

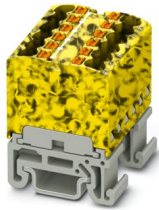
# PTFIX 12X1,5-NS15A-FE - Distribution block



3002981

<https://www.phoenixcontact.com/us/products/3002981>

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Distribution block, bridged internally, nom. voltage: 500 V, nominal current: 17.5 A, number of connections: 12, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, mounting type: NS 15, color: black/yellow

## Your advantages

- Space-saving, thanks to the compact design
- Flexible use, thanks to DIN rail and direct mounting
- Space-saving potential distribution, thanks to compact micro potential distributors
- Convenient test options, thanks to test openings at every terminal point
- Clear arrangement thanks to marking of all terminal points

## Commercial data

Item number	3002981
Packing unit	20 pc
Minimum order quantity	20 pc
Sales key	BE09
Product key	BEA114
GTIN	4055626433882
Weight per piece (including packing)	12.463 g
Weight per piece (excluding packing)	10.875 g
Customs tariff number	85369010
Country of origin	PL

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## Technical data

### Notes

Notes on operation	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.
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### Product properties

Product type	Distributor terminal block
Number of connections	12
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	0.56 W

### Connection data

Number of connections per level	12
Nominal cross section	1.5 mm <sup>2</sup>
Rated cross section AWG	14
Connection method	Push-in connection
Stripping length	8 mm ... 10 mm
Internal cylindrical gage	A1 / B1
Connection in acc. with standard	IEC 60947-7-1
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section AWG	26 ... 14 (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> ... 1.5 mm <sup>2</sup>
Flexible conductor cross-section (ferrule with plastic sleeve)	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Nominal current	17.5 A
Maximum load current	22 A
Maximum total current	26 A
Nominal voltage	500 V

### Connection cross sections directly pluggable

Conductor cross-section rigid	0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
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## Dimensions

Width	24.9 mm
Height	21.6 mm
Depth on NS 15	27.4 mm

## Material specifications

Color	multicolored (RAL -)
	black (RAL 9005)
	yellow (RAL 1018)
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))	125 °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)	27,5 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	7.3 kV
Result	Test passed

### Temperature-rise test

Requirement temperature-rise test	Increase in temperature ≤ 45 K
Result	Test passed
Short-time withstand current 1.5 mm <sup>2</sup>	0.18 kA
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

## 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/NS 15
Test force setpoint	1 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
Revolutions	135
Conductor cross-section/weight	0.14 mm <sup>2</sup> / 0.2 kg
	1.5 mm <sup>2</sup> / 0.4 kg
	2.5 mm <sup>2</sup> / 0.7 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	0.0013888888889 h

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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
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## Mounting

Mounting type	NS 15
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## Drawings

Circuit diagram



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## Classifications

### ECLASS

ECLASS-13.0

27250118

### ETIM

ETIM 9.0

EC000897

### 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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)