

# TB-EE-DB 250/1+11 - Distribution block



1725169

<https://www.phoenixcontact.com/us/products/1725169>

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Distribution block, nom. voltage: 1000 V, nominal current: 232 A, Thermal continuous current  $I_{th}$ : 250 A, number of connections: 12, number of positions: 1, connection method: Screw connection, Rated cross section: 95 mm<sup>2</sup>, Line contact, cross section: 35 mm<sup>2</sup> - 120 mm<sup>2</sup>, Screw connection, Load contact, cross section: 2.5 mm<sup>2</sup> - 35 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, Direct mounting, color: dark gray

## Your advantages

- Fast installation via ready-to-connect distributor and collection block
- Blocks can be snapped to each other to form function groups
- As well as saving space, the compact design enables user-friendly wiring in a small amount of space
- Flexible use, thanks to DIN rail and direct mounting
- Reversible cover for optimum readability of the technical data

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1725169       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BE05          |
| Product key                          | BEK825        |
| GTIN                                 | 4067923280717 |
| Weight per piece (including packing) | 443.3 g       |
| Weight per piece (excluding packing) | 443.3 g       |
| Customs tariff number                | 85369010      |
| Country of origin                    | IN            |

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## Technical data

### Notes

#### General

|      |                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note | The maximum load current of a single clamping unit must not be exceeded.                                                                                 |
|      | For power distribution applications, IEC 60364-4-43:2008; modified + corrigendum Okt. 2008 (DIN VDE 0100-430:2010-10) section 433.2 ff must be observed! |

### Product properties

|                       |                  |
|-----------------------|------------------|
| Product family        | TB               |
| Area of application   | Machine building |
| Number of positions   | 1                |
| Number of connections | 12               |
| Number of rows        | 1                |

#### Insulation characteristics

|                     |   |
|---------------------|---|
| Degree of pollution | 3 |
|---------------------|---|

### Electrical properties

|                     |      |
|---------------------|------|
| Rated surge voltage | 8 kV |
|---------------------|------|

### Connection data

|                                 |                    |
|---------------------------------|--------------------|
| Number of connections per level | 12                 |
| Nominal cross section           | 95 mm <sup>2</sup> |
| Rated cross section AWG         | 000                |

#### Line contact

|                                                                |                                                       |
|----------------------------------------------------------------|-------------------------------------------------------|
| Connection method                                              | Screw connection                                      |
| Screw thread                                                   | M14                                                   |
| Number of connections                                          | 1                                                     |
| Note                                                           | Ferrules are mandatory when using flexible conductors |
| Tightening torque                                              | 19 ... 21 Nm                                          |
| Stripping length                                               | 28 mm                                                 |
| Connection in acc. with standard                               | IEC 60947-7-1                                         |
| Conductor cross-section rigid                                  | 35 mm <sup>2</sup> ... 120 mm <sup>2</sup>            |
| Cross section AWG                                              | 0 ... 000 (converted acc. to IEC)                     |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 35 mm <sup>2</sup> ... 95 mm <sup>2</sup>             |
| Nominal cross section                                          | 95 mm <sup>2</sup>                                    |
| Thermal continuous current I <sub>th</sub>                     | 250 A                                                 |
| Nominal current                                                | 232 A                                                 |
| Nominal voltage                                                | 1000 V AC (suitable for 1500 V DC)                    |

#### Load contact

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|                                                                |                                                       |
|----------------------------------------------------------------|-------------------------------------------------------|
| Connection method                                              | Screw connection                                      |
| Screw thread                                                   | M8                                                    |
| Number of connections                                          | 2                                                     |
| Note                                                           | Ferrules are mandatory when using flexible conductors |
| Tightening torque                                              | 3.5 ... 5 Nm                                          |
| Stripping length                                               | 11 mm                                                 |
| Connection in acc. with standard                               | IEC 60947-7-1                                         |
| Conductor cross-section rigid                                  | 2.5 mm² ... 35 mm²                                    |
| Cross section AWG                                              | 12 ... 2 (converted acc. to IEC)                      |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 2.5 mm² ... 25 mm²                                    |

## Load contact

|                                                                |                                                       |
|----------------------------------------------------------------|-------------------------------------------------------|
| Connection method                                              | Screw connection                                      |
| Screw thread                                                   | M6                                                    |
| Number of connections                                          | 5                                                     |
| Note                                                           | Ferrules are mandatory when using flexible conductors |
| Tightening torque                                              | 2 ... 3 Nm                                            |
| Stripping length                                               | 11 mm                                                 |
| Connection in acc. with standard                               | IEC 60947-7-1                                         |
| Conductor cross-section rigid                                  | 2.5 mm² ... 16 mm²                                    |
| Cross section AWG                                              | 12 ... 6 (converted acc. to IEC)                      |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 2.5 mm² ... 16 mm²                                    |

