

# PTVFIX 6/12X2,5-NS35A BK - Distribution block



1019554

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Distribution block, nom. voltage: 690 V, nominal current: 24 A, number of connections: 13, number of positions: 1, connection method: Push-in connection, Rated cross section: 2.5 mm<sup>2</sup>, Load contact, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, Line contact, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: black

## Your advantages

- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting
- Clear wiring, thanks to eleven different color variants
- Time-saving conductor connection, thanks to tool-free Push-in direct connection technology
- Time savings of up to 80 %, thanks to ready-to-mount blocks without manual bridging
- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting

## Commercial data

Item number	1019554
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	BE09
Product key	BEA223
GTIN	4055626506074
Weight per piece (including packing)	32.13 g
Weight per piece (excluding packing)	32.13 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Notes

#### General

Note	The maximum load current of a single clamping unit must not be exceeded.
	For power distribution applications, IEC 60364-4-43:2008; modified + corrigendum Okt. 2008 (DIN VDE 0100-430:2010-10) section 433.2 ff must be observed!

### Product properties

Product type	Distributor terminal block
Number of positions	1
Number of connections	13
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	0.77 W

### Connection data

Service Entrance	yes
Number of connections per level	13
Nominal cross section	2.5 mm <sup>2</sup>

#### Load contact

Connection method	Push-in connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
	B3
Connection in acc. with standard	IEC 60947-7-1
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> ... 4 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>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup>
Nominal cross section	2.5 mm <sup>2</sup>

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Nominal current	24 A
Maximum load current	32 A (with 4 mm <sup>2</sup> conductor cross-section)
Maximum total current	57 A (with 10 mm <sup>2</sup> conductor cross-section)
Nominal voltage	690 V
Note	The IEC 60947-7-1 standard applies for the use of mounting accessories.

## Line contact

Stripping length	10 mm ... 12 mm
Internal cylindrical gage	A5
	B4
Conductor cross-section rigid	0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Cross section AWG	20 ... 8 (converted acc. to IEC)
Conductor cross-section flexible	0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross-section, flexible [AWG]	20 ... 8 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve)	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal cross section	6 mm <sup>2</sup>
Nominal current	41 A (with 6 mm <sup>2</sup> conductor cross-section)
Maximum load current	57 A (with 10 mm <sup>2</sup> conductor cross-section)
Maximum total current	The maximum load current of the individual terminal point must not be exceeded.
Connection in acc. with standard	IEC 60998-2-2
Nominal voltage	450 V (in accordance with IEC 60998-2-2)

## Load contact 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]	22 ... 18 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.5 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>

## Line contact Connection cross sections directly pluggable

Conductor cross-section rigid	1 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross-section, rigid [AWG]	18 ... 8 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	1 mm <sup>2</sup> ... 6 mm <sup>2</sup>

## Dimensions

Width	41.5 mm
Height	45.7 mm
Depth	29.2 mm
Depth on NS 35/7,5	30.9 mm

## Material specifications

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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
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

Result	Test passed
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### Temperature-rise test

Requirement temperature-rise test	Increase in temperature $\leq 45$ K
Result	Test passed
Short-time withstand current 6 mm <sup>2</sup>	0.72 kA
Short-time withstand current 10 mm <sup>2</sup>	1.2 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
Result	Test passed
Note	When aligning several blocks, it is recommended to either place a DIN rail adapter underneath the connection point or a flange element between the blocks.  For versions with 6 or 7 connections, it is enough to place one DIN rail adapter centrally per block and place flange elements

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	after every other block.
	Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen.
	When using the DIN rail adapter PTFIX-NS35, an aligned block must not protrude by more than a half.

## Test for conductor damage and slackening

Rotation speed	10 rpm
Revolutions	135
Conductor cross-section/weight	0.5 mm <sup>2</sup> / 0.3 kg
	6 mm <sup>2</sup> / 1.4 kg
	10 mm <sup>2</sup> / 2 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):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

Specification	DIN EN 50155 (VDE 0115-200):2018-05
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)

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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
	IEC 60998-2-2

## Mounting

Mounting type	NS 35/7,5
	NS 35/15

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## Drawings

Circuit diagram



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## Classifications

### ECLASS

ECLASS-13.0	27250118
ECLASS-15.0	27250118

### 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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