

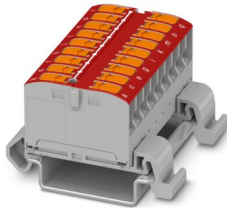
# PTVFIX 18X2,5-NS35A RD - Distribution block



1019539

<https://www.phoenixcontact.com/us/products/1019539>

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Distribution block, nom. voltage: 690 V, nominal current: 24 A, number of connections: 18, number of positions: 1, connection method: Push-in connection, Rated cross section: 2.5 mm<sup>2</sup>, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: red

## Your advantages

- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting
- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting
- 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
- Clear wiring, thanks to eleven different color variants

## Commercial data

Item number	1019539
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	BE09
Product key	BEA215
GTIN	4055626506715
Weight per piece (including packing)	33.76 g
Weight per piece (excluding packing)	33.76 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.
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### Product properties

Product type	Distributor terminal block
Number of positions	1
Number of connections	18
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

Number of connections per level	18
Nominal cross section	2.5 mm <sup>2</sup>
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)	1.5 mm <sup>2</sup>
Nominal cross section	2.5 mm <sup>2</sup>
Nominal current	24 A
Maximum load current	32 A (with 4 mm <sup>2</sup> conductor cross-section)
Maximum total current	The maximum load current of the individual terminal point must not be exceeded.
Nominal voltage	690 V

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Note	The IEC 60947-7-1 standard applies for the use of mounting accessories.
Connection in acc. with standard	IEC 60998-2-2
Nominal voltage	450 V (in accordance with IEC 60998-2-2)

## Connection cross sections directly pluggable

Conductor cross-section rigid	0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross-section, rigid [AWG]	20 ... 12 (converted acc. to IEC)
Conductor cross-section flexible (ferrule without plastic sleeve)	0.75 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>

## Dimensions

Width	46.6 mm
Height	45.7 mm
Depth	29.2 mm
Depth on NS 35/7,5	30.9 mm

## Material specifications

Color	red (RAL 3001)
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 ≤ 45 K
Result	Test passed
Short-time withstand current 2.5 mm <sup>2</sup>	0.3 kA
Result	Test passed

### Power-frequency withstand voltage

Test voltage setpoint	1.89 kV
Result	Test passed

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## 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	<p>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.</p> <p>For versions with 6 or 7 connections, it is enough to place one DIN rail adapter centrally per block and place flange elements after every other block.</p> <p>Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen.</p> <p>When using the DIN rail adapter PTFIX-NS35, an aligned block must not protrude by more than a half.</p>

### 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):2018-05
Spectrum	Long life test category 2, bogie-mounted
Frequency	f <sub>1</sub> = 5 Hz to f <sub>2</sub> = 250 Hz
ASD level	6.12 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Acceleration	3.12g

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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)
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

## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1019539>

 <b>CSA</b> Approval ID: 158887				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	300 V	20 A	26 - 12	-
C	300 V	20 A	26 - 12	-
D	600 V	5 A	26 - 12	-

 <b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	300 V	20 A	26 - 12	-
C	300 V	20 A	26 - 12	-
F	500 V	20 A	26 - 12	-
D	600 V	5 A	26 - 12	-

<b>DNV</b> Approval ID: TAE0004R4				
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 <b>EAC</b> Approval ID: KZ7500651131219505				
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## Classifications

### ECLASS

ECLASS-13.0	27250118
ECLASS-15.0	27250118

### 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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