

# RBO 5-F - Bolt connection terminal block



3058062

<https://www.phoenixcontact.com/us/products/3058062>

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Feed-through terminal block with bolt connection method, cross section: 0.1 - 6 mm<sup>2</sup>, AWG: 26 - 10, width 13 mm, color: gray

## Your advantages

- Compact connection with ring and fork-type cable lugs
- Direct mounting in control boxes
- Bridge shaft for potential distribution using standard screw bridges
- Isolator bridge bar for switchable cross connections

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 3058062             |
| Packing unit                         | 50 pc               |
| Minimum order quantity               | 50 pc               |
| Sales key                            | BE44                |
| Product key                          | BE4415              |
| Catalog page                         | Page 387 (C-1-2019) |
| GTIN                                 | 4046356500357       |
| Weight per piece (including packing) | 18.63 g             |
| Weight per piece (excluding packing) | 19.134 g            |
| Customs tariff number                | 85369010            |
| Country of origin                    | IN                  |

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## Technical data

### Product properties

|                       |                                |
|-----------------------|--------------------------------|
| Product type          | Bolt connection terminal block |
| Product family        | RBO                            |
| Pitch                 | 13 mm                          |
| 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> |

#### 1 level

|                                  |                                                                                           |
|----------------------------------|-------------------------------------------------------------------------------------------|
| 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 current                  | 57 A                                                                                      |
| Maximum load current             | 57 A (with 10 mm <sup>2</sup> conductor cross section)                                    |
| Nominal voltage                  | 800 V                                                                                     |
| Nominal cross section            | 10 mm <sup>2</sup>                                                                        |

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

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Connection in acc. with standard | DIN 46234:1980-03                          |
| Cross section                    | 0.1 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Cross section range AWG          | 26 ... 8 (converted acc. to IEC)           |
| Hole diameter                    | 5.3 mm                                     |
| Width                            | 10 mm                                      |
| Bolt diameter                    | 5 mm                                       |
| Screw thread                     | M5                                         |
| Tightening torque                | 2 ... 2.2 Nm                               |
| Connection in acc. with standard | DIN 46237:1970-07                          |
| 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                                      |

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|                                                  |                     |
|--------------------------------------------------|---------------------|
| Bolt diameter                                    | 5 mm                |
| Tightening torque                                | 2 ... 2.2 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>   |

## Dimensions

|                 |         |
|-----------------|---------|
| Width           | 13 mm   |
| End cover width | 10 mm   |
| Height          | 53.3 mm |
| Depth           | 37 mm   |
| Hole diameter   | 5.2 mm  |
| Pitch           | 13 mm   |

## Material specifications

|                                                                         |             |
|-------------------------------------------------------------------------|-------------|
| Color                                                                   | gray        |
| 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      |

## Electrical tests

### Surge voltage test

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

### Temperature-rise test

|                                                 |                                |
|-------------------------------------------------|--------------------------------|
| Requirement temperature-rise test               | Increase in temperature ≤ 45 K |
| Result                                          | Test passed                    |
| Short-time withstand current 10 mm <sup>2</sup> | 1.2 kA                         |
| Result                                          | Test passed                    |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2 kV        |
| Result                | Test passed |

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## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Mechanical strength

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

## Environmental and real-life conditions

### Needle-flame test

|                  |             |
|------------------|-------------|
| Time of exposure | 30 s        |
| Result           | Test passed |

### Oscillation/broadband noise

|                        |                                                |
|------------------------|------------------------------------------------|
| Specification          | DIN EN 50155 (VDE 0115-200):2018-05            |
| Spectrum               | Service life test category 2, bogie-mounted    |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | $6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$      |
| Acceleration           | 3.12g                                          |
| Test duration per axis | 5 h                                            |
| Test directions        | X-, Y- and Z-axis                              |

### Shocks

|                                |                                     |
|--------------------------------|-------------------------------------|
| Specification                  | DIN EN 50155 (VDE 0115-200):2008-03 |
| 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.)   |

### 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, no longer than 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

