

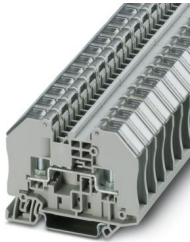
# RTO 3-TC - Feed-through terminal block



3049945

<https://www.phoenixcontact.com/us/products/3049945>

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Feed-through terminal block with bolt connection technology and transparent safety contact hood, cross section: 0.1 - 2.5 mm<sup>2</sup>, AWG: 26 - 14, width 12.3 mm, color: gray

## Your advantages

- Four bridge shafts per terminal block
- Terminal point always freely accessible

## Commercial data

Item number	3049945
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE43
Product key	BE4312
GTIN	4046356425162
Weight per piece (including packing)	20.28 g
Weight per piece (excluding packing)	20.28 g
Customs tariff number	85369010
Country of origin	CN

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## Technical data

### Product properties

Product type	Bolt connection terminal block
Product family	RTO
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>

#### 1 level

Connection method	Bolt connection
Stripping length	The stripping length depends on the specification provided by the cable lug manufacturer.
Connection in acc. with standard	IEC 60947-7-1
Nominal cross section	2.5 mm <sup>2</sup>
Nominal current	24 A
Maximum load current	24 A (with a 2.5 mm <sup>2</sup> conductor cross-section)
Nominal voltage	1000 V

#### Cable lug connection DIN 46234:1980-03

Connection in acc. with standard	DIN 46234:1980-03
Cross section	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section range AWG	20 ... 14 (converted acc. to IEC)
Hole diameter	3.2 mm
Width	6 mm
Bolt diameter	3 mm
Screw thread	M3
Tightening torque	0.6 ... 0.8 Nm
Connection in acc. with standard	DIN 46237:1970-07
Cross section	1 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section range AWG	18 ... 14 (converted acc. to IEC)
Hole diameter	3.2 mm
Width	6 mm

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Bolt diameter	3 mm
Screw thread	M3
Tightening torque	0.6 ... 0.8 Nm
Identification color of ring cable lugs : red	1 mm <sup>2</sup>
Identification color of ring cable lugs : blue	2.5 mm <sup>2</sup>

## Dimensions

Width	12.3 mm
End cover width	2.2 mm
Height	66 mm
Depth on NS 35/7,5	51 mm
Depth on NS 35/15	58.5 mm

## Material specifications

Color	gray (RAL 7042)
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 ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

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## Mechanical properties

### Mechanical data

Open side panel	Yes
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## Mechanical tests

### Mechanical strength

Result	Test passed
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## 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	$6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$
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

Mounting type	NS 35/7,5
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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/3049945>



**EAC**

Approval ID: RU C-DE.BL08.B.00540



**EAC**

Approval ID: KZ7500651131219505

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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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