

# PTFIX 6X1,5 BK - Distribution block



3002781

<https://www.phoenixcontact.com/us/products/3002781>

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Distribution block, bridged internally, nom. voltage: 450 V, nominal current: 17.5 A, number of connections: 6, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, mounting type: for snapping onto a DIN rail adapter, Direct mounting with flange, Free-hanging, 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 direct mounting with flange covers from accessories
- Space-saving, thanks to the compact design
- Space-saving potential distribution, thanks to compact micro potential distributors

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 3002781             |
| Packing unit                         | 20 pc               |
| Minimum order quantity               | 20 pc               |
| Sales key                            | BE09                |
| Product key                          | BEA113              |
| Catalog page                         | Page 429 (C-1-2019) |
| GTIN                                 | 4055626432618       |
| Weight per piece (including packing) | 5.627 g             |
| Weight per piece (excluding packing) | 5.52 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 |
|--------------------|------------------------------------------------------------------------------------------------------------------------|

### 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                             | 6 kV   |
| Maximum power dissipation for nominal condition | 0.56 W |

### Connection data

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Number of connections per level                                   | 6                                            |
| Nominal cross section                                             | 1.5 mm <sup>2</sup>                          |
| Rated cross section AWG                                           | 14                                           |
| Stripping length                                                  | 8 mm ... 10 mm                               |
| Internal cylindrical gage                                         | A1 / B1                                      |
| 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> ... 1.5 mm <sup>2</sup> |
| Conductor cross section, flexible [AWG]                           | 26 ... 16 (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                                         |
| Maximum total current                                             | 26 A                                         |
| Nominal voltage                                                   | 450 V                                        |

### Connection cross sections directly pluggable

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Conductor cross section rigid                                     | 0.34 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section, rigid [AWG]                              | 26 ... 14 (converted acc. to IEC)            |
| 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> |

### Dimensions

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|        |         |
|--------|---------|
| Width  | 12.5 mm |
| Height | 21.6 mm |
| Depth  | 17.7 mm |

## Material specifications

|                                                                         |             |
|-------------------------------------------------------------------------|-------------|
| Color                                                                   | black       |
| 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

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

### Ambient conditions

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

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## Drawings

Circuit diagram



# PTFIX 6X1,5 BK - Distribution block



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/3002781>

| 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               |                       |                       |                   |                             |
|                           | 300 V                 | 20 A                  | 26 - 12           | -                           |
| Use group C               |                       |                       |                   |                             |
|                           | 150 V                 | 20 A                  | 26 - 12           | -                           |
| Use group D               |                       |                       |                   |                             |
|                           | 300 V                 | 10 A                  | 26 - 12           | -                           |

| CB<br>IECEE CB Scheme<br>Approval ID: DE1-63083 |                       |                       |                   |                             |
|-------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                 | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|                                                 | 450 V                 | 17.5 A                | -                 | - 1.5                       |

| 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                             |                       |                       |                   |                             |

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|             |       |      |         |   |
|-------------|-------|------|---------|---|
|             | 300 V | 20 A | 26 - 12 | - |
| Use group C |       |      |         |   |
|             | 150 V | 20 A | 26 - 12 | - |
| Use group F |       |      |         |   |
|             | 500 V | 20 A | 26 - 12 | - |
| Use group D |       |      |         |   |
|             | 300 V | 10 A | 26 - 12 | - |

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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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## Accessories



Note: Applying some accessories below might limit this product.

### FBS 2-4 - Plug-in bridge

3030116

<https://www.phoenixcontact.com/us/products/3030116>



Plug-in bridge, pitch: 4.2 mm, number of positions: 2, color: red



Max. current carrying capacity: 17.5 A

### FBS 2-4 GY - Plug-in bridge

3030118

<https://www.phoenixcontact.com/us/products/3030118>



Plug-in bridge, pitch: 4.2 mm, number of positions: 2, color: gray



Max. current carrying capacity: 17.5 A

## PTFIX 6X1,5 BK - Distribution block

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<https://www.phoenixcontact.com/us/products/3002781>



## FBS 2-4 BU - Plug-in bridge

3030117

<https://www.phoenixcontact.com/us/products/3030117>



Plug-in bridge, pitch: 4.2 mm, number of positions: 2, color: blue

 Max. current carrying capacity: 17.5 A

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## PTFIX 1,5-F - Flange

1049503

<https://www.phoenixcontact.com/us/products/1049503>



Flange, with screw-on fixing, depth: 17.7 mm, width: 7.7 mm, height: 21.6 mm, color: gray, mounting type: Screw mounting

