

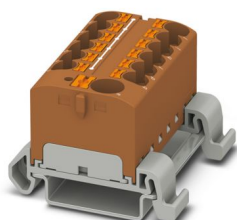
# PTFIX 10/12X4-NS35A BN - Distribution block



3273756

<https://www.phoenixcontact.com/us/products/3273756>

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Distribution block, nom. voltage: 800 V, nominal current: 32 A, number of connections: 13, connection method: Push-in connection, Rated cross section: 4 mm<sup>2</sup>, Load contact, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, Push-in connection, Line contact, Rated cross section: 10 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: brown

## 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                          | 3273756       |
| Packing unit                         | 8 pc          |
| Minimum order quantity               | 8 pc          |
| Sales key                            | BE09          |
| Product key                          | BEA123        |
| GTIN                                 | 4055626667799 |
| Weight per piece (including packing) | 43.08 g       |
| Weight per piece (excluding packing) | 41.662 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

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## Technical data

### Notes

#### 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 | 13                         |
| 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

|                                 |                   |
|---------------------------------|-------------------|
| Service Entrance                | yes               |
| Number of connections per level | 13                |
| Nominal cross section           | 4 mm <sup>2</sup> |
| Rated cross section AWG         | 10                |

#### Load contact

|                                                                                           |                                                                                        |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Connection method                                                                         | Push-in connection                                                                     |
| 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 mm <sup>2</sup> ... 6 mm <sup>2</sup>                                              |
| Cross section AWG                                                                         | 24 ... 10 (converted acc. to IEC)                                                      |
| Conductor cross-section flexible                                                          | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>                                              |
| Conductor cross-section, flexible [AWG]                                                   | 24 ... 10 (converted acc. to IEC)                                                      |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>                                              |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.2 mm <sup>2</sup> ... 4 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 mm <sup>2</sup>                                              |
| Nominal current                                                                           | 32 A                                                                                   |
| Maximum load current                                                                      | 41 A (with 6 mm <sup>2</sup> conductor connection)                                     |
| Maximum total current                                                                     | 63 A (The maximum load current of the individual terminal point must not be exceeded.) |

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|                       |                   |
|-----------------------|-------------------|
| Nominal voltage       | 800 V             |
| Nominal cross section | 4 mm <sup>2</sup> |

## Line contact

|                                                                                           |                                                                                        |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Connection method                                                                         | Push-in connection                                                                     |
| Stripping length                                                                          | 12 mm ... 14 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                                                                         | 24 ... 10 (converted acc. to IEC)                                                      |
| Conductor cross-section flexible                                                          | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                             |
| Conductor cross-section, flexible [AWG]                                                   | 24 ... 10 (converted acc. to IEC)                                                      |
| Conductor cross-section flexible (ferrule without plastic sleeve)                         | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                             |
| Flexible conductor cross-section (ferrule with plastic sleeve)                            | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                             |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.75 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                           |
| Nominal current                                                                           | 57 A                                                                                   |
| Maximum load current                                                                      | 57 A (with 10 mm <sup>2</sup> conductor cross-section)                                 |
| Maximum total current                                                                     | 63 A (The maximum load current of the individual terminal point must not be exceeded.) |
| Nominal voltage                                                                           | 800 V                                                                                  |
| Nominal cross section                                                                     | 10 mm <sup>2</sup>                                                                     |

## Load contact Connection cross sections directly pluggable

|                                                                   |                                            |
|-------------------------------------------------------------------|--------------------------------------------|
| Conductor cross-section rigid                                     | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross-section, rigid [AWG]                              | 20 ... 10 (converted acc. to IEC)          |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.75 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 0.5 mm <sup>2</sup> ... 4 mm <sup>2</sup>  |

## Line contact Connection cross sections directly pluggable

|                                                                   |                                            |
|-------------------------------------------------------------------|--------------------------------------------|
| Conductor cross-section rigid                                     | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 2.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 46.3 mm |
| Height             | 45.7 mm |
| Depth on NS 35/7,5 | 30.9 mm |

## Material specifications

|                                                                  |                  |
|------------------------------------------------------------------|------------------|
| Color                                                            | brown (RAL 8028) |
| 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      |

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|                                                         |             |
|---------------------------------------------------------|-------------|
| 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 $\leq 45$ K |
| Result                                          | Test passed                         |
| Short-time withstand current 10 mm <sup>2</sup> | 1.2 kA                              |
| Short-time withstand current 4 mm <sup>2</sup>  | 1.2 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

|        |                                                                                                                                                            |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.    |
|        | Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen.                                    |
|        | 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 |
|----------------|--------|

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|                                |                              |
|--------------------------------|------------------------------|
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 0.5 mm <sup>2</sup> / 0.3 kg |
|                                | 10 mm <sup>2</sup> / 2 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 | 5 h                                            |
| 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 |
|                                  | IEC 60947-7-1 |

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## Mounting

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

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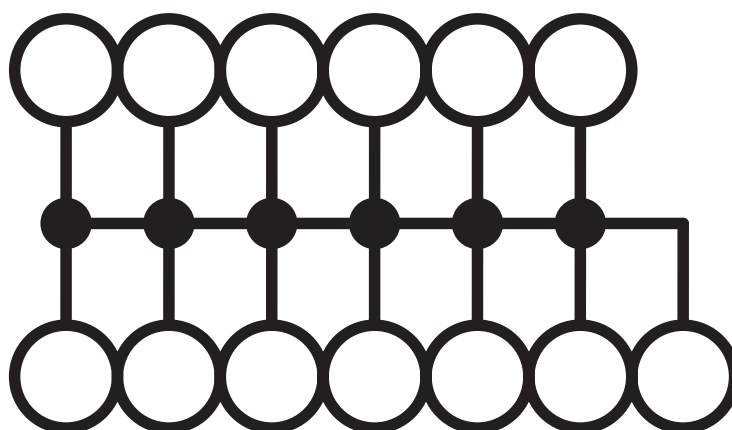
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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3273756>



**CSA**  
Approval ID: 13631

|              |                                                  |                                |                   |                               |
|--------------|--------------------------------------------------|--------------------------------|-------------------|-------------------------------|
| CB<br>scheme | <b>IECEE CB Scheme</b><br>Approval ID: DE1-62701 |                                |                   |                               |
|              | Nominal voltage U <sub>N</sub>                   | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
|              | keine                                            |                                |                   |                               |
|              | 800 V                                            | 57 A                           | -                 | - 10                          |



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



**VDE Zeichengenehmigung**  
Approval ID: 40047797



**cULus Recognized**  
Approval ID: E60425



**EAC**  
Approval ID: KZ7500651131219505



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## Classifications

### ECLASS

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