UBAL 50 FE - High-current terminal block

1086471

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High-current terminal block, nom. voltage: 1000 V, nominal current: 145 A, number of connections: 2, number of positions: 1, connection method: Screw connection, Rated cross section: 50 mm^2, cross section: 6 mm^2 - 50 mm^2, Rated cross section: 50 mm^2, cross section: 4 mm^2 - 50 mm^2, mounting type: NS 35/15, NS 35/7,5, color: yellow

Your advantages

- Maintenance-free terminal points that are greased beforehand simplify the connection of aluminum conductors
- Tailor-made screw connection for multi-stranded aluminum conductors and copper wires
- 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	1086471
Packing unit	20 pc
Minimum order quantity	20 pc
Sales key	BE13
Product key	BE1311
GTIN	4055626878461
Weight per piece (including packing)	48.92 g
Weight per piece (excluding packing)	22.22 g
Customs tariff number	85369010
Country of origin	EE

Technical data

Notes

General	Terminal block for aluminum and copper conductors (AL-CU)

General

Note	We recommend using ferrules when using flexible donductor.

Product properties

Product type	High current 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	4.73 W

Connection data

Nominal cross section	50 mm²

Aluminum conductor

Connection method	Screw connection
Screw thread	M10
Note	Screws with hexagonal socket
	The following values apply to aluminum conductors
	The values for aluminum conductors relate to class 1 and 2 single- and multi-stranded rigid conductors in accordance with EN 60228. Application notes on connecting aluminum conductors can be found in the download area.
Tightening torque	12 Nm
Stripping length	23 mm
Connection in acc. with standard	IEC 61238-1
Conductor cross-section rigid	6 mm² ... 50 mm²
Cross section AWG	6 ... 1/0 (converted acc. to IEC)
Nominal cross section	50 mm²
Nominal current	145 A
Maximum load current	145 A (with 50 mm² conductor cross-section – test current in accordance with IEC 61238-1)

Nominal voltage	1000 V

Copper conductor

Note	The following values apply to copper wires
	Flexible conductors, class 5, in accordance with EN 60228.
Tightening torque	4 ... 12 Nm
Stripping length	23 mm
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	4 mm² ... 50 mm²
Cross section AWG	6 ... 1/0 (converted acc. to IEC)
Conductor cross-section flexible	2.5 mm² ... 35 mm²
Conductor cross-section flexible (ferrule without plastic sleeve)	2.5 mm² ... 35 mm²
Flexible conductor cross-section (ferrule with plastic sleeve)	2.5 mm² ... 35 mm²
2 conductors with same cross section, flexible	2.5 mm² ... 16 mm²
Nominal cross section	50 mm²
Nominal current	150 A
Maximum load current	150 A (with 50 mm² conductor cross-section)
Nominal voltage	1000 V

Dimensions

Width	19.2 mm
Height	82.5 mm
Depth	51 mm
Depth on NS 35/7,5	51 mm
Depth on NS 35/15	58.5 mm
Hole diameter	2.75 mm

Material specifications

Color	yellow (RAL 1018)
Flammability rating according to UL 94	V0
Insulating material group	II
Insulating material	PA
Relative insulation material temperature index (Elec., UL 746 B)	400 °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 50 mm²	6 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	2.2 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
Test force setpoint	10 N
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	2.5 mm² / 0.7 kg
	50 mm² / 9.5 kg
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 Hz to f_2 = 250 Hz
ASD level	6.12 (m/s²)²/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 %

Standards and regulations

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

Mounting

Mounting type	NS 35/15
	NS 35/7,5

Drawings

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1086471

EAC
Approval ID: KZ7500651131219505

UL Recognized
Approval ID: FILE E 60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
E				
	1000 V	150 A	6 - 1/0	-
Al conductors	1000 V	120 A	6 - 1/0	-

Classifications

ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

ETIM

ETIM 10.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

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	0.641 kg CO2e

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