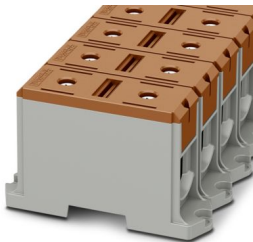


# UBAL 240 BN - High-current terminal block



1086509  
<https://www.phoenixcontact.com/us/products/1086509>

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High-current terminal block, nom. voltage: 1000 V, nominal current: 380 A, number of connections: 2, number of positions: 1, connection method: Screw connection, Rated cross section: 240 mm<sup>2</sup>, cross section: 35 mm<sup>2</sup> - 240 mm<sup>2</sup>, Rated cross section: 240 mm<sup>2</sup>, cross section: 35 mm<sup>2</sup> - 240 mm<sup>2</sup>, mounting type: Screw mounting, color: brown

## Your advantages

- Tailor-made screw connection for multi-stranded aluminum conductors and copper wires
- Maintenance-free terminal points that are greased beforehand simplify the connection of aluminum conductors
- Extremely robust housing made from fiberglass-reinforced polyamide with V0 approval
- The special design of the UBAL enables the simultaneous connection of aluminum and copper conductors in various connections

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1086509             |
| Packing unit                         | 5 pc                |
| Minimum order quantity               | 5 pc                |
| Sales key                            | BE13                |
| Product key                          | BE1311              |
| Catalog page                         | Page 585 (C-1-2019) |
| GTIN                                 | 4055626879345       |
| Weight per piece (including packing) | 278.1 g             |
| Weight per piece (excluding packing) | 278.1 g             |
| Customs tariff number                | 85369010            |
| Country of origin                    | EE                  |

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## Technical data

### Notes

|         |                                                            |
|---------|------------------------------------------------------------|
| General | Terminal block for aluminum and copper conductors (AL-CU)  |
| General |                                                            |
| Note    | We recommend using ferrules when using flexible conductor. |

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| Number of positions   | 1                           |
| Number of connections | 2                           |
| Number of rows        | 1                           |
| Potentials            | 1                           |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 01 |
|------------------|----|

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Electrical properties

|                                                 |         |
|-------------------------------------------------|---------|
| Rated surge voltage                             | 8 kV    |
| Maximum power dissipation for nominal condition | 13.78 W |

### Connection data

|                       |                     |
|-----------------------|---------------------|
| Nominal cross section | 240 mm <sup>2</sup> |
|-----------------------|---------------------|

### Aluminum conductor

|                                  |                                                                                                                                                                                                      |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Screw thread                     | M20                                                                                                                                                                                                  |
| Note                             | Screws with hexagonal socket                                                                                                                                                                         |
|                                  | The following values apply to aluminum conductors                                                                                                                                                    |
|                                  | The values for aluminum conductors relate to rigid and multi-stranded conductors in accordance with EN 60228. Application notes on connecting aluminum conductors can be found in the download area. |
| Tightening torque                | 12 ... 45 Nm                                                                                                                                                                                         |
| Stripping length                 | 43 mm                                                                                                                                                                                                |
| Connection in acc. with standard | IEC 61238-1                                                                                                                                                                                          |
| Conductor cross section rigid    | 35 mm <sup>2</sup> ... 240 mm <sup>2</sup>                                                                                                                                                           |
| Cross section AWG                | 3/0 ... 500 (converted acc. to IEC)                                                                                                                                                                  |
| Nominal current                  | 380 A                                                                                                                                                                                                |
| Maximum load current             | 380 A (with 240 mm <sup>2</sup> conductor cross section – test current in accordance with IEC 61238-1)                                                                                               |
| Nominal voltage                  | 1000 V                                                                                                                                                                                               |
| Nominal cross section            | 240 mm <sup>2</sup>                                                                                                                                                                                  |

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## Copper conductor

|                                                                   |                                                                                                          |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Note                                                              | The following values apply to copper wires<br>Flexible conductors, class 5, in accordance with EN 60228. |
| Tightening torque                                                 | 12 ... 45 Nm                                                                                             |
| Stripping length                                                  | 43 mm                                                                                                    |
| Connection in acc. with standard                                  | IEC 60947-7-1                                                                                            |
| Conductor cross section rigid                                     | 35 mm <sup>2</sup> ... 240 mm <sup>2</sup>                                                               |
| Cross section AWG                                                 | 3/0 ... 500 (converted acc. to IEC)                                                                      |
| Conductor cross section flexible                                  | 150 mm <sup>2</sup> ... 185 mm <sup>2</sup>                                                              |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 35 mm <sup>2</sup> ... 185 mm <sup>2</sup>                                                               |
| Flexible conductor cross section (ferrule with plastic sleeve)    | 35 mm <sup>2</sup> ... 185 mm <sup>2</sup>                                                               |
| 2 conductors with same cross section, flexible                    | 35 mm <sup>2</sup> ... 70 mm <sup>2</sup>                                                                |
| Nominal current                                                   | 415 A                                                                                                    |
| Maximum load current                                              | 415 A (with 240 mm <sup>2</sup> conductor cross section)                                                 |
| Nominal voltage                                                   | 1000 V                                                                                                   |
| Nominal cross section                                             | 240 mm <sup>2</sup>                                                                                      |

