

# RTO 5-PE - Protective conductor terminal block



3049628

<https://www.phoenixcontact.com/us/products/3049628>

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Protective conductor terminal block, Note: the BE-RT... path extension is to be used for non-insulated cable lugs (see accessories)., nom. voltage: 1000 V, nominal current: 41 A, number of connections: 2, connection method: Bolt connection, 1 level, Rated cross section: 6 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green-yellow

## Your advantages

- Low contact resistance
- Corrosion-free terminal points
- Another labeling option
- Green-yellow housing

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3049628       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | BE43          |
| Product key                          | BE4312        |
| GTIN                                 | 4046356140836 |
| Weight per piece (including packing) | 38.286 g      |
| Weight per piece (excluding packing) | 38.286 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | CN            |

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## Technical data

### Notes

|         |   |
|---------|---|
| General | Note: the BE-RT... path extension is to be used for non-insulated cable lugs (see accessories). |
|---------|---|

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Bolt connection terminal block |
| Product family        | RTO                            |
| 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 | 1.31 W |

### Connection data

|                                 |                   |
|---------------------------------|-------------------|
| Grounding foot                  | Yes               |
| Number of connections per level | 2                 |
| Nominal cross section           | 6 mm <sup>2</sup> |

#### 1 level

|                                  |   |
|----------------------------------|---|
| Connection method                | Bolt connection   |
| Note                             | Please observe the current carrying capacity of the DIN rails.                            |
| Stripping length                 | The stripping length depends on the specification provided by the cable lug manufacturer. |
| Connection in acc. with standard | IEC 60947-7-2   |
| Nominal cross section            | 6 mm <sup>2</sup>   |
| Nominal current                  | 41 A  |
| Maximum load current             | 41 A (with 6 mm <sup>2</sup> conductor connection)  |
| Nominal voltage                  | 1000 V  |

#### Cable lug connection DIN 46234:1980-03

|                                  |   |
|----------------------------------|---|
| Connection in acc. with standard | DIN 46234:1980-03                         |
| Cross section                    | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Cross section range AWG          | 20 ... 10 (converted acc. to IEC)         |
| Hole diameter                    | 5.3 mm                                    |
| Width                            | 10 mm                                     |
| Bolt diameter                    | 5 mm                                      |
| Screw thread                     | M5  |

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|  |   |
|--|---|
| Tightening torque                                | 2.5 ... 3 Nm                            |
| Connection in acc. with standard                 | DIN 46237:1970-07                       |
| Cross section                                    | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Cross section range AWG                          | 16 ... 10 (converted acc. to IEC)       |
| Hole diameter                                    | 5.3 mm                                  |
| Width  | 10 mm                                   |
| Bolt diameter                                    | 5 mm                                    |
| Screw thread                                     | M5                                      |
| Tightening torque                                | 2.5 ... 3 Nm                            |
| Identification color of ring cable lugs : red    | 1 mm <sup>2</sup>                       |
| Identification color of ring cable lugs : blue   | 2.5 mm <sup>2</sup>                     |
| Identification color of ring cable lugs : yellow | 6 mm <sup>2</sup>                       |

## Ex data

### Rated data (ATEX/IECEx)

|                             |   |
|-----------------------------|---|
| Identification              | ⊕ II 2 G Ex eb IIC Gb   |
| Operating temperature range | -60 °C ... 110 °C   |
| Ex-certified accessories    | 3049097 D-RT 3/5<br>0706647 TPNS-UK<br>3049819 BE-RT 3/5<br>1209868 SHN 8<br>3022276 CLIPFIX 35-5 |
| output                      | (Permanent)   |

### Ex connection data General

|                              |   |
|------------------------------|---|
| Torque range                 | 2.5 Nm ... 3 Nm                           |
| Nominal cross section        | 6 mm <sup>2</sup>                         |
| Rated cross section AWG      | 10  |
| Connection capacity rigid    | 0.1 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Connection capacity AWG      | 26 ... 10                                 |
| Connection capacity flexible | 0.1 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Connection capacity AWG      | 26 ... 10                                 |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 16.3 mm |
| End cover width    | 2.2 mm  |
| Height             | 66 mm   |
| Depth on NS 35/7,5 | 49.9 mm |
| Depth on NS 35/15  | 57.4 mm |

## Material specifications

|  |              |
|--|--------------|
| Color                                  | green-yellow |
| Flammability rating according to UL 94 | V0           |
| Insulating material group              | I            |

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|   |             |
|---|-------------|
| 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      |

## Mechanical properties

### Mechanical data

|                 |     |
|-----------------|-----|
| Open side panel | Yes |
|-----------------|-----|

## Environmental and real-life conditions

### 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 (m/s <sup>2</sup> )/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  |

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|  |               |
|--|---------------|
| Permissible humidity (operation)         | 20 % ... 90 % |
| Permissible humidity (storage/transport) | 30 % ... 70 % |

## Standards and regulations

|                                  |               |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 60947-7-2 |
|----------------------------------|---------------|

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
|               | NS 35/15  |

# RTO 5-PE - Protective conductor terminal block

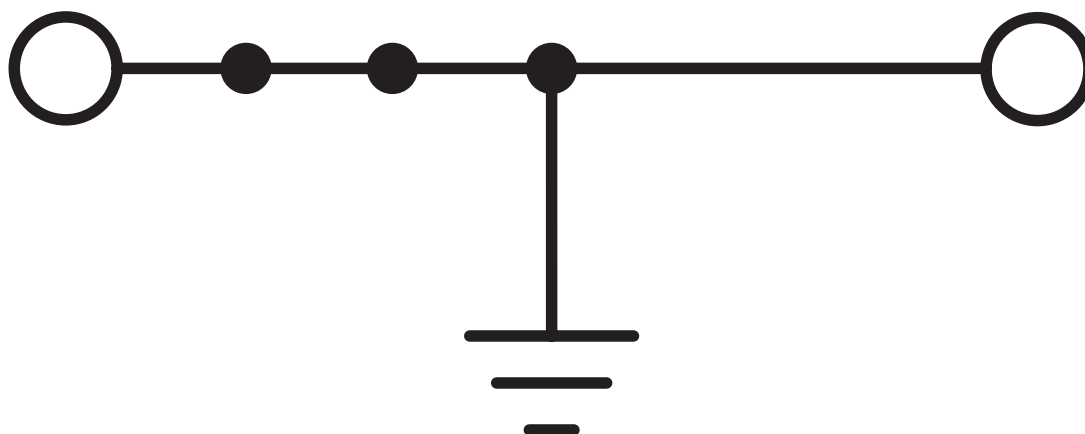


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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3049628>



### IECEE CB Scheme

Approval ID: DE1-62981



### VDE approval of drawings

Approval ID: 40022551

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | -                     | -                     | -                 | 0.14 - 6                    |



### cULus Recognized

Approval ID: E60425



### EAC Ex

Approval ID: KZ 7500525010101950



### IEC Ex

Approval ID: IECEXPTB08.0063U

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | -                     | -                     | -                 | 0.1 - 6                     |



### ATEX

Approval ID: PTB09ATEX1003U

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | -                     | -                     | -                 | 0.1 - 6                     |



### CCC

Approval ID: 2020322313000627



### UKCA-EX

Approval ID: CSAE 22UKEX1085U

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250103 |
| ECLASS-15.0 | 27250103 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC000901 |
|-----------|----------|

### 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 0.27 kg CO2e |
|---------|--------------|

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