

# PTFIX 2X2,5 BN - Distribution block



1028072

<https://www.phoenixcontact.com/us/products/1028072>

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Distribution block, Basic terminal block, nom. voltage: 450 V, nominal current: 24 A, number of connections: 2, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: for snapping onto a DIN rail adapter, Direct mounting with flange, Free-hanging, color: brown

## Your advantages

- Time-saving conductor connection, thanks to tool-free Push-in direct connection technology
- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting
- Clear wiring, thanks to eleven different color variants
- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting

## Commercial data

Item number	1028072
Packing unit	1 pc
Minimum order quantity	50 pc
Sales key	BE09
Product key	BEA111
Catalog page	Page 439 (C-1-2019)
GTIN	4055626524849
Weight per piece (including packing)	3.842 g
Weight per piece (excluding packing)	3.333 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Product properties

Product type	Distributor 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	6 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>
Rated cross section AWG	12
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
Connection in acc. with standard	IEC 60998-2-2
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cross section AWG	26 ... 12 (converted acc. to IEC)
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	26 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Nominal current	24 A
Maximum load current	27 A
Nominal voltage	450 V

### Connection cross sections directly pluggable

Conductor cross section rigid	0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section, rigid [AWG]	24 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross section (ferrule with plastic sleeve)	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

### Dimensions

Width	5.2 mm
Height	28.6 mm
Depth	21.7 mm

### Material specifications

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Color	brown
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 $\leq$ 45 K
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Short-time withstand current 4 mm <sup>2</sup>	0.48 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

## Mechanical properties

### Mechanical data

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 35
Test force setpoint	1 N

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Result	Test passed
Note	When aligning several blocks, the foot elements should be placed in a way that maximum 5 blocks are free-hanging in between. Flange elements should be placed after every 9 blocks. Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen. One DIN rail adapter PTFIX-NS35 is intended for maximum 11 blocks.

## Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross section/weight	0.14 mm <sup>2</sup> / 0.2 kg 2.5 mm <sup>2</sup> / 0.7 kg 4 mm <sup>2</sup> / 0.9 kg
Result	Test passed

## Environmental and real-life conditions

### 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	Service 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

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 ... 105 °C (max. short-term operating temperature RTI)
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	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 (storage/transport)	30 % ... 70 %

## Standards and regulations

Connection in acc. with standard	IEC 60998-2-2
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## Mounting

Mounting type	for snapping onto a DIN rail adapter
	Direct mounting with flange
	Free-hanging

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1028072>

<b>DNV</b> Approval ID: TAE00002TT-04				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	500 V	24 A	-	-

<b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	300 V	20 A	26 - 12	-
Use group C	300 V	20 A	26 - 12	-
Use group D	600 V	5 A	26 - 12	-

<b>CB Scheme</b> Approval ID: DE1-63085				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	450 V	24 A	-	- 2.5

<b>ERC</b> Approval ID: RU C-DE.BL08.B.00644				
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<b>LR</b> Approval ID: LR2002627TA				
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<b>BV</b> Approval ID: 59146/A0 BV				
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<b>ERC</b> Approval ID: RU C-DE.BE.B.03378				
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<b>VDE Zeichengenehmigung</b> Approval ID: 40047798				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	450 V	24 A	-	0.2 - 2.5

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 <b>cULus Recognized</b> Approval ID: E60425		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B		300 V	20 A	26 - 12	-
Use group C		300 V	20 A	26 - 12	-
Use group F		600 V	20 A	26 - 12	-
Use group D		600 V	5 A	26 - 12	-

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## Classifications

### ECLASS

ECLASS-11.0	27141120
ECLASS-13.0	27250118

### ETIM

ETIM 8.0	EC000897
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e No hazardous substances above threshold values
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