# PTFIX 6X2,5-NS35 VT - Distribution block

3273016

https://www.phoenixcontact.com/us/products/3273016

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Distribution block, Block with vertical alignment, nom. voltage: 690 V, nominal current: 24 A, number of connections: 6, connection method: Push-in connection, cross section: 0.14 mm$^2$ - 4 mm$^2$, mounting type: NS 35/7,5, NS 35/15, color: violet

## Your advantages

- Time-saving conductor connection, thanks to tool-free Push-in direct connection technology
- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting
- Clear wiring, thanks to eleven different color variants
- 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 | 3273016 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | BE09 |
| Product key | BEA113 |
| Catalog page | Page 441 (C-1-2019) |
| GTIN | 4055626390611 |
| Weight per piece (including packing) | 17.16 g |
| Weight per piece (excluding packing) | 17.16 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

# 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 |

### General

| | |
|---|---|
| Note | The maximum load current of a single clamping unit must not be exceeded. |

## Product properties

| | |
|---|---|
| Product type | Distributor terminal block |
| Number of connections | 6 |
| 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 | 6 |
| Nominal cross section | 2.5 mm² |
| Rated cross section AWG | 14 |
| 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 mm² ... 4 mm² |
| Cross section AWG | 26 ... 12 (converted acc. to IEC) |
| Conductor cross section flexible | 0.14 mm² ... 2.5 mm² |
| Conductor cross section, flexible [AWG] | 26 ... 14 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm² ... 2.5 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.14 mm² ... 2.5 mm² |
| Nominal current | 24 A |
| Maximum load current | 32 A |
| Maximum total current | 48 A |
| Nominal voltage | 690 V |

### Connection cross sections directly pluggable

| | |
|---|---|
| Conductor cross section rigid | 0.34 mm² ... 4 mm² |
| Conductor cross section, rigid [AWG] | 24 ... 12 (converted acc. to IEC) |

| | |
|---|---|
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm² ... 2.5 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.34 mm² ... 2.5 mm² |

## Dimensions

| | |
|---|---|
| Width | 28.6 mm |
| Height | 58.1 mm |
| Depth on NS 15 | 30.4 mm |
| Depth on NS 35/7,5 | 32.4 mm |

## Material specifications

| | |
|---|---|
| Color | violet |
| 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 ≤ 45 K |
| Result | Test passed |
| Short-time withstand current 2.5 mm² | 0.3 kA |
| Short-time withstand current 4 mm² | 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 |

## Mechanical tests

Mechanical strength

| | |
|---|---|
| Result | Test passed |

Attachment on the carrier

| | |
|---|---|
| DIN rail/fixing support | NS 35 |
| Test force setpoint | 1 N |
| 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 after every other block. |
| | 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 | 0.14 mm² / 0.2 kg |
| | 2.5 mm² / 0.7 kg |
| | 4 mm² / 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 Hz to $f_2$ = 250 Hz |
| ASD level | 6.12 (m/s²)²/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 ... 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, no longer than 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

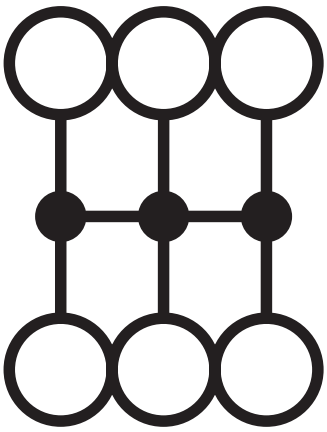
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |

## Mounting

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

## Drawings

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/3273016

**DNV**
Approval ID: TAE00002TT-04

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| | 500 V | 24 A | - | - |

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| 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 | - |

**IECEE CB Scheme**
Approval ID: DE1-62701

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| | 690 V | 24 A | - | - |

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

**LR**
Approval ID: LR2002627TA

**BV**
Approval ID: 59146/A0 BV

**VDE Zeichengenehmigung**
Approval ID: 40047797

**cULus Recognized**
Approval ID: E60425

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| 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 | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 27250118 |

### ETIM

| | |
|---|---|
| ETIM 9.0 | EC000897 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121400 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |

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% |

## Accessories

Note: Applying some accessories below might limit this product.

