

# UT 2,5 GN - Feed-through terminal block



3045091

<https://www.phoenixcontact.com/us/products/3045091>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 24 A, number of connections: 2, connection method: Screw connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green

## 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	3045091
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE01
Product key	BE1111
GTIN	4017918975432
Weight per piece (including packing)	7.84 g
Weight per piece (excluding packing)	7.351 g
Customs tariff number	85369010
Country of origin	DE

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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	0.77 W

### Connection data

Number of connections per level	2
Nominal cross section	2.5 mm <sup>2</sup>
Rated cross section AWG	12

### Level 1 above 1 below 1

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 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible ultrasound-compressed	0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, flexible [AWG] ultrasound-compressed	22 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

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2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal cross section	2.5 mm <sup>2</sup>
Nominal current	24 A
Maximum load current	32 A (with 4 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	3047028 D-UT 2,5/10
	3047167 ATP-UT
	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	21 A (2.5 mm <sup>2</sup> )
Ex temperature increase	40 K (23.3 A / 2.5 mm <sup>2</sup> )
for bridging with bridge	690 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	275 V
Rated insulation voltage	630 V
output	(Permanent)

### Ex level General

Rated voltage	690 V
Rated current	21 A
Maximum load current	28 A
Contact resistance	0.41 mΩ

### Ex connection data General

Torque range	0.5 Nm ... 0.6 Nm
Nominal cross section	2.5 mm <sup>2</sup>
Rated cross section AWG	14

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Connection capacity rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Connection capacity AWG	26 ... 12
Connection capacity flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Connection capacity AWG	26 ... 14
2 conductors with same cross section, solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross-section AWG rigid	26 ... 16
2 conductors with same cross section, stranded	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross-section AWG flexible	26 ... 16

## Dimensions

Width	5.2 mm
End cover width	2.2 mm
Height	47.7 mm
Depth on NS 35/7,5	47.5 mm
Depth on NS 35/15	55 mm

## Material specifications

Color	green (RAL 6021)
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))	125 °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)	27,5 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 ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Short-time withstand current 4 mm <sup>2</sup>	0.48 kA

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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

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

### Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	2.5 mm <sup>2</sup> / 0.7 kg
	4 mm <sup>2</sup> / 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):2008-03
Spectrum	Long life test category 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	1.857 (m/s <sup>2</sup> )/Hz
Acceleration	0.8g
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

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Acceleration	5g
Shock duration	30 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
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## Mounting

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/3045091>

### DNV

Approval ID: TAE00001S9



### CSA

Approval ID: 13631



### IECEE CB Scheme

Approval ID: DE1-63061\_M1

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				
	1000 V	24 A	-	0.2 - 2.5



### cULus Recognized

Approval ID: E60425

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



### VDE Zeichengenehmigung

Approval ID: 40013658

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				
	1000 V	24 A	-	0.2 - 2.5



### CSA

Approval ID: 13631



### ATEX

Approval ID: KEMA04ATEX2048U

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				

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Only flexible conductors	690 V	21 A	-	0.14 - 2.5
Only rigid conductors	690 V	28 A	-	0.14 - 4



**EAC Ex**

Approval ID: KZ 7500525010101950



**IECEX**

Approval ID: IECEX KEM 06.0027U

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine				
Only flexible conductors	690 V	21 A	-	0.14 - 2.5
Only rigid conductors	690 V	28 A	-	0.14 - 4



**CCC**

Approval ID: 2020322313000622



**UKCA-EX**

Approval ID: DEKRA 21UKEX0304U

**UL Comp Hazloc CA US**

Approval ID: UL-US-2552444-2

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

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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
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	f30d9bd1-1591-42f4-977b-8406a7ad7ae0

### EF3.1 Climate Change

CO2e kg	0.014 kg CO2e
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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)