

# UBAL 240 BU - High-current terminal block



1086506

<https://www.phoenixcontact.com/us/products/1086506>

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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: blue

## 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                          | 1086506       |
| Packing unit                         | 5 pc          |
| Minimum order quantity               | 5 pc          |
| Sales key                            | BE13          |
| Product key                          | BE1311        |
| GTIN                                 | 4055626879819 |
| Weight per piece (including packing) | 278.97 g      |
| Weight per piece (excluding packing) | 278.97 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | EE            |

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## Technical data

### Notes

#### General

|      |  |
|------|--|
| Note | We recommend using ferrules when using flexible conductor. |
|------|--|

### Product properties

|                       |                             |
|-----------------------|-----------------------------|
| Product type          | Feed-through terminal block |
| Product family        | UBAL                        |
| Number of positions   | 1                           |
| 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 | 13.78 W |

### Connection data

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

#### Aluminum conductor

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection  |
| Screw thread                     | M20   |
| Note                             | Screws with hexagonal socket<br>The following values apply to aluminum conductors<br>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 cross section            | 240 mm <sup>2</sup>   |
| 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  |

#### Copper conductor

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|   |  |
|---|--|
| 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 cross section   | 240 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   |

## Dimensions

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

## Material specifications

|  |                 |
|--|-----------------|
| Color  | blue (RAL 5015) |
| 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 |

## Mechanical properties

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## 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               | Long 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, 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 %  |

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## Standards and regulations

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

## Mounting

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

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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/1086506>



**EAC**

Approval ID: KZ7500651131219505



**UL Recognized**

Approval ID: FILE E 60425

|               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|---------------|-----------------------|-----------------------|-------------------|-----------------------------|
| E             |                       |                       |                   |                             |
|               | 1000 V                | 380 A                 | 3/0 - 500         | -                           |
| Al conductors | 1000 V                | 310 A                 | 3/0 - 500         | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250101 |
| ECLASS-15.0 | 27250101 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 2.85 kg CO2e |
|---------|--------------|

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