

PT 16 N BK - Feed-through terminal block



3212145

<https://www.phoenixcontact.com/sg/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

- The compact design and front connection enable wiring in a confined space
- In addition to the testing option in the double function shaft, all terminal blocks provide an additional test pick-off
- The Push-in connection terminal blocks are characterized by the system features of the CLIPLINE complete system and by easy and tool-free wiring of conductors with ferrules or solid conductors
- Tested for railway applications

Commercial data

Item number	3212145
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	*****
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
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
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

Rated data (ATEX/IECEx)

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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 mm²
Ex temperature increase	40 K (65.5 A / 16 mm²)
Rated voltage	550 V
for bridging with bridge	550 V
Rated insulation voltage	500 V
output	(Permanent)

Ex level General

Rated current	65.5 A
Maximum load current	78 A
Contact resistance	0.31 mΩ

Ex connection data General

Nominal cross section	16 mm²
Rated cross section AWG	6
Connection capacity rigid	0.5 mm² ... 25 mm²
Connection capacity AWG	20 ... 4
Connection capacity flexible	0.5 mm² ... 16 mm²
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
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 3

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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

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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	Service 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/sg/products/3212145>

 CSA Approval ID: 2030668				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B	600 V	70 A	20 - 4	-
Use group 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
	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
Use group B	600 V	85 A	20 - 4	-
Use group 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
	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
	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
	550 V	85 A	20 - 4	-



ATEX

Approval ID: SEV13ATEX0159U



CCC

Approval ID: 2020322313000631



EAC Ex

Approval ID: KZ 7500525010101950

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250101

ETIM

ETIM 9.0	EC000897
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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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PHOENIX CONTACT SEA Pte. Ltd.

105 Eunos Avenue 3, #04-00

Singapore 409836

+65 6228 4900

marketing@phoenixcontact.com.sg