

PT 16 N BK - Feed-through terminal block



3212145

<https://www.phoenixcontact.com/us/products/3212145>

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Feed-through terminal block, nom. voltage: 1000 V, nominal current: 76 A, number of connections: 2, connection method: Push-in connection, Rated cross section: 16 mm², cross section: 0.5 mm² - 25 mm², mounting type: NS 35/7,5, NS 35/15, color: black

Your advantages

- Time-saving conductor connection thanks to tool-free direct-connection technology
- Convenient plugging with lower insertion force
- High conductor pull-out forces due to the spring design
- Vibration-resistant and maintenance-free conductor connection
- Full flexibility thanks to the standardized CLIPLINE complete bridging, marking, and testing accessories
- Optimized for manual and automated wiring

Commercial data

Item number	3212145
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	BE22
Product key	BE2211
GTIN	4055626080864
Weight per piece (including packing)	31.06 g
Weight per piece (excluding packing)	31.06 g
Customs tariff number	85369010
Country of origin	PL

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Technical data

Product properties

Product type	Feed-through terminal block
Product family	PT
Area of application	Railway industry
	Machine building
	Plant engineering
Number of connections	2
Number of rows	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 ²
Connection method	Push-in connection
Stripping length	18 mm ... 20 mm
Internal cylindrical gage	A7
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.5 mm ² ... 25 mm ²
Cross section AWG	20 ... 4 (converted acc. to IEC)
Conductor cross-section flexible	0.5 mm ² ... 25 mm ²
Conductor cross-section, flexible [AWG]	20 ... 4 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm ² ... 16 mm ²
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm ² ... 16 mm ²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm ² ... 4 mm ²
Nominal current	76 A
Maximum load current	85 A (with 25 mm ² conductor cross-section, rigid)
Nominal voltage	1000 V
Nominal cross section	16 mm ²

Connection cross sections directly pluggable

Conductor cross-section rigid	2.5 mm ² ... 25 mm ²
Conductor cross-section flexible (ferrule without plastic sleeve)	2.5 mm ² ... 16 mm ²
Flexible conductor cross-section (ferrule with plastic sleeve)	2.5 mm ² ... 16 mm ²

Ex data

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Rated data (ATEX/IECEX)

Identification	Ex II 2 GD Ex eb IIC Gb
Operating temperature range (1)	-60 °C ... 85 °C
Operating temperature range (2)	-40 °C ... 110 °C
Ex-certified accessories	3212060 D-PT 16 N
	1206612 SZF 3-1,0X5,5
	3022276 CLIPFIX 35-5
	3022218 CLIPFIX 35
List of bridges	Plug-in bridge / FBS 2-12 / 3005950
Bridge data	60.5 A (16 mm ²)
Ex temperature increase	40 K (65.5 A / 16 mm ²)
for bridging with bridge	550 V
Rated insulation voltage	500 V
output	(Permanent)

Ex level General

Rated voltage	550 V
Rated current	65.5 A
Maximum load current	78 A
Contact resistance	0.31 mΩ

Ex connection data General

Nominal cross section	16 mm ²
Rated cross section AWG	6
Connection capacity rigid	0.5 mm ² ... 25 mm ²
Connection capacity AWG	20 ... 4
Connection capacity flexible	0.5 mm ² ... 16 mm ²
Connection capacity AWG	20 ... 6

Dimensions

Width	12.2 mm
End cover width	2.2 mm
Height	75.4 mm
Depth on NS 35/7,5	52.6 mm
Depth on NS 35/15	60.1 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
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

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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 ≤ 45 K
Result	Test passed
Short-time withstand current 16 mm ²	1.92 kA
Short-time withstand current 25 mm ²	3 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

DIN rail/fixing support	NS 35
Test force setpoint	5 N
Result	Test passed

Test for conductor damage and slackening

Conductor cross-section/weight	0.5 mm ² / 0.3 kg
	16 mm ² / 2.9 kg
	25 mm ² / 4.5 kg
Result	Test passed

Environmental and real-life conditions

Service life

Insertion/withdrawal cycles	100
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Aging

Temperature cycles	192
Result	Test passed

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 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
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
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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/3212145>

 CSA Approval ID: 2030668				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	600 V	70 A	20 - 4	-
C	600 V	70 A	20 - 4	-

 IECEE CB Scheme Approval ID: DE1-62846				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine	1000 V	76 A	-	0.5 - 16

 EAC Approval ID: RU C-DE.BL08.B.00644				
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 cULus Recognized Approval ID: E60425				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B	600 V	85 A	20 - 4	-
C	600 V	85 A	20 - 4	-

 LR Approval ID: LR2371832TA				
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 VDE Zeichengenehmigung Approval ID: 40040917				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine	1000 V	76 A	-	0.5 - 16

 PRS Approval ID: TE/2107/880590/21				
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DNV

Approval ID: TAE000010T



cUL Recognized

Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	550 V	85 A	20 - 4	-



EAC Ex

Approval ID: RU C-DE.AB72.B.02351



IECEx

Approval ID: IECEx SEV13.0005U



UL Recognized

Approval ID: E192998

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	550 V	85 A	20 - 4	-



ATEX

Approval ID: SEV13ATEX0159U



CCC

Approval ID: 2020322313000631



EAC Ex

Approval ID: KZ 7500525010101950

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Classifications

ECLASS

ECLASS-13.0	27250101
ECLASS-15.0	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
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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