

# PTFIX 6X10/S-NS35A BU - Distribution block



1082480

<https://www.phoenixcontact.com/us/products/1082480>

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Distribution block, Block with horizontal alignment, nom. voltage: 800 V, nominal current: 57 A, number of connections: 6, connection method: Push-in connection, Rated cross section: 10 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 16 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: blue

## 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                          | 1082480       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | BE09          |
| Product key                          | BEA113        |
| GTIN                                 | 4055626815800 |
| Weight per piece (including packing) | 29.16 g       |
| Weight per piece (excluding packing) | 28.5 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 | 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.                                                     |

### 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 | 1.82 W |

### Connection data

|                                                                   |                                                                                        |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Number of connections per level                                   | 6                                                                                      |
| Nominal cross section                                             | 10 mm <sup>2</sup>                                                                     |
| 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> ... 16 mm <sup>2</sup>                                             |
| Cross section AWG                                                 | 20 ... 6 (converted acc. to IEC)                                                       |
| Conductor cross-section flexible                                  | 0.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>                                             |
| Conductor cross-section, flexible [AWG]                           | 20 ... 6 (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> ... 6 mm <sup>2</sup>                                              |
| Nominal current                                                   | 57 A                                                                                   |
| Maximum load current                                              | 76 A (with a 16 mm <sup>2</sup> conductor cross-section, rigid)                        |
| Maximum total current                                             | 90 A (The maximum load current of the individual terminal point must not be exceeded.) |
| Nominal voltage                                                   | 800 V                                                                                  |

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|                       |                    |
|-----------------------|--------------------|
| Nominal cross section | 10 mm <sup>2</sup> |
|-----------------------|--------------------|

Connection cross sections directly pluggable

|                                                                   |                                          |
|-------------------------------------------------------------------|------------------------------------------|
| Conductor cross-section rigid                                     | 1 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 1 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 37 mm   |
| Height             | 45.7 mm |
| Depth              | 25.1 mm |
| Depth on NS 35/7,5 | 34.2 mm |

## Material specifications

|                                                                         |                 |
|-------------------------------------------------------------------------|-----------------|
| Color                                                                   | blue (RAL 5015) |
| 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

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

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## Mechanical strength

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

## Attachment on the carrier

|                         |                                                                                                                                                                                                                                                                           |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DIN rail/fixing support | NS 35                                                                                                                                                                                                                                                                     |
| Result                  | Test passed                                                                                                                                                                                                                                                               |
| Note                    | <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 | 0.5 mm <sup>2</sup> / 0.3 kg |
|                                | 10 mm <sup>2</sup> / 2 kg    |
|                                | 16 mm <sup>2</sup> / 2.9 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):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

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

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## 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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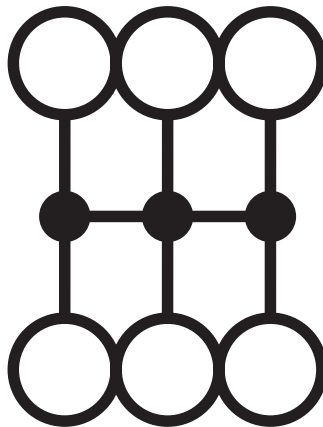
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## Drawings

Circuit diagram



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## Approvals

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|  <b>CSA</b><br>Approval ID: 158887 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                     | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                   | 600 V                 | 60 A                  | 20 - 6            | -                           |
| C                                                                                                                   | 600 V                 | 60 A                  | 20 - 6            | -                           |
| D                                                                                                                   | 600 V                 | 5 A                   | 20 - 6            | -                           |

|  <b>IECEE CB Scheme</b><br>Approval ID: DE1-62701_M1 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                 | 800 V                 | 57 A                  | -                 | - 10                        |

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40047797 |                       |                       |                   |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                            | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                      | 800 V                 | 57 A                  | -                 | 0.5 - 10                    |

|  <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                 | 60 A                  | 20 - 6            | -                           |
| C                                                                                                                                  | 600 V                 | 60 A                  | 20 - 6            | -                           |
| D                                                                                                                                  | 600 V                 | 5 A                   | 20 - 6            | -                           |

| <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                  | -                 | -                           |

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**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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