### FBS 2-5 - Plug-in bridge

3030161

https://www.phoenixcontact.com/us/products/3030161



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, length: 23 mm, color: red

Max. current carrying capacity: 24 A

### FBS 2-5 BU - Plug-in bridge

3036877

https://www.phoenixcontact.com/us/products/3036877



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: blue

Max. current carrying capacity: 24 A

## FBS 2-5 GY - Plug-in bridge

3038969

https://www.phoenixcontact.com/us/products/3038969



Plug-in bridge, pitch: 5.2 mm, number of positions: 2, color: gray

Max. current carrying capacity: 24 A

## MPS-MT 1-S - Test plug

1944372

https://www.phoenixcontact.com/us/products/1944372



Test plug, consisting of 1.0 mm Ø test pin and 2.0 mm Ø socket

## PTFIX 2,5-RZ - Mounting adapter

1632417

https://www.phoenixcontact.com/us/products/1632417



Securing pin adapter, for direct mounting of 2.5 $mm^2$, 4 $mm^2$, and 10 $mm^2$ FIX blocks, color: gray

## NS 35/ 7,5 PERF 2000MM - DIN rail perforated

0801733

https://www.phoenixcontact.com/us/products/0801733



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

## NS 35/ 7,5 UNPERF 2000MM - DIN rail, unperforated

0801681

https://www.phoenixcontact.com/us/products/0801681



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

## NS 35/ 7,5 WH PERF 2000MM - DIN rail perforated

1204119

https://www.phoenixcontact.com/us/products/1204119



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

## NS 35/ 7,5 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204122

https://www.phoenixcontact.com/us/products/1204122



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

## NS 35/ 7,5 AL UNPERF 2000MM - DIN rail, unperforated

0801704

https://www.phoenixcontact.com/us/products/0801704



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

## NS 35/ 7,5 ZN PERF 2000MM - DIN rail perforated

1206421

https://www.phoenixcontact.com/us/products/1206421



DIN rail perforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

## NS 35/ 7,5 ZN UNPERF 2000MM - DIN rail, unperforated

1206434

https://www.phoenixcontact.com/us/products/1206434



DIN rail, unperforated, Pack of 25 (50 m), acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

## NS 35/ 7,5 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

0801762

https://www.phoenixcontact.com/us/products/0801762



DIN rail, unperforated, Pack of 10 (20 m), acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

## NS 35/ 7,5 CAP - End cap

1206560

https://www.phoenixcontact.com/us/products/1206560

DIN rail end piece, for DIN rail NS 35/7.5



## NS 35/15 PERF 2000MM - DIN rail perforated

1201730

https://www.phoenixcontact.com/us/products/1201730



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

## NS 35/15 UNPERF 2000MM - DIN rail, unperforated

1201714

https://www.phoenixcontact.com/us/products/1201714



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

## NS 35/15 WH PERF 2000MM - DIN rail perforated

0806602

https://www.phoenixcontact.com/us/products/0806602



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: white

## NS 35/15 WH UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1204135

https://www.phoenixcontact.com/us/products/1204135



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

## NS 35/15 AL UNPERF 2000MM - DIN rail, unperforated

1201756

https://www.phoenixcontact.com/us/products/1201756



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

## NS 35/15 ZN PERF 2000MM - DIN rail perforated

1206599

https://www.phoenixcontact.com/us/products/1206599



DIN rail perforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

## NS 35/15 ZN UNPERF 2000MM - DIN rail, unperforated

1206586

https://www.phoenixcontact.com/us/products/1206586



DIN rail, unperforated, Pack of 25 (50 m), similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

## NS 35/15 CU UNPERF 2000MM-VPE 10 - DIN rail, unperforated

1201895

https://www.phoenixcontact.com/us/products/1201895



DIN rail, unperforated, Pack of 10 (20 m), similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

## NS 35/15 CAP - End cap

1206573

https://www.phoenixcontact.com/us/products/1206573

DIN rail end piece, for DIN rail NS 35/15



## PAI-4-N GY - Test adapter

3032871

https://www.phoenixcontact.com/us/products/3032871

4 mm test adapter, for terminal blocks with 5.2 mm, 6.2 mm and 8.2 mm pitch



## MPS-MT - Test plug

0201744

https://www.phoenixcontact.com/us/products/0201744



Test plug, with solder connection up to 1 $mm^2$ conductor cross section, number of positions: 1, color: gray

