

# PTFIX 4/6X1,5 GY - Distribution block



1047466  
<https://www.phoenixcontact.com/us/products/1047466>

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Distribution block, Basic terminal block with supply, nom. voltage: 450 V, nominal current: 17.5 A, number of connections: 7, connection method: Push-in connection, Load contact, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, Line contact, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting type: for snapping onto a DIN rail adapter, Direct mounting with flange, Free-hanging, color: gray

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1047466       |
| Packing unit                         | 20 pc         |
| Minimum order quantity               | 20 pc         |
| Sales key                            | BE09          |
| Product key                          | BEA122        |
| GTIN                                 | 4055626665719 |
| Weight per piece (including packing) | 8.665 g       |
| Weight per piece (excluding packing) | 8.68 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! |
|      | The maximum load current of a single clamping unit must not be exceeded.                                                                                 |

### Product properties

|                       |                            |
|-----------------------|----------------------------|
| Product type          | Distributor terminal block |
| Number of connections | 7                          |
| Number of rows        | 1                          |

#### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Electrical properties

|                                                 |        |
|-------------------------------------------------|--------|
| Rated surge voltage                             | 6 kV   |
| Maximum power dissipation for nominal condition | 0.56 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Service Entrance                | yes                 |
| Number of connections per level | 7                   |
| Nominal cross section           | 1.5 mm <sup>2</sup> |
| 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 60998-2-2                                             |
| Conductor cross-section rigid                                     | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>              |
| Cross section AWG                                                 | 26 ... 14 (converted acc. to IEC)                         |
| Conductor cross-section flexible                                  | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>              |
| Conductor cross-section, flexible [AWG]                           | 26 ... 14 (converted acc. to IEC)                         |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>              |
| Nominal current                                                   | 17.5 A                                                    |
| Maximum load current                                              | 22 A (with a 2.5 mm <sup>2</sup> conductor cross-section) |
| Maximum total current                                             | 32 A                                                      |
| Nominal voltage                                                   | 450 V                                                     |

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## Line contact

|                                                                   |                                                    |
|-------------------------------------------------------------------|----------------------------------------------------|
| Stripping length                                                  | 10 mm ... 12 mm                                    |
| Connection in acc. with standard                                  | IEC 60998-2-2                                      |
| 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>          |
| Nominal current                                                   | 41 A                                               |
| Maximum load current                                              | 41 A (with 6 mm <sup>2</sup> conductor connection) |
| Maximum total current                                             | 41 A                                               |
| Nominal cross section                                             | 4 mm <sup>2</sup>                                  |

## Load contact Connection cross sections directly pluggable

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Conductor cross-section rigid                                     | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 0.34 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |

## Line contact Connection cross sections directly pluggable

|                                                                   |                                            |
|-------------------------------------------------------------------|--------------------------------------------|
| Conductor cross-section rigid                                     | 0.34 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Conductor cross-section, rigid [AWG]                              | 24 ... 12 (converted acc. to IEC)          |
| Conductor cross-section flexible                                  | 0.34 mm <sup>2</sup> ... 4 mm <sup>2</sup> |
| 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>  |

## Dimensions

|        |         |
|--------|---------|
| Width  | 19 mm   |
| Height | 21.6 mm |
| Depth  | 17.7 mm |

## Material specifications

|                                                                  |                 |
|------------------------------------------------------------------|-----------------|
| Color                                                            | gray (RAL 7042) |
| 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          |

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## Mechanical properties

### Mechanical data

|                 |    |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

## Mechanical tests

### Attachment on the carrier

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DIN rail/fixing support | NS 35/NS 15                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 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> |

## Environmental and real-life conditions

### 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              | $6.12 \text{ (m/s}^2\text{)}^2\text{/Hz}$      |
| 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.) |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------|

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|                                          |                                                                           |
|------------------------------------------|---------------------------------------------------------------------------|
| 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 60998-2-2 |
|                                  | IEC 60998-2-2 |

## Mounting

|               |                                      |
|---------------|--------------------------------------|
| Mounting type | for snapping onto a DIN rail adapter |
|               | Direct mounting with flange          |
|               | Free-hanging                         |

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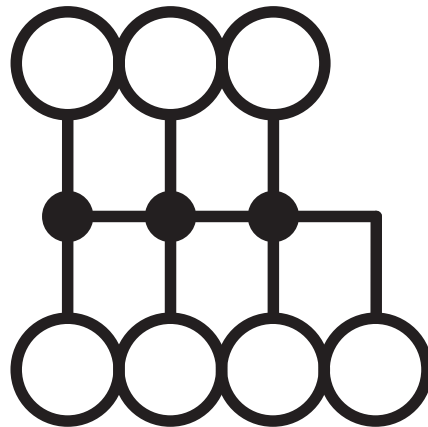
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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1047466>

| <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                                |                       |                       |                   |                             |
| Output                           | 300 V                 | 20 A                  | 26 - 12           | -                           |
| Input                            | 300 V                 | 30 A                  | 24 - 10           | -                           |
| C                                |                       |                       |                   |                             |
| Output                           | 150 V                 | 20 A                  | 26 - 12           | -                           |
| Input                            | 150 V                 | 30 A                  | 24 - 10           | -                           |

| <b>IECEE CB Scheme</b><br>Approval ID: DE1-63084 |                       |                       |                   |                             |
|--------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                            |                       |                       |                   |                             |
|                                                  | 450 V                 | 32 A                  | -                 | - 4                         |

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

| <b>VDE Zeichengenehmigung</b><br>Approval ID: 40047798 |  |  |  |  |
|--------------------------------------------------------|--|--|--|--|
|--------------------------------------------------------|--|--|--|--|

| <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                                              |                       |                       |                   |                             |
| Output                                         | 300 V                 | 20 A                  | 26 - 12           | -                           |
| Input                                          | 300 V                 | 30 A                  | 24 - 10           | -                           |
| C                                              |                       |                       |                   |                             |
| Output                                         | 150 V                 | 20 A                  | 26 - 12           | -                           |
| Input                                          | 150 V                 | 30 A                  | 24 - 10           | -                           |

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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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