

# UT 16 BK - Feed-through terminal block



3044197

<https://www.phoenixcontact.com/us/products/3044197>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 76 A, number of connections: 2, connection method: Screw connection, Rated cross section: 16 mm<sup>2</sup>, cross section: 1.5 mm<sup>2</sup> - 25 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: black

## 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
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Vibration-resistant and maintenance-free conductor connection

## Commercial data

Item number	3044197
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE01
Product key	BE1111
GTIN	4055626055275
Weight per piece (including packing)	30.583 g
Weight per piece (excluding packing)	30.583 g
Customs tariff number	85369010
Country of origin	TR

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## Technical data

### Product properties

Product type	Feed-through terminal block
Product family	UT
Area of application	Railway industry
	Machine building
	Plant engineering
	Process industry
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	2.43 W

### Connection data

Number of connections per level	2
Nominal cross section	16 mm <sup>2</sup>

### Level 1 above 1 below 1

Connection method	Screw connection
Screw thread	M5
Tightening torque	2.5 ... 3 Nm
Stripping length	14 mm
Internal cylindrical gage	A7
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Cross section AWG	14 ... 4 (converted acc. to IEC)
Conductor cross-section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	14 ... 4 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	1 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	1 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with same cross section, rigid	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with same cross section, flexible	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.75 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Nominal cross section	16 mm <sup>2</sup>

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Nominal current	76 A
Maximum load current	101 A (with 25 mm <sup>2</sup> conductor cross-section)
Nominal voltage	1000 V
Note	Note: Product releases, connection cross sections and notes on connecting aluminum cables can be found in the download area.

## Ex data

### Rated data (ATEX/IECEX)

Identification	⊕ II 2 GD Ex eb IIC Gb
Operating temperature range	-60 °C ... 110 °C
Ex-certified accessories	3047206 D-UT 16 1205066 SZS 1,0X4,0 VDE 3022276 CLIPFIX 35-5 3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-12 / 3005950
Bridge data	73.5 A (16 mm <sup>2</sup> )
Ex temperature increase for bridging with bridge	40 K (80.5 A / 16 mm <sup>2</sup> ) 690 V
Rated insulation voltage output	630 V (Permanent)

### Ex level General

Rated voltage	690 V
Rated current	73.5 A
Maximum load current	89.5 A
Contact resistance	0.16 mΩ

### Ex connection data General

Torque range	2.5 Nm ... 3 Nm
Nominal cross section	16 mm <sup>2</sup>
Rated cross section AWG	6
Connection capacity rigid	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Connection capacity AWG	16 ... 4
Connection capacity flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Connection capacity AWG	16 ... 6
2 conductors with same cross section, solid	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
2 conductors with the same cross-section AWG rigid	18 ... 10
2 conductors with same cross section, stranded	1 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with the same cross-section AWG flexible	18 ... 12

## Dimensions

Width	12.2 mm
End cover width	2.2 mm
Height	55.5 mm
Depth	54.4 mm

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Depth on NS 35/7,5	55 mm
Depth on NS 35/15	62.5 mm

## Material specifications

Color	black (RAL 9005)
Flammability rating according to UL 94	V0
Insulating material group	I
Insulating material	PA
Static insulating material application in cold	-60 °C
Temperature index of insulation material (DIN EN 60216-1 (VDE 0304-21))	130 °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
Calorimetric heat release NFPA 130 (ASTM E 1354)	28 MJ/kg
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	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 16 mm <sup>2</sup>	1.92 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Mechanical tests

### Mechanical strength

Result	Test passed
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### Attachment on the carrier

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DIN rail/fixing support	NS 32/NS 35
Result	Test passed

## Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	1.5 mm <sup>2</sup> / 0.4 kg
	16 mm <sup>2</sup> / 2.9 kg
	25 mm <sup>2</sup> / 4.5 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):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 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis

### 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.)

### 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
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## Mounting

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

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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/3044197>

### DNV

Approval ID: TAE00001S9



### CSA

Approval ID: 13631



### IECEE CB Scheme

Approval ID: DE1-65779

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	1000 V	76 A	-	- 16



### cULus Recognized

Approval ID: E60425

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B				
	600 V	85 A	16 - 4	-
Multi-conductor connection	600 V	85 A	- 14	-
C				
	600 V	85 A	16 - 4	-
Multi-conductor connection	600 V	85 A	- 14	-



### LR

Approval ID: LR24100022TA



### VDE Zeichengenehmigung

Approval ID: 40020166

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	1000 V	76 A	-	1.5 - 16



### CSA


Approval ID: 13631


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 <b>ATEX</b> Approval ID: KEMA04ATEX2048U				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
Only flexible conductors	690 V	73.5 A	-	1.5 - 16
Only rigid conductors	690 V	89.5 A	-	1.5 - 25

 <b>cUL Recognized</b> Approval ID: E192998				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	600 V	85 A	16 - 4	-

 <b>IECEx</b> Approval ID: IECExKEM06.0027U				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
Only flexible conductors	690 V	73.5 A	-	1.5 - 16
Only rigid conductors	690 V	89.5 A	-	1.5 - 25

 <b>UL Recognized</b> Approval ID: E192998				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	600 V	85 A	16 - 4	-

 <b>CCC</b> Approval ID: 2020322313000622				
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 <b>UKCA-EX</b> Approval ID: DEKRA 21UKEX0304U				
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 <b>EAC Ex</b> Approval ID: KZ 7500525010101950				
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## Classifications

### ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	27250101

### ETIM

ETIM 10.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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