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|               |                         |
|---------------|-------------------------|
| Mounting type | direct screw connection |
|---------------|-------------------------|

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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/3058062>

| cUL Recognized<br>Approval ID: FILE E 60425 |                       |                       |                   |                             |
|---------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                             | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B                                 | 600 V                 | 45 A                  | -                 | -                           |
|                                             |                       |                       |                   |                             |
| Use group C                                 | 600 V                 | 45 A                  | -                 | -                           |
|                                             |                       |                       |                   |                             |

| UL Recognized<br>Approval ID: FILE E 60425 |                       |                       |                   |                             |
|--------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B                                | 600 V                 | 45 A                  | -                 | -                           |
|                                            |                       |                       |                   |                             |
| Use group C                                | 600 V                 | 45 A                  | -                 | -                           |
|                                            |                       |                       |                   |                             |

| EAC<br>Approval ID: RU C-DE.BL08.B.00540 |  |  |  |  |
|------------------------------------------|--|--|--|--|
|------------------------------------------|--|--|--|--|

| cULus Recognized |  |  |  |  |
|------------------|--|--|--|--|
|------------------|--|--|--|--|

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 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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## Accessories

**i** Note: Applying some accessories below might limit this product.

### FB 10-13 - Fixed bridge

3059126

<https://www.phoenixcontact.com/us/products/3059126>



Fixed bridge, pitch: 13 mm, number of positions: 10, color: silver

**i** Max. current carrying capacity: 57 A

with 41 A bridging between non-adjacent term. blocks

### FB 10-13 ISO - Fixed bridge

3059663

<https://www.phoenixcontact.com/us/products/3059663>



Fixed bridge, pitch: 13 mm, number of positions: 10, color: silver

**i** Max. current carrying capacity: 24 A

## RBO 5-F - Bolt connection terminal block

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## TS-KK 3 - Separating plate

2770215

<https://www.phoenixcontact.com/us/products/2770215>



Separating plate, depth: 16 mm, width: 0.5 mm, height: 14 mm, color: gray

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## AP RSC - Cover profile

3058017

<https://www.phoenixcontact.com/us/products/3058017>



Cover profile, for covering terminal strips, directly snapped onto RBO... and RSC... terminal blocks. Length supplied: 1 m

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## D-RSC 5-F - End cover

3059647

<https://www.phoenixcontact.com/us/products/3059647>

End cover, width: 2.2 mm, height: 37 mm, color: gray



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## ZB 13:UNBEDRUCKT - Zack marker strip

0829131

<https://www.phoenixcontact.com/us/products/0829131>

Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 13 mm, lettering field size: 13 x 10.5 mm, Number of individual labels: 5



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## ZB 13 CUS - Zack marker strip

0829132

<https://www.phoenixcontact.com/us/products/0829132>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 13 mm, lettering field size: 13 x 10.5 mm, Number of individual labels: 5

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## ZBF 13:UNBEDRUCKT - Zack Marker strip, flat

0829133

<https://www.phoenixcontact.com/us/products/0829133>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 13 mm, lettering field size: 13 x 5.2 mm, Number of individual labels: 5

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## ZBF 13 CUS - Zack Marker strip, flat

0829134

<https://www.phoenixcontact.com/us/products/0829134>



Zack Marker strip, flat, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 13 mm, lettering field size: 13 x 5.2 mm, Number of individual labels: 5

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## SHN 8 - Tool

1209868

<https://www.phoenixcontact.com/us/products/1209868>



Socket wrench, wrench size 8 mm

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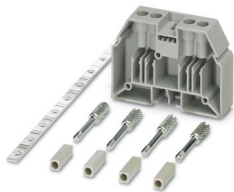
<https://www.phoenixcontact.com/us/products/3058062>



## CARRIER F-13 KIT - Short circuit kit for current transformers

3215070

<https://www.phoenixcontact.com/us/products/3215070>



Short-circuit kit for current transformer. Use with panel mounted RBO/RSC 5 feed-through terminals

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)