

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



1291917

<https://www.phoenixcontact.com/us/products/1291917>

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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: red

## Your advantages

- Time-saving conductor connection thanks to tool-free direct-connection technology
- Convenient plugging with lower insertion force
- High conductor pull-out forces due to the spring design
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Compact wiring of three conductors in a single terminal block
- Optimized for manual and automated wiring

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1291917       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE23          |
| Product key                          | BE2312        |
| GTIN                                 | 4063151524357 |
| Weight per piece (including packing) | 19.75 g       |
| Weight per piece (excluding packing) | 14.606 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            |
|                       | Machine building            |
|                       | Plant engineering           |
|                       | Process industry            |
| Number of positions   | 1                           |
| Number of connections | 3                           |
| Number of rows        | 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 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                |
|                                                                          | 1182214 DS-PTV 6                    |
|                                                                          | 3022276 CLIPFIX 35-5                |
|                                                                          | 1212602 SZS 0,6X3,5 VDE             |
| 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                                                              | 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                                                                   | red (RAL 3001) |
| 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)) | 125 °C         |
| Relative insulation material temperature index (Elec., UL 746 B)        | 125 °C         |

## Electrical tests

### Surge voltage test

|        |             |
|--------|-------------|
| Result | Test passed |
|--------|-------------|

### Temperature-rise test

|                                                |                                     |
|------------------------------------------------|-------------------------------------|
| Requirement temperature-rise test              | Increase in temperature $\leq 45$ K |
| Result                                         | Test passed                         |
| Short-time withstand current 6 mm <sup>2</sup> | 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       |
| Result                  | Test passed |

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## 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              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| 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

|                                          |                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| 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 %                                                                                                                |

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## 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/1291917>

|                                                                                   |                                                  |                       |                   |                             |
|-----------------------------------------------------------------------------------|--------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>IECEE CB Scheme</b><br>Approval ID: DE1-67001 |                       |                   |                             |
|                                                                                   | Nominal voltage $U_N$                            | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                   | keine                                            |                       |                   |                             |
|                                                                                   | 1000 V                                           | 41 A                  | -                 | 0.5 - 10                    |

|                                                                                   |                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------|
|  | <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00644 |
|-----------------------------------------------------------------------------------|-------------------------------------------------|

|                                                                                   |                                                        |                       |                   |                             |
|-----------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>VDE Zeichengenehmigung</b><br>Approval ID: 40056061 |                       |                   |                             |
|                                                                                   | Nominal voltage $U_N$                                  | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                                                   | keine                                                  |                       |                   |                             |
|                                                                                   | 1000 V                                                 | 41 A                  | -                 | 0.5 - 10                    |

|                                                                                     |                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------|
|  | <b>CCC</b><br>Approval ID: 2021122313114374 |
|-------------------------------------------------------------------------------------|---------------------------------------------|

|                                                                                     |                                               |
|-------------------------------------------------------------------------------------|-----------------------------------------------|
|  | <b>IECEx</b><br>Approval ID: IECExPTB20.0037U |
|-------------------------------------------------------------------------------------|-----------------------------------------------|

|                                                                                     |                                            |
|-------------------------------------------------------------------------------------|--------------------------------------------|
|  | <b>ATEX</b><br>Approval ID: PTB20ATEX1016U |
|-------------------------------------------------------------------------------------|--------------------------------------------|

|                                                                                     |                                                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------|
|  | <b>UKCA-EX</b><br>Approval ID: CSAE 22UKEX1099U |
|-------------------------------------------------------------------------------------|-------------------------------------------------|

|                                                                                     |                                                   |
|-------------------------------------------------------------------------------------|---------------------------------------------------|
|  | <b>EAC Ex</b><br>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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