# PTFIX 12X4-NS35A GY - Distribution block

3273680

https://www.phoenixcontact.com/us/products/3273680

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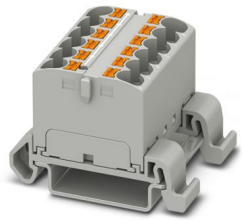


Distribution block, Block with horizontal alignment, nom. voltage: 800 V, nominal current: 32 A, number of connections: 12, connection method: Push-in connection, cross section: 0.2 $mm^2$ - 6 $mm^2$, mounting type: NS 35/7,5, NS 35/15, color: gray

## Your advantages

- Time savings of up to 80 %, thanks to ready-to-mount blocks without manual bridging
- Time-saving conductor connection, thanks to tool-free Push-in direct connection technology
- Clear wiring, thanks to eleven different color variants
- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting
- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting

## Commercial data

| | |
|---|---|
| Item number | 3273680 |
| Packing unit | 8 pc |
| Minimum order quantity | 8 pc |
| Sales key | BE09 |
| Product key | BEA114 |
| Catalog page | Page 449 (C-1-2019) |
| GTIN | 4055626646565 |
| Weight per piece (including packing) | 33.1 g |
| Weight per piece (excluding packing) | 29 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

# Technical data

## Notes

| | |
|---|---|
| General | 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 | 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 | 1.02 W |

## Connection data

| | |
|---|---|
| Number of connections per level | 12 |
| Nominal cross section | 4 mm² |
| Rated cross section AWG | 10 |
| Stripping length | 10 mm ... 12 mm |
| Internal cylindrical gage | A4 |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.2 mm² ... 6 mm² |
| Cross section AWG | 24 ... 10 (converted acc. to IEC) |
| Conductor cross section flexible | 0.2 mm² ... 4 mm² |
| Conductor cross section, flexible [AWG] | 24 ... 12 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.2 mm² ... 4 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.2 mm² ... 4 mm² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² ... 1 mm² |
| Nominal current | 32 A |
| Maximum load current | 41 A |
| Maximum total current | 63 A |
| Nominal voltage | 800 V |

Connection cross sections directly pluggable

| | |
|---|---|
| Conductor cross section rigid | 0.5 mm² ... 6 mm² |

| | |
|---|---|
| Conductor cross section, rigid [AWG] | 20 ... 10 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.75 mm² ... 4 mm² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.5 mm² ... 4 mm² |

## Dimensions

| | |
|---|---|
| Width | 36.9 mm |
| Height | 45.7 mm |
| Depth on NS 35/7,5 | 30.9 mm |

## Material specifications

| | |
|---|---|
| Color | gray |
| 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 4 mm² | 0.48 kA |
| Short-time withstand current 6 mm² | 0.72 kA |
| Result | Test passed |

### Power-frequency withstand voltage

| | |
|---|---|
| Test voltage setpoint | 2 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/NS 15 |
| 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 | 0.2 mm² / 0.2 kg |
| | 4 mm² / 0.9 kg |
| | 6 mm² / 1.4 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

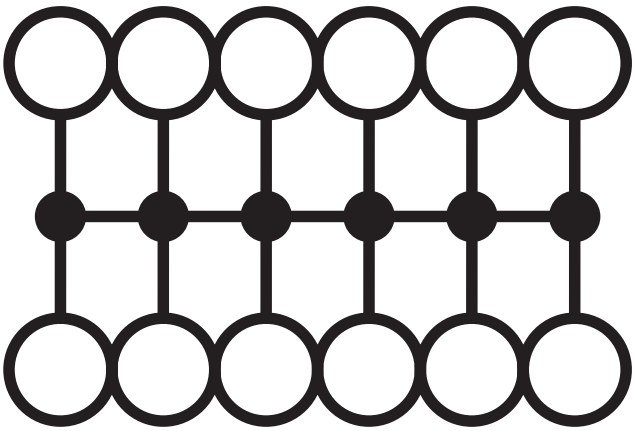
| | |
|---|---|
| Connection in acc. with standard | IEC 60947-7-1 |

## 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/3273680

**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 | | | | |
| | 600 V | 32 A | 24 - 10 | - |
| Use group C | | | | |
| | 600 V | 32 A | 24 - 10 | - |

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

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| | 800 V | 32 A | - | - 4 |

