# PTFIX 6/6X2,5-NS35A BK - Distribution block

3273212

https://www.phoenixcontact.com/us/products/3273212

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Distribution block, Block with horizontal alignment and integrated supply, nom. voltage: 690 V, nominal current: 24 A, number of connections: 7, connection method: Push-in connection, Rated cross section: 2.5 mm$^2$, Load contact, cross section: 0.14 mm$^2$ - 4 mm$^2$, Push-in connection, Line contact, Rated cross section: 6 mm$^2$, cross section: 0.5 mm$^2$ - 10 mm$^2$, mounting type: NS 35/7,5, NS 35/15, color: black

## 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 | 3273212 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | BE09 |
| Product key | BEA122 |
| GTIN | 4055626391687 |
| Weight per piece (including packing) | 22.65 g |
| Weight per piece (excluding packing) | 22.65 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 | 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 connections | 7 |
| 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 | 7 |
| Nominal cross section | 2.5 mm² |
| Rated cross section AWG | 14 |

### Load contact

| | |
|---|---|
| Connection method | Push-in connection |
| 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 ... 4 mm² |
| Conductor cross-section, flexible [AWG] | 26 ... 12 (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 |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² |
| Nominal cross section | 2.5 mm² |
| Nominal current | 24 A |

| | |
|---|---|
| Maximum load current | 32 A (with 4 mm² conductor cross-section) |
| Maximum total current | 57 A (The maximum load current of the individual terminal point must not be exceeded.) |
| Nominal voltage | 690 V |

Line contact

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 10 mm ... 12 mm |
| Internal cylindrical gage | A5 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross-section rigid | 0.5 mm² ... 10 mm² |
| Cross section AWG | 20 ... 8 (converted acc. to IEC) |
| Conductor cross-section flexible | 0.5 mm² ... 10 mm² |
| Conductor cross-section, flexible [AWG] | 20 ... 8 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.5 mm² ... 6 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.5 mm² ... 6 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 1.5 mm² |
| Nominal cross section | 6 mm² |
| Nominal current | 41 A |
| Maximum load current | 57 A (with 10 mm² conductor cross-section) |
| Maximum total current | 57 A (The maximum load current of the individual terminal point must not be exceeded.) |
| Nominal voltage | 690 V |

Load contact 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) | 0.5 mm² ... 2.5 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 0.34 mm² ... 2.5 mm² |

Line contact Connection cross sections directly pluggable

| | |
|---|---|
| Conductor cross-section rigid | 1 mm² ... 10 mm² |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 1 mm² ... 6 mm² |
| Flexible conductor cross-section (ferrule with plastic sleeve) | 1 mm² ... 6 mm² |

## Dimensions

| | |
|---|---|
| Width | 25.6 mm |
| Height | 45.7 mm |
| Depth on NS 35/7,5 | 30.9 mm |

## Material specifications

| | |
|---|---|
| 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

| | |
|---|---|
| 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 6 mm² | 0.72 kA |
| Short-time withstand current 10 mm² | 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 |

## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

| | |
|---|---|
| DIN rail/fixing support | NS 35 |
| Test force setpoint | 5 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 | 0.5 mm² / 0.3 kg |
| | 6 mm² / 1.4 kg |
| | 10 mm² / 2 kg |
| Result | Test passed |

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 | Long 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, 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

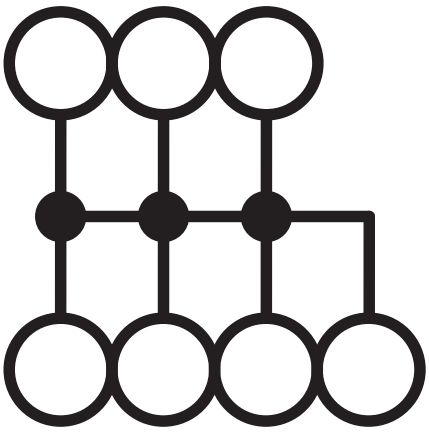
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |
| | IEC 60947-7-1 |

## 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/3273212

**DNV**
Approval ID: TAE00002TT-05

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

**CSA**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| Output | 300 V | 20 A | 26 - 12 | - |
| Input | 300 V | 50 A | 20 - 8 | - |
| C | | | | |
| Output | 300 V | 20 A | 26 - 12 | - |
| Input | 300 V | 50 A | 20 - 8 | - |
| D | | | | |
| Input | 600 V | 5 A | 20 - 8 | - |

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

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 690 V | 41 A | - | - |

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

**cULus Recognized**
Approval ID: E60425

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| B | | | | |
| Output | 300 V | 20 A | 26 - 12 | - |
| Input | 300 V | 50 A | 20 - 8 | - |
| C | | | | |
| Output | 300 V | 20 A | 26 - 12 | - |
| Input | 300 V | 50 A | 20 - 8 | - |
| D | | | | |
| Output | 600 V | 5 A | 26 - 12 | - |

| | | | | |
|---|---|---|---|---|
| Input | 600 V | 5 A | 20 - 8 | - |

**VDE Zeichengenehmigung**
Approval ID: 40047797

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 690 V | 41 A | - | - |

**EAC**
Approval ID: KZ7500651131219505

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27250118 |
| ECLASS-15.0 | 27250118 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | 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% |


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