## MPS-IH WH - Insulating sleeve

0201663

https://www.phoenixcontact.com/us/products/0201663

Insulating sleeve, color: white



## MPS-IH RD - Insulating sleeve

0201676

https://www.phoenixcontact.com/us/products/0201676

Insulating sleeve, color: red

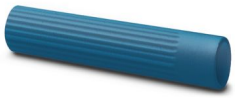


## MPS-IH BU - Insulating sleeve

0201689

https://www.phoenixcontact.com/us/products/0201689

Insulating sleeve, color: blue



## MPS-IH YE - Insulating sleeve

0201692

https://www.phoenixcontact.com/us/products/0201692

Insulating sleeve, color: yellow



## MPS-IH GN - Insulating sleeve

0201702

https://www.phoenixcontact.com/us/products/0201702

Insulating sleeve, color: green



## MPS-IH GY - Insulating sleeve

0201728

https://www.phoenixcontact.com/us/products/0201728

Insulating sleeve, color: gray



## MPS-IH BK - Insulating sleeve

0201731

https://www.phoenixcontact.com/us/products/0201731

Insulating sleeve, color: black



## ISH 2,5/0,2 - Insulating sleeve

3002843

https://www.phoenixcontact.com/us/products/3002843



Insulating sleeve, color: white

## ISH 2,5/0,5 - Insulating sleeve

3002856

https://www.phoenixcontact.com/us/products/3002856



Insulating sleeve, color: gray

## ISH 2,5/1,0 - Insulating sleeve

3002869

https://www.phoenixcontact.com/us/products/3002869



Insulating sleeve, color: black

## TML (EX3,8)R - Marker strip

0801837

https://www.phoenixcontact.com/us/products/0801837



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 3.8 mm, Number of individual labels: 12

## TML (104X3,8)R - Marker strip

0801833

https://www.phoenixcontact.com/us/products/0801833



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 104 mm, lettering field size: 104 x 3.8 mm, Number of individual labels: 2500

## TML (104X2,8)R - Marker strip

0801832

https://www.phoenixcontact.com/us/products/0801832



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 104 mm, lettering field size: 104 x 2.8 mm, Number of individual labels: 2500

## TML (EX2,8)R - Marker strip

0801836

https://www.phoenixcontact.com/us/products/0801836



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 30000 mm, lettering field size: continuous x 2.8 mm, Number of individual labels: 14

## SK 2,8 REEL P5,2 WH CUS - Marker card

8199986

https://www.phoenixcontact.com/us/products/8199986

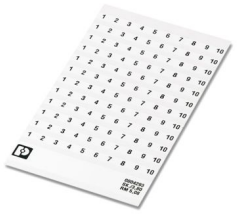


Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 5.2 mm, lettering field size: continuous x 2.8 mm

## SK 3,8 REEL P5,2 WH CUS - Marker card

8199989

https://www.phoenixcontact.com/us/products/8199989



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 5.2 mm, lettering field size: continuous x 3.8 mm

## US-TML (104X3,8) - Marker for terminal blocks

0830768

https://www.phoenixcontact.com/us/products/0830768



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 104 x 3.8 mm, Number of individual labels: 22

## US-TML (104X2,8) - Marker for terminal blocks

0830767

https://www.phoenixcontact.com/us/products/0830767



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 104 x 2.8 mm, Number of individual labels: 26

## SK U/3,8 WH:UNBEDRUCKT - Marker card

0803906

https://www.phoenixcontact.com/us/products/0803906



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

## SK U/2,8 WH:UNBEDRUCKT - Marker card

0803883

https://www.phoenixcontact.com/us/products/0803883



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

## MM-TML (EX3,8)R C1 WH/BK - Label

1092026

https://www.phoenixcontact.com/us/products/1092026



Label, Roll, white/black, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, lettering field size: continuous x 2.8 mm, Number of individual labels: 1


Phoenix Contact 2024 © - all rights reserved
https://www.phoenixcontact.com



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