

# PTFIX 6/12X2,5-NS35A-FE - Distribution block



3273240

<https://www.phoenixcontact.com/us/products/3273240>

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Distribution block, Block with horizontal alignment and integrated supply, nom. voltage: 690 V, nominal current: 24 A, number of connections: 13, connection method: Push-in connection, Load contact, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, Push-in connection, 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/yellow

## 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	3273240
Packing unit	1 pc
Minimum order quantity	8 pc
Sales key	BE09
Product key	BEA123
Catalog page	Page 445 (C-1-2019)
GTIN	4055626391847
Weight per piece (including packing)	33.963 g
Weight per piece (excluding packing)	9.99 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Notes

General	the blocks can be bridged with one another via the conductor shaft, for corresponding plug-in bridges, see accessories
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### 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!
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### Product properties

Product type	Distributor terminal block
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>
Rated cross section AWG	14

### Load contact

Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A3
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> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	26 ... 14 (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	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)

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Nominal voltage	690 V
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## Line contact

Stripping length	10 mm ... 12 mm
Connection in acc. with standard	IEC 60947-7-1
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 ... 10 (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>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 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)
Nominal cross section	6 mm <sup>2</sup>

## 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]	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>

## Line contact Connection cross sections directly pluggable

Conductor cross section rigid	1 mm <sup>2</sup> ... 10 mm <sup>2</sup>
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 mm
Height	45.7 mm
Depth on NS 35/7,5	30.9 mm

## Material specifications

Color	black/yellow
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

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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
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 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
Test force setpoint	5 N
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>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
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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

## 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 Elec.)
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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 60947-7-1
	IEC 60947-7-1

## Mounting

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

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3273240>

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

<b>CSA</b> Approval ID: 13631				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B				
Output	300 V	20 A	26 - 12	-
Input	300 V	50 A	20 - 8	-
Use group C				
Output	300 V	20 A	26 - 12	-
Input	300 V	50 A	20 - 8	-
Use group D				
Input	600 V	5 A	20 - 8	-

<b>IECEE CB Scheme</b> Approval ID: DE1-62701				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
	690 V	41 A	-	-

<b>EAC</b> Approval ID: RU C-DE.AI30.B.01102				
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<b>cULus Recognized</b> Approval ID: E60425				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
Use group B				
Output	300 V	20 A	26 - 12	-
Input	300 V	50 A	20 - 8	-
Use group C				
Output	300 V	20 A	26 - 12	-
Input	300 V	50 A	20 - 8	-
Use group D				
Output	600 V	5 A	26 - 12	-
Input	600 V	5 A	20 - 8	-

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**LR**

Approval ID: LR2002627TA



**BV**

Approval ID: 59146/A0 BV



**EAC**

Approval ID: RU C-DE.BL08.B.00644



**VDE Zeichengenehmigung**

Approval ID: 40047797

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	690 V	41 A	-	-



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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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