## PTFIX 6X1,5 BK - Distribution block

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<https://www.phoenixcontact.com/us/products/3002781>



## PTFIX 1,5-NS15A - DIN rail adapter

1049500

<https://www.phoenixcontact.com/us/products/1049500>

DIN rail adapter, depth: 10.85 mm, width: 8 mm, height: 21.6 mm



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## PTFIX 1,5-NS35 - DIN rail adapter

1049497

<https://www.phoenixcontact.com/us/products/1049497>

DIN rail adapter, depth: 11 mm, width: 21.6 mm, height: 58.1 mm



## PTFIX 6X1,5 BK - Distribution block

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## PTFIX 1,5-NS35AD - DIN rail adapter

1049498

<https://www.phoenixcontact.com/us/products/1049498>

DIN rail adapter, for NS 35 for accommodating two rows of PTFIX 1,5 distribution blocks, depth: 10.9 mm, width: 8 mm, height: 44.4 mm



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## PTFIX 1,5-RZF - Mounting adapter

1050613

<https://www.phoenixcontact.com/us/products/1050613>

Adapter for direct mounting



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<https://www.phoenixcontact.com/us/products/3002781>



## PTFIX 1,5-RZ - Mounting adapter

1632415

<https://www.phoenixcontact.com/us/products/1632415>

Securing pin adapter, for direct mounting of 1.5 mm<sup>2</sup> FIX blocks, color: gray



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## ISH 1,5/0,2 - Insulating sleeve

3206131

<https://www.phoenixcontact.com/us/products/3206131>

Insulating sleeve, color: white



## PTFIX 6X1,5 BK - Distribution block

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<https://www.phoenixcontact.com/us/products/3002781>



## ISH 1,5/0,5 - Insulating sleeve

3031034

<https://www.phoenixcontact.com/us/products/3031034>

Insulating sleeve, color: gray



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## SK 3,8 REEL P4,15 WH CUS - Marker card

0825990

<https://www.phoenixcontact.com/us/products/0825990>



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 4.15 mm, lettering field size: continuous x 3.8 mm

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<https://www.phoenixcontact.com/us/products/3002781>

## TML (EX3,8)R - Marker strip

0801837

<https://www.phoenixcontact.com/us/products/0801837>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 3.8 mm, Number of individual labels: 12

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## TML (104X3,8)R - Marker strip

0801833

<https://www.phoenixcontact.com/us/products/0801833>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 104 mm, lettering field size: 104 x 3.8 mm, Number of individual labels: 2500

## PTFIX 6X1,5 BK - Distribution block

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### TML (104X2,8)R - Marker strip

0801832

<https://www.phoenixcontact.com/us/products/0801832>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 104 mm, lettering field size: 104 x 2.8 mm, Number of individual labels: 2500

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### TML (EX2,8)R - Marker strip

0801836

<https://www.phoenixcontact.com/us/products/0801836>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 30000 mm, lettering field size: continuous x 2.8 mm, Number of individual labels: 14

## PTFIX 6X1,5 BK - Distribution block

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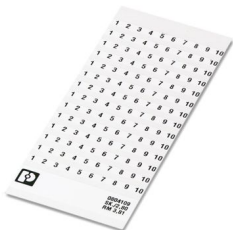
<https://www.phoenixcontact.com/us/products/3002781>



## SK 2,8 REEL P4,15 WH CUS - Marker card

8199987

<https://www.phoenixcontact.com/us/products/8199987>



Marker card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 4.15 mm, lettering field size: continuous x 2.8 mm

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## US-TML (104X3,8) - Marker for terminal blocks

0830768

<https://www.phoenixcontact.com/us/products/0830768>



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 104 x 3.8 mm, Number of individual labels: 22

## PTFIX 6X1,5 BK - Distribution block

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## US-TML (104X2,8) - Marker for terminal blocks

0830767

<https://www.phoenixcontact.com/us/products/0830767>



Marker for terminal blocks, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 104 x 2.8 mm, Number of individual labels: 26

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## SK U/3,8 WH:UNBEDRUCKT - Marker card

0803906

<https://www.phoenixcontact.com/us/products/0803906>



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

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## SK U/2,8 WH:UNBEDRUCKT - Marker card

0803883

<https://www.phoenixcontact.com/us/products/0803883>



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

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## MM-TML (EX3,8)R C1 WH/BK - Label

1092026

<https://www.phoenixcontact.com/us/products/1092026>



Label, Roll, white/black, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, lettering field size: continuous x 2.8 mm, Number of individual labels: 1

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## MPS-MT 1-S4-B RD - Accessories

1982800

<https://www.phoenixcontact.com/us/products/1982800>

Test plug terminal block



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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)