

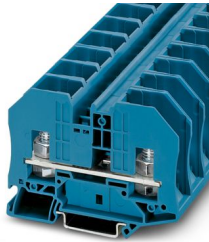
# RTO 8 BU - Bolt connection terminal block



3049864

<https://www.phoenixcontact.com/us/products/3049864>

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Feed-through terminal block with bolt connection method, cross section: 2.5 - 35 mm<sup>2</sup>, AWG: 14 - 2, width 20.2 mm, color: blue

## Your advantages

- Four bridge shafts per terminal block
- Terminal point always freely accessible

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3049864       |
| Packing unit                         | 25 pc         |
| Minimum order quantity               | 25 pc         |
| Sales key                            | BE43          |
| Product key                          | BE4312        |
| GTIN                                 | 4046356284684 |
| Weight per piece (including packing) | 80.468 g      |
| Weight per piece (excluding packing) | 80.468 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | CN            |

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## Technical data

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Bolt connection terminal block |
| Product family        | RTO                            |
| Number of positions   | 1                              |
| 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 | 4.06 W |

### Connection data

|                                 |                    |
|---------------------------------|--------------------|
| Number of connections per level | 2                  |
| Nominal cross section           | 35 mm <sup>2</sup> |

#### 1 level

|                                  |   |
|----------------------------------|---|
| Connection method                | Bolt connection   |
| Stripping length                 | The stripping length depends on the specification provided by the cable lug manufacturer. |
| Connection in acc. with standard | IEC 60947-7-1   |
| Nominal cross section            | 35 mm <sup>2</sup>  |
| Nominal current                  | 125 A   |
| Maximum load current             | 125 A (with 35 mm <sup>2</sup> conductor cross-section)                                   |
| Nominal voltage                  | 1000 V  |

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

|                                  |  |
|----------------------------------|--|
| Connection in acc. with standard | DIN 46234:1980-03                          |
| Cross section                    | 2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Cross section range AWG          | (converted acc. to IEC)                    |
| Hole diameter                    | 8.4 mm                                     |
| Width                            | 16 mm                                      |
| Bolt diameter                    | 8 mm                                       |
| Screw thread                     | M8   |
| Tightening torque                | 6 ... 10 Nm                                |
| Connection in acc. with standard | DIN 46235:1983-07                          |
| Cross section range AWG          | (converted acc. to IEC)                    |
| Hole diameter                    | 8.4 mm                                     |
| Width                            | 14 mm                                      |

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|  |   |
|--|---|
| Bolt diameter                                    | 8 mm                                      |
| Screw thread                                     | M8  |
| Tightening torque                                | 6 ... 10 Nm                               |
| Connection in acc. with standard                 | DIN 46237:1970-07                         |
| Cross section                                    | 2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Cross section range AWG                          | (converted acc. to IEC)                   |
| Hole diameter                                    | 8.4 mm                                    |
| Width  | 14 mm                                     |
| Bolt diameter                                    | 8 mm                                      |
| Screw thread                                     | M8  |
| Tightening torque                                | 6 ... 10 Nm                               |
| 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                            | 3049194 D-RT 8<br>3003062 TPN-UK<br>1209923 SHN 13<br>3022276 CLIPFIX 35-5 |
| List of bridges                                     | Plug-in bridge / FBS 2-10 / 3005947<br>Plug-in bridge / FBS 5-10 / 3005948 |
| Bridge data   | 57 A (10 mm <sup>2</sup> )   |
| Ex temperature increase<br>for bridging with bridge | 40 K (123 A / 35 mm <sup>2</sup> )<br>690 V                                |
| Rated insulation voltage<br>output                  | 630 V<br>(Permanent)   |

### Ex level General

|                      |         |
|----------------------|---------|
| Rated voltage        | 690 V   |
| Rated current        | 123 A   |
| Maximum load current | 123 A   |
| Contact resistance   | 0.09 mΩ |

### Ex connection data General

|                              |  |
|------------------------------|--|
| Torque range                 | 6 Nm ... 10 Nm                             |
| Nominal cross section        | 35 mm <sup>2</sup>                         |
| Rated cross section AWG      | 2  |
| Connection capacity rigid    | 2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Connection capacity AWG      | 14 ... 2                                   |
| Connection capacity flexible | 2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Connection capacity AWG      | 14 ... 2                                   |

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## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 20.2 mm |
| End cover width    | 2.2 mm  |
| Height             | 84 mm   |
| Depth              | 63.2 mm |
| Depth on NS 35/7,5 | 63.8 mm |
| Depth on NS 35/15  | 71.3 mm |

## Material specifications

|   |                 |
|---|-----------------|
| Color   | blue (RAL 5015) |
| 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          |

## Mechanical properties

### Mechanical data

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

## Environmental and real-life conditions

### 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 |
|----------------------------------|---------------|

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## Mounting

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

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## Drawings

### Circuit diagram



# RTO 8 BU - Bolt connection terminal block





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## Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3049864>


|   |  |
|---|--|
|  | <b>IECEE CB Scheme</b><br>Approval ID: DE1-62814 |
|---|--|

|   |  |                       |                   |                             |
|---|--|-----------------------|-------------------|-----------------------------|
|  | <b>VDE approval of drawings</b><br>Approval ID: 40022553 |                       |                   |                             |
|   | Nominal voltage $U_N$                                    | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |  |                       |                   |                             |
|   | 1000 V   | 125 A                 | -                 | 2.5 - 35                    |

|   |  |                       |                   |                             |
|---|--|-----------------------|-------------------|-----------------------------|
|  | <b>cULus Recognized</b><br>Approval ID: E60425 |                       |                   |                             |
|   | Nominal voltage $U_N$                          | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B   |  |                       |                   |                             |
|   | 600 V  | 130 A                 | -                 | -                           |
| C   |  |                       |                   |                             |
|   | 600 V  | 130 A                 | -                 | -                           |

|   |   |
|---|---|
|  | <b>EAC Ex</b><br>Approval ID: KZ 7500525010101950 |
|---|---|

|   |   |                       |                   |                             |
|---|---|-----------------------|-------------------|-----------------------------|
|  | <b>IECEX</b><br>Approval ID: IECEXPTB08.0063U |                       |                   |                             |
|   | Nominal voltage $U_N$                         | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |   |                       |                   |                             |
|   | 690 V   | 123 A                 | -                 | 2.5 - 35                    |

|   |  |                       |                   |                             |
|---|--|-----------------------|-------------------|-----------------------------|
|  | <b>ATEX</b><br>Approval ID: PTB09ATEX1003U |                       |                   |                             |
|   | Nominal voltage $U_N$                      | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine   |  |                       |                   |                             |
|   | 690 V                                      | 123 A                 | -                 | 2.5 - 35                    |

|   |   |
|---|---|
|  | <b>CCC</b><br>Approval ID: 2020322313000627 |
|---|---|

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**UKCA-EX**

Approval ID: CSAFE 22UKEX1085U

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## Classifications

### ECLASS

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

### ETIM

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