

# PT 16 N BK - Feed-through terminal block



3212145

<https://www.phoenixcontact.com/gb/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 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 25 mm<sup>2</sup>, 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	BE2211
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 <sup>2</sup>
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 <sup>2</sup> ... 25 mm <sup>2</sup>
Cross section AWG	20 ... 4 (converted acc. to IEC)
Conductor cross-section flexible	0.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	20 ... 4 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Nominal cross section	16 mm <sup>2</sup>
Nominal current	76 A
Maximum load current	85 A (with 25 mm <sup>2</sup> conductor cross-section, rigid)
Nominal voltage	1000 V

### Connection cross sections directly pluggable

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

## Ex data

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3212145

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## Rated data (ATEX/IECEX)

Identification	⊕ 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 <sup>2</sup> )
Ex temperature increase for bridging with bridge	40 K (65.5 A / 16 mm <sup>2</sup> ) 550 V
Rated insulation voltage output	500 V (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 <sup>2</sup>
Rated cross section AWG	6
Connection capacity rigid	0.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Connection capacity AWG	20 ... 4
Connection capacity flexible	0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
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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3212145

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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 $\leq 45$ K
Result	Test passed
Short-time withstand current 16 mm <sup>2</sup>	1.92 kA
Short-time withstand current 25 mm <sup>2</sup>	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 <sup>2</sup> / 0.3 kg
	16 mm <sup>2</sup> / 2.9 kg
	25 mm <sup>2</sup> / 4.5 kg
Result	Test passed

## Environmental and real-life conditions

### Service life

Insertion/withdrawal cycles	100
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3212145

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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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3212145

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## Drawings

Circuit diagram



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## Approvals

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 <b>CSA</b> Approval ID: 158887				
	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	-

 <b>IECEE CB Scheme</b> 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

 <b>EAC</b> Approval ID: RU C-DE.BL08.B.00644				
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 <b>cULus Recognized</b> 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	-

 <b>LR</b> Approval ID: LR2371832TA				
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 <b>VDE Zeichengenehmigung</b> 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

 <b>PRS</b> Approval ID: TE/2107/880590/21				
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3212145

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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 $\text{mm}^2$
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 $\text{mm}^2$
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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<https://www.phoenixcontact.com/gb/products/3212145>

## 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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### EF3.1 Climate Change

CO2e kg	0.189 kg CO2e
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