

# TB 150 I - Feed-through terminal block



3251201

<https://www.phoenixcontact.com/sg/products/3251201>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 309 A, number of connections: 2, connection method: Screw connection, Rated cross section: 150 mm<sup>2</sup>, cross section: 35 mm<sup>2</sup> - 150 mm<sup>2</sup>, mounting type: NS 35/15, NS 32, color: dark gray

## Your advantages

- Reliable cable connection is ensured by three-point centering of the conductor in the prismatic sleeve base
- Low contact resistance of the contact surface due to ribbing
- Screw locking by means of spring-loaded elements in the clamping part

## Commercial data

Item number	3251201
Packing unit	3 pc
Minimum order quantity	3 pc
Sales key	*****
Product key	BEK311
GTIN	4046356951074
Weight per piece (including packing)	383.1 g
Weight per piece (excluding packing)	363.28 g
Customs tariff number	85369010
Country of origin	IN

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## Technical data

### Product properties

Product type	High current terminal block
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	9.55 W

### Connection data

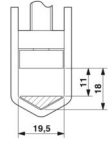
Number of connections per level	2
Nominal cross section	150 mm <sup>2</sup>
Rated cross section AWG	1/0
Screw thread	M10
Note	Screws with hexagonal socket
Tightening torque	25 ... 30 Nm
Stripping length	40 mm
Internal cylindrical gage	B14
Connection in acc. with standard	IEC 60947-7-1
Conductor cross section rigid	35 mm <sup>2</sup> ... 150 mm <sup>2</sup>
Cross section AWG	1/0 ... 250 kcmil (converted acc. to IEC)
Conductor cross section flexible	50 mm <sup>2</sup> ... 150 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	1/0 ... 250 kcmil (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	50 mm <sup>2</sup> ... 150 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	50 mm <sup>2</sup> ... 150 mm <sup>2</sup>
Cross-section with insertion bridge, rigid	150 mm <sup>2</sup>
Cross-section with insertion bridge, flexible	120 mm <sup>2</sup>
2 conductors with same cross section, solid	25 mm <sup>2</sup> ... 50 mm <sup>2</sup>
2 conductors with same cross section, flexible	35 mm <sup>2</sup> ... 50 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	25 mm <sup>2</sup> ... 50 mm <sup>2</sup>
Nominal current	309 A
Maximum load current	309 A (with 150 mm <sup>2</sup> conductor cross section)
Nominal voltage	1000 V
Nominal cross section	150 mm <sup>2</sup>

### Dimensions

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Dimensional drawing	
Width	31 mm
Height	100 mm
Depth	107.3 mm
Depth on NS 32	116 mm
Depth on NS 35/15	118.5 mm

## Material specifications

Color	traffic grey B (RAL 7043)
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	9.8 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq$ 45 K
Result	Test passed
	Test passed
Short-time withstand current 150 mm <sup>2</sup>	18 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	2.2 kV
Result	Test passed

## Mechanical properties

### Mechanical data

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Open side panel	No
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## Mechanical tests

### Mechanical strength

Result	Test passed
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### Attachment on the carrier

DIN rail/fixing support	NS 32/NS 35
Test force setpoint	15 N
Result	Test passed

### Test for conductor damage and slackening

Rotation speed	10 (+/- 2) rpm
Revolutions	135
Conductor cross section/weight	35 mm <sup>2</sup> / 6.8 kg
	50 mm <sup>2</sup> / 9.5 kg
	150 mm <sup>2</sup> / 15 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
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.)
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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 35/15
	NS 32

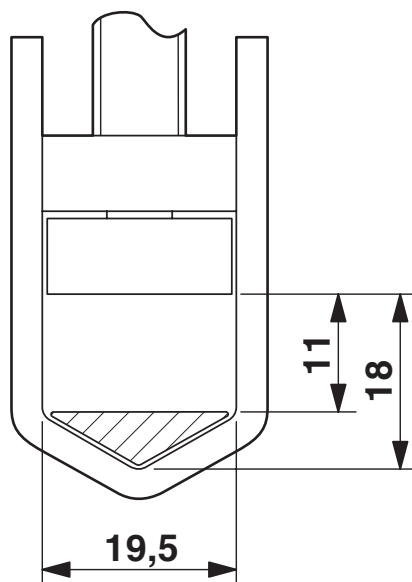
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## Drawings

Dimensional drawing



Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3251201>



**EAC**

Approval ID: EACKZ 08593



**cULus Recognized**

Approval ID: E60425

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
	600 V	285 A	2 - 300	-
Multi-conductor connection	600 V	285 A	4 - 1/0	-
Use group C				
	600 V	285 A	2 - 300	-
Multi-conductor connection	600 V	285 A	4 - 1/0	-

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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

### ETIM

ETIM 9.0	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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