**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 | | | | |
| | 600 V | 32 A | 24 - 10 | - |
| Use group C | | | | |

| | | | | |
|---|---|---|---|---|
| | 600 V | 32 A | 24 - 10 | - |

## 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 2-6 - Plug-in bridge

3030336

https://www.phoenixcontact.com/us/products/3030336

Plug-in bridge, pitch: 6.2 mm, number of positions: 2, color: red

Max. current carrying capacity: 32 A

### FBS 2-6 BU - Plug-in bridge

3036932

https://www.phoenixcontact.com/us/products/3036932

Plug-in bridge, pitch: 6.2 mm, number of positions: 2, color: blue

Max. current carrying capacity: 32 A

## FBS 2-6 GY - Plug-in bridge

3032237

https://www.phoenixcontact.com/us/products/3032237

Plug-in bridge, pitch: 6.2 mm, number of positions: 2, color: gray

Max. current carrying capacity: 32 A

## PTFIX 2,5-RZ - Mounting adapter

1632417

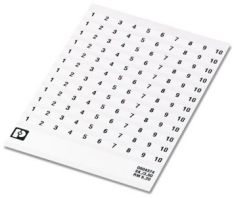
https://www.phoenixcontact.com/us/products/1632417

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

## SK 6,2/3,8:FORTL.ZAHLEN - Marker card

0804374

https://www.phoenixcontact.com/us/products/0804374

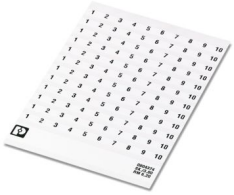


Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 6.2 mm, lettering field size: 6.2 x 3.8 mm

## SK 6,2/3,8:FORTL.ZAHLEN 1-10 - Marker for terminal blocks

0804374:0001

https://www.phoenixcontact.com/us/products/0804374:0001

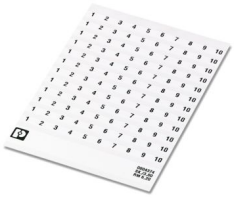


Marker card, self-adhesive, horizontally labeled with the consecutive numbers: 1 ... 10, 10-section marker strips with 12 identical decades, white, for terminal block width: 6.2 mm, mounting type: adhesive

## SK 6,2/3,8:FORTL.ZAHLEN 11-20 - Marker for terminal blocks

0804374:0011

https://www.phoenixcontact.com/us/products/0804374:0011

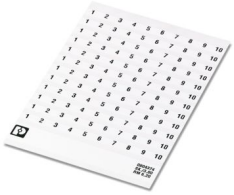


Marker card, self-adhesive, horizontally labeled with the consecutive numbers: 11 ... 20, 10-section marker strips with 12 identical decades, white, for terminal block width: 6.2 mm, mounting type: adhesive

## SK 6,2/3,8:FORTL.ZAHLEN 21-30 - Marker for terminal blocks

0804374:0021

https://www.phoenixcontact.com/us/products/0804374:0021

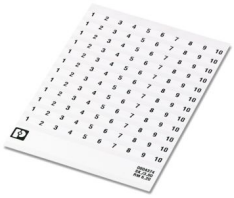


Marker card, self-adhesive, horizontally labeled with the consecutive numbers: 21 ... 30, 10-section marker strips with 12 identical decades, white, for terminal block width: 6.2 mm, mounting type: adhesive

## SK 6,2/3,8:FORTL.ZAHLEN 31-40 - Marker for terminal blocks

0804374:0031

https://www.phoenixcontact.com/us/products/0804374:0031

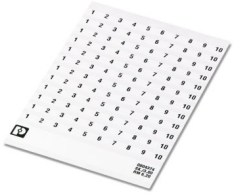


Marker card, self-adhesive, horizontally labeled with the consecutive numbers: 31 ... 40, 10-section marker strips with 12 identical decades, white, for terminal block width: 6.2 mm, mounting type: adhesive

## SK 6,2/3,8:FORTL.ZAHLEN 41-50 - Marker for terminal blocks

0804374:0041

https://www.phoenixcontact.com/us/products/0804374:0041



Marker card, self-adhesive, horizontally labeled with the consecutive numbers: 41 ... 50, 10-section marker strips with 12 identical decades, white, for terminal block width: 6.2 mm, mounting type: adhesive

## 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

## 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

## 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

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