## Load contact

|                                                                |                                                       |
|----------------------------------------------------------------|-------------------------------------------------------|
| Connection method                                              | Screw connection                                      |
| Screw thread                                                   | M6                                                    |
| Number of connections                                          | 4                                                     |
| Note                                                           | Ferrules are mandatory when using flexible conductors |
| Tightening torque                                              | 2 ... 3 Nm                                            |
| Stripping length                                               | 11 mm                                                 |
| Connection in acc. with standard                               | IEC 60947-7-1                                         |
| Conductor cross-section rigid                                  | 2.5 mm² ... 10 mm²                                    |
| Cross section AWG                                              | 12 ... 8 (converted acc. to IEC)                      |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 2.5 mm² ... 10 mm²                                    |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 46.2 mm |
| Height             | 96 mm   |
| Depth              | 60 mm   |
| Depth on NS 35/7,5 | 61.5 mm |
| Depth on NS 35/15  | 69 mm   |

## Material specifications

|                                        |                        |
|----------------------------------------|------------------------|
| Color                                  | basalt gray (RAL 7012) |
| Flammability rating according to UL 94 | V0                     |

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|                                                                  |        |
|------------------------------------------------------------------|--------|
| Insulating material group                                        | I      |
| Relative insulation material temperature index (Elec., UL 746 B) | 125 °C |

## 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 95 mm <sup>2</sup> | 11.4 kA                             |
| Result                                          | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 3.82 kV     |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

|                 |    |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

|                         |             |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35       |
| Result                  | Test passed |

### Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 9 rpm                        |
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 2.5 mm <sup>2</sup> / 0.7 kg |
|                                | 16 mm <sup>2</sup> / 2.9 kg  |
|                                | 35 mm <sup>2</sup> / 6.8 kg  |
|                                | 120 mm <sup>2</sup> / 14 kg  |
| Result                         | Test passed                  |

## Environmental and real-life conditions

### Needle-flame test

|                  |             |
|------------------|-------------|
| Time of exposure | 5 s         |
| Result           | Test passed |

### Ambient conditions

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|                                          |                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Degree of protection                     | IP10                                                                                                                         |
| Ambient temperature (operation)          | -40 °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 60947-7-1 |
|                                  | IEC 60947-7-1 |
|                                  | IEC 60947-7-1 |

## Mounting

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

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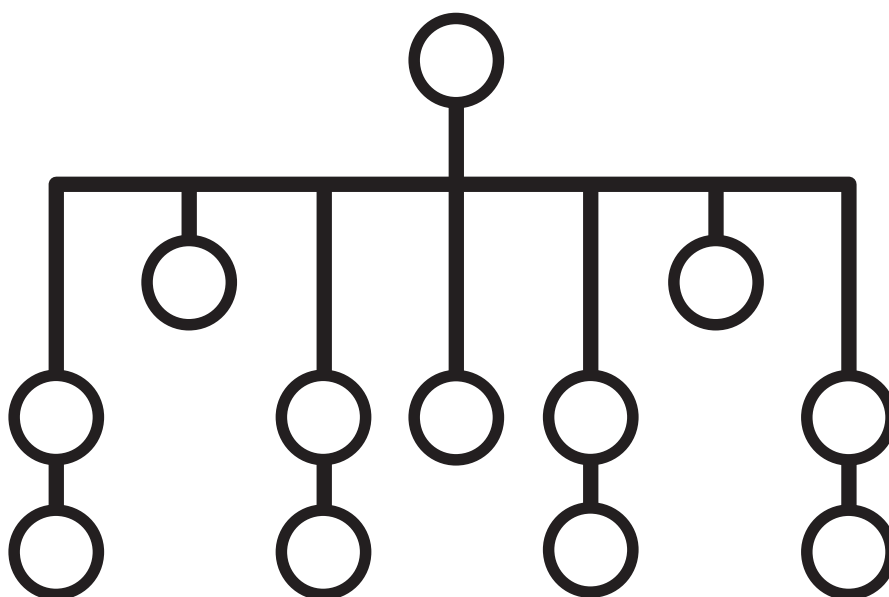
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## Drawings

Circuit diagram



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1725169>



**UL Recognized**  
Approval ID: E60425



**CSA**  
Approval ID: 80247697

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250118 |
| ECLASS-15.0 | 27250118 |

### 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                                                                                                                                                                                                                               |
| Exemption                               | 6(c)                                                                                                                                                                                                                              |
| China RoHS                              |                                                                                                                                                                                                                                   |
| Environment friendly use period (EFUP)  | EFUP-50                                                                                                                                                                                                                           |
|                                         | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC                           |                                                                                                                                                                                                                                   |
| REACH candidate substance (CAS No.)     | Lead(CAS: 7439-92-1)                                                                                                                                                                                                              |

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