Height             | 72.9 mm |
| Depth              | 57.6 mm |
| Depth on NS 35/7,5 | 59.1 mm |
| Depth on NS 35/15  | 66.6 mm |

## Material specifications

|   |                  |
|---|------------------|
| Color   | black (RAL 9005) |
| Flammability rating according to UL 94                                  | V0               |
| Insulating material group   | I                |
| Insulating material   | PA 6.6           |
| 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                             |                                |
| Result   | Test passed                    |
| <hr/>  |                                |
| Temperature-rise test                          |                                |
| Requirement temperature-rise test              | Increase in temperature ≤ 45 K |
| Result   | Test passed                    |
| Short-time withstand current 6 mm <sup>2</sup> | 0.72 kA                        |
| Result   | Test passed                    |
| <hr/>  |                                |
| Power-frequency withstand voltage              |                                |
| Test voltage setpoint                          | 2.2 kV                         |
| Result   | Test passed                    |

## Mechanical properties

|                 |     |
|-----------------|-----|
| Mechanical data |     |
| Open side panel | Yes |

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## 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                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 0.5 mm <sup>2</sup> / 0.3 kg |
|                                | 6 mm <sup>2</sup> / 1.4 kg   |
|                                | 10 mm <sup>2</sup> / 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               | Long life test category 2, bogie-mounted         |
| Frequency              | f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 250 Hz |
| ASD level              | 6.12 (m/s <sup>2</sup> ) <sup>2</sup> /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

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|  |  |
|--|--|
| 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/1291918>

| IECEE CB Scheme |  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|-----------------|--|-----------------------|-----------------------|-------------------|----------------------|
| keine           |  | 1000 V                | 41 A                  | -                 | 0.5 - 10             |

| EAC |  | Approval ID: RU C-DE.BL08.B.00644 |
|-----|--|-----------------------------------|
|     |  |                                   |

| VDE Zeichengenehmigung |  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|------------------------|--|-----------------------|-----------------------|-------------------|----------------------|
| keine                  |  | 1000 V                | 41 A                  | -                 | 0.5 - 10             |

| CCC |  | Approval ID: 2021122313114374 |
|-----|--|-------------------------------|
|     |  |                               |

| IECEx |  | Approval ID: IECExPTB20.0037U |
|-------|--|-------------------------------|
|       |  |                               |

| ATEX |  | Approval ID: PTB20ATEX1016U |
|------|--|-----------------------------|
|      |  |                             |

| UKCA-EX |  | Approval ID: CSAE 22UKEX1099U |
|---------|--|-------------------------------|
|         |  |                               |

| 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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