UTTB 2,5 BU - Double-level terminal block

3044649

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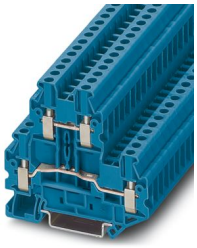


Double-level terminal block, nom. voltage: 500 V, nominal current: 24 A, connection method: Screw connection, Rated cross section: 2.5 mm^2, cross section: 0.14 mm^2 - 4 mm^2, mounting type: NS 35/7,5, NS 35/15, color: blue

Your advantages

- Globally recognized: Internationally proven screw connection
- Maintenance-free and vibration-resistant thanks to the patented Reakdyn principle
- Space savings and flexibility with the connection of two identical conductors
- Long-term stable connections with the use of high-quality materials
- Low self-heating due to high contact forces
- Maximum efficiency in the smallest space - thanks to integrated level bridging, the connections are connected across levels
- High space savings thanks to the compact integration of two separate circuits in a single terminal block

Commercial data

Item number	3044649
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE01
Product key	BE1114
GTIN	4017918997014
Weight per piece (including packing)	16.14 g
Weight per piece (excluding packing)	15.025 g
Customs tariff number	85369010
Country of origin	DE

Technical data

Product properties

Product type	Multi-level terminal block
Product family	UT
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
Number of connections	4
Number of rows	2
Potentials	2

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Electrical properties

Rated surge voltage	6 kV
Maximum power dissipation for nominal condition	0.77 W

Connection data

Number of connections per level	2
Nominal cross section	2.5 mm²

Level 1+2

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 ... 0.6 Nm
Stripping length	9 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.14 mm² ... 4 mm²
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm² ... 4 mm²
Conductor cross-section, flexible [AWG]	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm² ... 2.5 mm²
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm² ... 2.5 mm²
2 conductors with same cross section, rigid	0.14 mm² ... 1.5 mm²
2 conductors with same cross section, flexible	0.14 mm² ... 1.5 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.14 mm² ... 1.5 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² ... 1.5 mm²
Nominal cross section	2.5 mm²

Nominal current	24 A
Maximum load current	28 A (in case of a 4 mm² conductor cross-section, the maximum load current must not be exceeded by the total current of all connected conductors.)
Nominal voltage	500 V

Ex data

Rated data (ATEX/IECEx)

Identification	Ⓔx II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3047293 D-UTTB 2,5/4
	3047303 DP-UTTB 2,5/4
	3047316 ATP-UTTB 2,5/4
	1205053 SZS 0,6X3,5
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-5 / 3030161
	Plug-in bridge / FBS 3-5 / 3030174
	Plug-in bridge / FBS 4-5 / 3030187
	Plug-in bridge / FBS 5-5 / 3030190
	Plug-in bridge / FBS 10-5 / 3030213
	Plug-in bridge / FBS 20-5 / 3030226
Bridge data	20 A / 2.5 mm²
Ex temperature increase	40 K (22.5 A / 2.5 mm²)
for bridging with bridge	352 V
- At bridging between non-adjacent terminal blocks	352 V
- At bridging between non-adjacent terminal blocks via PE terminal block	275 V
- At cut-to-length bridging with cover	220 V
- At cut-to-length bridging with partition plate	176 V
Rated insulation voltage	320 V
output	(Permanent)

Ex level General

Rated voltage	352 V
Rated current	20 A
Maximum load current	24 A

Ex connection data General

Torque range	0.5 Nm ... 0.6 Nm
Nominal cross section	2.5 mm²
Rated cross section AWG	14
Connection capacity rigid	0.14 mm² ... 4 mm²
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm² ... 2.5 mm²

Connection capacity AWG	26 ... 14
2 conductors with same cross section, solid	0.14 mm² ... 1.5 mm²
2 conductors with the same cross-section AWG rigid	26 ... 16
2 conductors with same cross section, stranded	0.14 mm² ... 1.5 mm²
2 conductors with the same cross-section AWG flexible	26 ... 16
output	(Permanent)

Ex level Level 1

Contact resistance	0.6 mΩ
output	(Permanent)

Ex level Level 2

Contact resistance	0.4 mΩ

Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	69.9 mm
Depth	64.4 mm
Depth on NS 35/7,5	65 mm
Depth on NS 35/15	72.5 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
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
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

