

# PTFIX 18X4-G BK - Distribution block



3273980  
<https://www.phoenixcontact.com/us/products/3273980>

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Distribution block, bridged internally, nom. voltage: 450 V, nominal current: 32 A, number of connections: 18, connection method: Push-in connection, cross section: 0.2 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting type: adhesive, color: black

## Your advantages

- Clear arrangement thanks to marking of all terminal points
- Convenient test options, thanks to test openings at every terminal point
- Flexible use, thanks to DIN rail and direct mounting
- Space-saving, thanks to the compact design
- Space-saving potential distribution, thanks to compact micro potential distributors

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 3273980             |
| Packing unit                         | 8 pc                |
| Minimum order quantity               | 8 pc                |
| Sales key                            | BE09                |
| Product key                          | BEA115              |
| Catalog page                         | Page 448 (C-1-2019) |
| GTIN                                 | 4055626647357       |
| Weight per piece (including packing) | 22.22 g             |
| Weight per piece (excluding packing) | 22.22 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

|                       |                            |
|-----------------------|----------------------------|
| Product type          | Distributor terminal block |
| Number of connections | 18                         |
| Number of rows        | 1                          |
| Potentials            | 1                          |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 01 |
|------------------|----|

### 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                                                           | 18                                        |
| Nominal cross section                                                                     | 4 mm <sup>2</sup>                         |
| Rated cross section AWG                                                                   | 12                                        |
| Stripping length                                                                          | 10 mm ... 12 mm                           |
| Internal cylindrical gage                                                                 | A4                                        |
| 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> ... 4 mm <sup>2</sup> |
| Conductor cross section, flexible [AWG]                                                   | 24 ... 12 (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                                                                           | 450 V                                     |

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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>  |

## Dimensions

|        |         |
|--------|---------|
| Width  | 55.4 mm |
| Height | 28.6 mm |
| Depth  | 22.7 mm |

## Material specifications

|                                                                         |                  |
|-------------------------------------------------------------------------|------------------|
| Color                                                                   | black (RAL 9005) |
| 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           |

## Mechanical properties

Mechanical data

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

## Mechanical tests

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.    |
|        | When using the DIN rail adapter PTFIX-NS35, an aligned block must not protrude by more than a half.                                                        |

## 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               | Service 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)          | -35 °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 60998-2-2 |
|----------------------------------|---------------|

## Mounting

|               |          |
|---------------|----------|
| Mounting type | adhesive |
|---------------|----------|

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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/3273980>

| DNV<br>Approval ID: TAE00002TT-04 |                       |                       |                   |                             |
|-----------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                   | 500 V                 | 24 A                  | -                 | -                           |

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

| CB<br>IECEE CB Scheme<br>Approval ID: DE1-63087 |                       |                       |                   |                             |
|-------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                 | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                 | 450 V                 | 32 A                  | -                 | - 4                         |

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

| LR<br>Approval ID: LR2002627TA |  |  |  |  |
|--------------------------------|--|--|--|--|
|--------------------------------|--|--|--|--|

| BV<br>Approval ID: 59146/A0 BV |  |  |  |  |
|--------------------------------|--|--|--|--|
|--------------------------------|--|--|--|--|

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

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

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 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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