

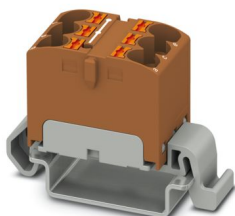
# PTFIX 6X4-NS35A BN - Distribution block



3273668

<https://www.phoenixcontact.com/nl/products/3273668>

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

## Your advantages

- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting
- 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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3273668       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | BEA113        |
| Product key                          | BEA113        |
| GTIN                                 | 4055626646497 |
| Weight per piece (including packing) | 5 g           |
| Weight per piece (excluding packing) | 5 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 |
|--------------------|------------------------------------------------------------------------------------------------------------------------|

### General

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

### Product properties

|                       |   |
|-----------------------|---|
| Number of connections | 6 |
| 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                                                           | 6                                         |
| Nominal cross section                                                                     | 4 mm <sup>2</sup>                         |
| Rated cross section AWG                                                                   | 10                                        |
| 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                                      |
| Maximum total current                                                                     | 63 A                                      |
| Nominal voltage                                                                           | 800 V                                     |

### Connection cross sections directly pluggable

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Conductor cross-section rigid | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
|-------------------------------|-------------------------------------------|

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|                                                                   |                                            |
|-------------------------------------------------------------------|--------------------------------------------|
| 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>  |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 18.5 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           |
| 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 mm <sup>2</sup> | 0.48 kA                        |
| Short-time withstand current 6 mm <sup>2</sup> | 0.72 kA                        |
| Result                                         | Test passed                    |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 2 kV        |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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|                 |    |
|-----------------|----|
| 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                    | <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 | 0.2 mm <sup>2</sup> / 0.2 kg |
|                                | 4 mm <sup>2</sup> / 0.9 kg   |
|                                | 6 mm <sup>2</sup> / 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               | 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

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

## Mounting

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

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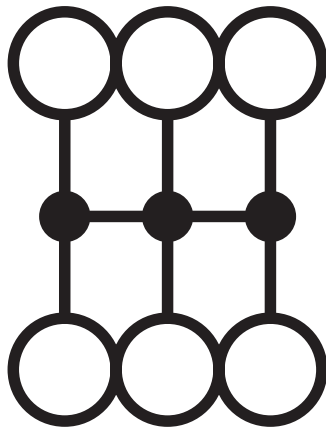
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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/nl/products/3273668>

| <b>DNV</b><br>Approval ID: TAE00002TT-05 |                       |                       |                   |                             |
|------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                          | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                    |                       |                       |                   |                             |
|                                          | 500 V                 | 24 A                  | -                 | -                           |

| <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|----------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                |                       |                       |                   |                             |
|                                  | 600 V                 | 32 A                  | 24 - 10           | -                           |
| C                                |                       |                       |                   |                             |
|                                  | 600 V                 | 32 A                  | 24 - 10           | -                           |

| <b>CB</b><br><b>IECEE CB Scheme</b><br>Approval ID: DE1-62701 |                       |                       |                   |                             |
|---------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                               | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                         |                       |                       |                   |                             |
|                                                               | 800 V                 | 32 A                  | -                 | - 4                         |

| <b>EAC</b><br><b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00644 |  |  |  |  |
|---------------------------------------------------------------|--|--|--|--|
|---------------------------------------------------------------|--|--|--|--|

| <b>VDE</b><br><b>VDE Zeichengenehmigung</b><br>Approval ID: 40047797 |  |  |  |  |
|----------------------------------------------------------------------|--|--|--|--|
|----------------------------------------------------------------------|--|--|--|--|

| <b>EAC</b><br><b>EAC</b><br>Approval ID: KZ7500651131219505 |  |  |  |  |
|-------------------------------------------------------------|--|--|--|--|
|-------------------------------------------------------------|--|--|--|--|

| <b>cULus</b><br><b>cULus Recognized</b><br>Approval ID: E60425 |                       |                       |                   |                             |
|----------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                              |                       |                       |                   |                             |
|                                                                | 600 V                 | 32 A                  | 24 - 10           | -                           |
| C                                                              |                       |                       |                   |                             |
|                                                                | 600 V                 | 32 A                  | 24 - 10           | -                           |

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## Classifications

### ECLASS

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

### ETIM

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