Electrical tests

Surge voltage test

Test voltage setpoint	7.3 kV
Result	Test passed

Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed

	Test passed
Short-time withstand current 2.5 mm²	0.3 kA
	0.3 kA
Result	Test passed

Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

Mechanical properties

Mechanical data

Open side panel	Yes

Mechanical tests

Mechanical strength

Result	Test passed

Attachment on the carrier

DIN rail/fixing support	NS 35
Test force setpoint	1 N
Result	Test passed

Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross-section/weight	0.14 mm² / 0.2 kg
	2.5 mm² / 0.7 kg
	4 mm² / 0.9 kg
Result	Test passed

Environmental and real-life conditions

Needle-flame test

Time of exposure	30 s
Result	Test passed

Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2022-06
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

Specification	DIN EN 50155 (VDE 0115-200):2008-03
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

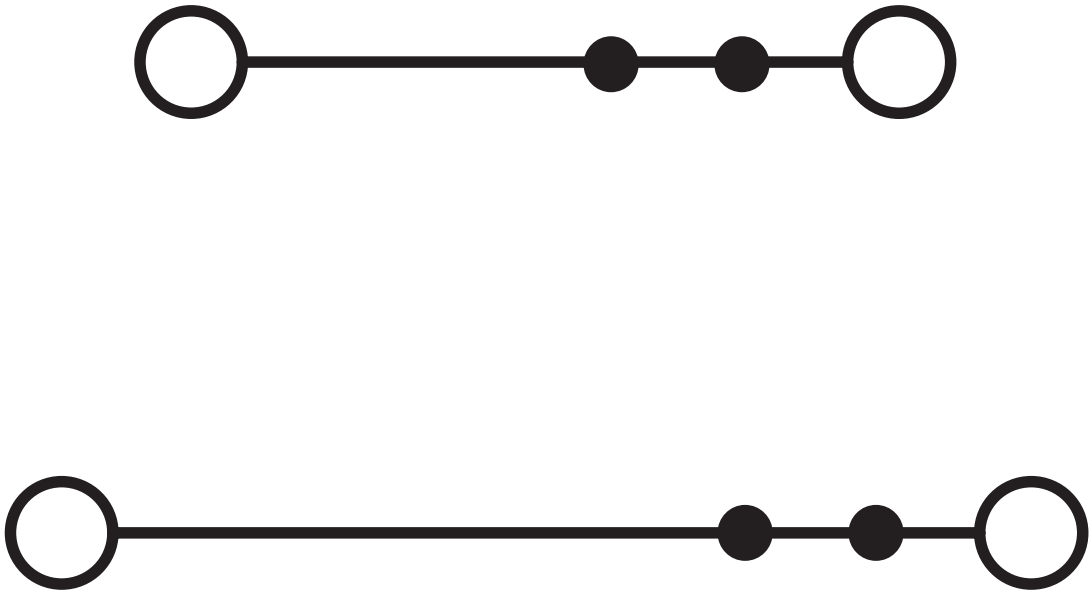
Connection in acc. with standard	IEC 60947-7-1

Mounting

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

Drawings

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3044649

DNV
Approval ID: TAE00001S9

CSA
Approval ID: 13631

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	20 A	26 - 12	-
C				
	300 V	20 A	26 - 12	-
D				
	600 V	5 A	26 - 12	-

cULus Recognized
Approval ID: E60425

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	20 A	26 - 12	-
Multi-conductor connection	300 V	20 A	26 - 16	-
C				
	300 V	20 A	26 - 12	-
Multi-conductor connection	300 V	20 A	26 - 16	-
D				
	600 V	5 A	26 - 12	-
Multi-conductor connection	600 V	5 A	26 - 16	-

ATEX
Approval ID: KEMA06ATEX0017U

EAC Ex
Approval ID: KZ 7500525010101950

IECEx
Approval ID: IECEx KEM 06.0013U

CCC
Approval ID: 2020322313000622

UKCA-EX
Approval ID: DEKRA 21UKEX0305U

UL Comp Hazloc CA US
Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	20 A	26 - 12	-
C				
	300 V	20 A	26 - 12	-

Classifications

ECLASS

ECLASS-13.0	27250102
ECLASS-15.0	27250102

ETIM

ETIM 10.0	EC000897

UNSPSC

UNSPSC 21.0	39121400

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)
SCIP	c10990d5-ffd1-42c5-81dd-b72f86434162

EF3.1 Climate Change

CO2e kg	0.016 kg CO2e

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