

# MSB 2,5-RZ BU - Mini feed-through terminal block



3244177

<https://www.phoenixcontact.com/sg/products/3244177>

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Mini feed-through terminal block, nom. voltage: 800 V, nominal current: 24 A, number of connections: 2, connection method: Spring-cage connection, 1 level, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.08 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: on mounting panel, color: blue

## Your advantages

- Can be freely combined with MS(D)B 2,5-M middle terminal blocks
- Space saving, thanks to the compact design and mounting option directly on the mounting panel
- Clear arrangement thanks to marking of all terminal points

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 3244177                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | 0161*                          |
| Product key                          | BE2165                         |
| Catalog page                         | Page 224 (C-1-2019)            |
| GTIN                                 | 4046356145510                  |
| Weight per piece (including packing) | 3.876 g                        |
| Weight per piece (excluding packing) | 3.876 g                        |
| Customs tariff number                | 85369010                       |
| Country of origin                    | CN                             |

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## Technical data

### Product properties

|                       |                          |
|-----------------------|--------------------------|
| Product type          | Miniature terminal block |
| Number of connections | 2                        |
| 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 | 0.77 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Number of connections per level | 2                   |
| Nominal cross section           | 2.5 mm <sup>2</sup> |

#### 1 level

|                                                                                           |                                                       |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Stripping length                                                                          | 8 mm                                                  |
| Internal cylindrical gage                                                                 | A3                                                    |
| Connection in acc. with standard                                                          | IEC 60947-7-1                                         |
| Conductor cross section rigid                                                             | 0.08 mm <sup>2</sup> ... 4 mm <sup>2</sup>            |
| Cross section AWG                                                                         | 28 ... 12 (converted acc. to IEC)                     |
| Conductor cross section flexible                                                          | 0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>          |
| Conductor cross section, flexible [AWG]                                                   | 28 ... 14 (converted acc. to IEC)                     |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>          |
| Flexible conductor cross section (ferrule with plastic sleeve)                            | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>          |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup>                                   |
| Nominal current                                                                           | 24 A                                                  |
| Maximum load current                                                                      | 30 A (with 4 mm <sup>2</sup> conductor cross section) |
| Nominal voltage                                                                           | 800 V                                                 |
| Nominal cross section                                                                     | 2.5 mm <sup>2</sup>                                   |
| Connection in acc. with standard                                                          | IEC/EN 60079-7                                        |

### Ex data

#### Rated data (ATEX/IECEx)

|                             |                                            |
|-----------------------------|--------------------------------------------|
| Identification              | Ⓔ II 2 G Ex eb IIC Gb                      |
| Operating temperature range | -60 °C ... 110 °C                          |
| Ex-certified accessories    | 3024177 D-MZB 1,5<br>1204517 SZF 1-0,6X3,5 |
| Ex temperature increase     | 40 K (21.3 A / 2.5 mm <sup>2</sup> )       |

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|                                                                    |             |
|--------------------------------------------------------------------|-------------|
| Rated insulation voltage when mounting on DIN rails                | 630 V       |
| Rated insulation voltage when directly mounted on mounting surface | 500 V       |
| output                                                             | (Permanent) |

## Ex level General

|                                                          |         |
|----------------------------------------------------------|---------|
| Rated voltage when mounting on DIN rails                 | 690 V   |
| Rated voltage during direct mounting on mounting surface | 550 V   |
| Rated current                                            | 21 A    |
| Maximum load current                                     | 26 A    |
| Contact resistance                                       | 0.87 mΩ |

## Ex connection data General

|                              |                      |
|------------------------------|----------------------|
| Nominal cross section        | 2.5 mm²              |
| Rated cross section AWG      | 14                   |
| Connection capacity rigid    | 0.08 mm² ... 4 mm²   |
| Connection capacity AWG      | 28 ... 12            |
| Connection capacity flexible | 0.08 mm² ... 2.5 mm² |
| Connection capacity AWG      | 28 ... 14            |

## Dimensions

|                    |                   |
|--------------------|-------------------|
| Width              | 5.2 mm            |
| End cover width    | 4 mm              |
| Height             | 32 mm             |
| Depth              | 22 mm             |
| Drill hole spacing | 5.2 mm            |
| Hole diameter      | 3.5 mm            |
| Plate thickness    | 0.6 mm ... 1.5 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          |

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## Mechanical properties

### Mechanical data

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

### Technical data

|                    |        |
|--------------------|--------|
| Drill hole spacing | 5.2 mm |
|--------------------|--------|

## 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  |
|                                  | IEC/EN 60079-7 |

## Mounting

|               |                   |
|---------------|-------------------|
| Mounting type | on mounting panel |
|---------------|-------------------|

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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3244177>

| CSA<br>Approval ID: 13631 |                       |                       |                   |                             |
|---------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B               | 600 V                 | 20 A                  | 28 - 12           | -                           |
| Use group C               | 600 V                 | 20 A                  | 28 - 12           | -                           |

| CB<br>IECEE CB Scheme<br>Approval ID: DE1-62820 |                       |                       |                   |                             |
|-------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                 | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                 | 800 V                 | 24 A                  | -                 | 0.2 - 2.5                   |

| cULus<br>cULus Recognized<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                 | 20 A                  | 28 - 12           | -                           |
| Use group C                                      | 600 V                 | 20 A                  | 28 - 12           | -                           |

| VDE<br>VDE approval of drawings<br>Approval ID: 40029769 |                       |                       |                   |                             |
|----------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                          | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                          | 800 V                 | 24 A                  | -                 | 0.2 - 2.5                   |

| CCC<br>Approval ID: 2020322313000629 |  |  |  |  |
|--------------------------------------|--|--|--|--|
|--------------------------------------|--|--|--|--|

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

| IECEx<br>Approval ID: IECExPTB08.0048U |  |  |  |  |
|----------------------------------------|--|--|--|--|
|----------------------------------------|--|--|--|--|

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**ATEX**

Approval ID: PTB08ATEX1075U



**UKCA-EX**

Approval ID: CSAE 22UKEX1245U

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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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