

# TB 4 I BU - Feed-through terminal block



3057678

<https://www.phoenixcontact.com/sg/products/3057678>

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Feed-through terminal block, nom. voltage: 800 V, nominal current: 32 A, number of connections: 2, connection method: Screw connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, NS 32, color: blue

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 3057678                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | *****                          |
| Product key                          | BEK211                         |
| GTIN                                 | 4046356648233                  |
| Weight per piece (including packing) | 7.694 g                        |
| Weight per piece (excluding packing) | 7.4 g                          |
| Customs tariff number                | 85369010                       |
| Country of origin                    | CN                             |

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## Technical data

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| 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 | 1.02 W |

### Connection data

|                                 |                   |
|---------------------------------|-------------------|
| Number of connections per level | 2                 |
| Nominal cross section           | 4 mm <sup>2</sup> |
| Rated cross section AWG         | 12                |

### Level 1 above 1 below 1

|   |   |
|---|---|
| Screw thread  | M3  |
| Tightening torque   | 0.5 ... 0.6 Nm                              |
| Stripping length  | 8 mm  |
| Connection in acc. with standard  | IEC 60947-7-1                               |
| Conductor cross section rigid   | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>   |
| Cross section AWG   | 20 ... 10 (converted acc. to IEC)           |
| Conductor cross section flexible  | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section, flexible [AWG]   | 20 ... 12 (converted acc. to IEC)           |
| Conductor cross-section flexible (ferrule without plastic sleeve)                   | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Flexible conductor cross section (ferrule with plastic sleeve)                      | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Cross-section with insertion bridge, rigid  | 2.5 mm <sup>2</sup>                         |
| Cross-section with insertion bridge, flexible                                       | 2.5 mm <sup>2</sup>                         |
| 2 conductors with same cross section, solid   | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| 2 conductors with the same cross-section AWG rigid                                  | 20 ... 12 (converted acc. to IEC)           |
| 2 conductors with same cross section, flexible                                      | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| 2 conductors with the same cross-section AWG flexible                               | 20 ... 12 (converted acc. to IEC)           |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Nominal current   | 32 A  |
| Maximum load current  | 32 A  |
| Nominal voltage   | 800 V                                       |
| Nominal cross section   | 4 mm <sup>2</sup>                           |

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## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 6.2 mm  |
| End cover width    | 1.8 mm  |
| Height             | 42.5 mm |
| Depth on NS 32     | 52 mm   |
| Depth on NS 35/7,5 | 47 mm   |
| Depth on NS 35/15  | 54.5 mm |

## Material specifications

|  |                 |
|--|-----------------|
| Color                                  | blue (RAL 5015) |
| Flammability rating according to UL 94 | V0              |
| Insulating material group              | I               |
| Insulating material                    | PA              |

## Electrical tests

### Surge voltage test

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 9.8 kV      |
| Result                | Test passed |

### Temperature-rise test

|  |                                     |
|--|-------------------------------------|
| Requirement temperature-rise test              | Increase in temperature $\leq 45$ K |
| Result   | Test passed                         |
| Short-time withstand current 4 mm <sup>2</sup> | 0.48 kA                             |
| Result   | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 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 32/NS 35 |
| Result                  | Test passed |

### Test for conductor damage and slackening

|                |        |
|----------------|--------|
| Rotation speed | 10 rpm |
| Revolutions    | 135    |

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|                                |                              |
|--------------------------------|------------------------------|
| Conductor cross section/weight | 0.5 mm <sup>2</sup> / 0.3 kg |
|                                | 4 mm <sup>2</sup> / 0.9 kg   |
|                                | 6 mm <sup>2</sup> / 1.4 kg   |
| Result                         | Test passed                  |

## Environmental and real-life conditions

### Needle-flame test

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

### Oscillation/broadband noise

|                        |  |
|------------------------|--|
| Specification          | EN 50155:2021                                    |
| Spectrum               | Service 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):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.)   |
| 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 %  |

## Standards and regulations

|                                  |               |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 60947-7-1 |
|----------------------------------|---------------|

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
|               | NS 35/15  |
|               | NS 32     |

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## Drawings

### Circuit diagram



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## Approvals

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|  <b>cULus Recognized</b><br>Approval ID: E60425 |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B  | 600 V                 | 30 A                  | 20 - 10           | -                           |
| Use group C  | 600 V                 | 30 A                  | 20 - 10           | -                           |

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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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PHOENIX CONTACT SEA Pte. Ltd.  
105 Eunos Avenue 3, #04-00  
Singapore 409836  
+65 6228 4900  
[marketing@phoenixcontact.com.sg](mailto:marketing@phoenixcontact.com.sg)