## Dimensions

|               |         |
|---------------|---------|
| Width         | 37.5 mm |
| Height        | 130 mm  |
| Depth         | 70 mm   |
| Hole diameter | 3.22 mm |

## Material specifications

|                                                                  |                  |
|------------------------------------------------------------------|------------------|
| Color                                                            | brown (RAL 8028) |
| Flammability rating according to UL 94                           | V0               |
| Insulating material group                                        | II               |
| Insulating material                                              | PA               |
| Relative insulation material temperature index (Elec., UL 746 B) | 550 °C           |

## Electrical tests

### Surge voltage test

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 8 kV        |
| Result                | Test passed |

### Temperature-rise test

|                                                  |                                |
|--------------------------------------------------|--------------------------------|
| Requirement temperature-rise test                | Increase in temperature ≤ 45 K |
| Result                                           | Test passed                    |
| Short-time withstand current 250 mm <sup>2</sup> | 28.8 kA                        |
| Result                                           | Test passed                    |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2.2 kV      |
| Result                | Test passed |

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## 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       |
| Test force setpoint     | 20 N        |
| Result                  | Test passed |

## Environmental and real-life conditions

### Needle-flame test

|                  |             |
|------------------|-------------|
| Time of exposure | 10 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                              |
| Result                 | Test passed                                    |

### Shocks

|                                |                                   |
|--------------------------------|-----------------------------------|
| 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, 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 %                                                                                                                |

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|                                          |               |
|------------------------------------------|---------------|
| Permissible humidity (storage/transport) | 30 % ... 70 % |
|------------------------------------------|---------------|

## Standards and regulations

|                                  |               |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 61238-1   |
|                                  | IEC 60947-7-1 |

## Mounting

|               |                |
|---------------|----------------|
| Mounting type | Screw mounting |
|---------------|----------------|

# UBAL 240 BN - High-current terminal block

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## Drawings

### Circuit diagram



# UBAL 240 BN - High-current terminal block



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 27250101 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000897 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

# UBAL 240 BN - High-current terminal block



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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

### CEC UBAL 240 - Cover plate

1090037

<https://www.phoenixcontact.com/us/products/1090037>



Cover plate, color: yellow

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### UCT-TM 12 - Marker for terminal blocks

0829144

<https://www.phoenixcontact.com/us/products/0829144>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

# UBAL 240 BN - High-current terminal block



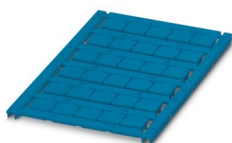
1086509

<https://www.phoenixcontact.com/us/products/1086509>

## UCT-TM 12 BU - Marker for terminal blocks

0829177

<https://www.phoenixcontact.com/us/products/0829177>



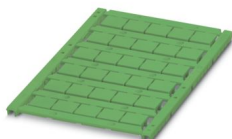
Marker for terminal blocks, Sheet, blue, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

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## UCT-TM 12 GN - Marker for terminal blocks

0829178

<https://www.phoenixcontact.com/us/products/0829178>



Marker for terminal blocks, Sheet, green, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

# UBAL 240 BN - High-current terminal block

1086509

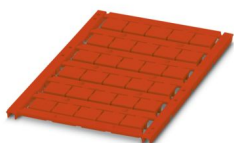
<https://www.phoenixcontact.com/us/products/1086509>



## UCT-TM 12 RD - Marker for terminal blocks

0829174

<https://www.phoenixcontact.com/us/products/0829174>



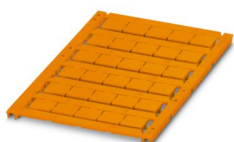
Marker for terminal blocks, Sheet, red, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

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## UCT-TM 12 OG - Marker for terminal blocks

0829175

<https://www.phoenixcontact.com/us/products/0829175>



Marker for terminal blocks, Sheet, orange, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

## UBAL 240 BN - High-current terminal block

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## UCT-TM 12 YE - Marker for terminal blocks

0829145

<https://www.phoenixcontact.com/us/products/0829145>



Marker for terminal blocks, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

## PXC TERMINAL GREASE - Antioxidant

1108540

<https://www.phoenixcontact.com/us/products/1108540>



Antioxidant

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