

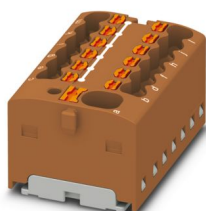
# PTFIX 4/12X1,5 BN - Distribution block



1046964

<https://www.phoenixcontact.com/it/products/1046964>

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Distribution block, Basic terminal block with supply, nom. voltage: 450 V, nominal current: 17.5 A, number of connections: 13, Load contact, cross section: 0.14 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, Push-in connection, 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: brown

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1046964             |
| Packing unit                         | 20 pc               |
| Minimum order quantity               | 20 pc               |
| Sales key                            | BEA                 |
| Product key                          | BEA123              |
| Catalog page                         | Page 435 (C-1-2019) |
| GTIN                                 | 4055626668895       |
| Weight per piece (including packing) | 13.37 g             |
| Weight per piece (excluding packing) | 12.22 g             |
| Customs tariff number                | 85369010            |
| Country of origin                    | PL                  |

# PTFIX 4/12X1,5 BN - Distribution block



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## Technical data

### Notes

#### General

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

### Product properties

|                       |                            |
|-----------------------|----------------------------|
| Product type          | Distributor terminal block |
| Number of connections | 13                         |
| 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 | 13                  |
| Nominal cross section           | 1.5 mm <sup>2</sup> |
| Rated cross section AWG         | 14                  |

#### Load contact

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

#### Line contact

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|                                                                   |                                                    |
|-------------------------------------------------------------------|----------------------------------------------------|
| 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  | 31.4 mm |
| Height | 21.6 mm |
| Depth  | 17.7 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)) | 125 °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)                        | 27,5 MJ/kg       |
| Surface flammability NFPA 130 (ASTM E 162)                              | passed           |

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

## 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)          | -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 60998-2-2 |
|                                  | IEC 60998-2-2 |

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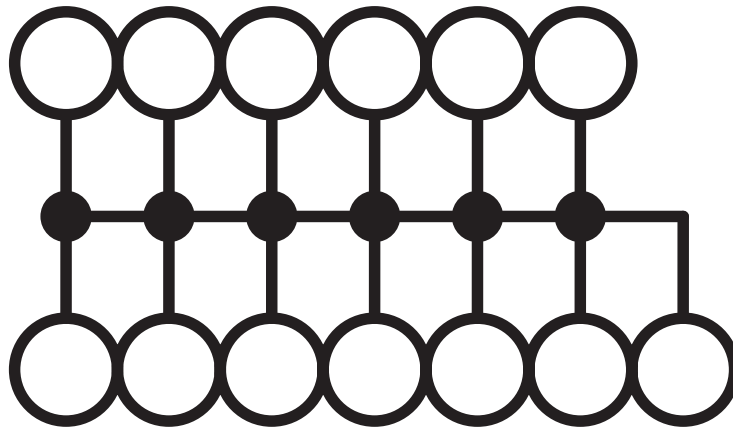
<https://www.phoenixcontact.com/it/products/1046964>

## Mounting

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

## Drawings

Circuit diagram



# PTFIX 4/12X1,5 BN - Distribution block



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<https://www.phoenixcontact.com/it/products/1046964>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/it/products/1046964>

| DNV<br>Approval ID: TAE00002TT-05 |                       |                       |                   |                             |
|-----------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                   | 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               |                       |                       |                   |                             |
| Output                    | 300 V                 | 20 A                  | 26 - 12           | -                           |
| Input                     | 300 V                 | 30 A                  | 24 - 10           | -                           |
| Use group C               |                       |                       |                   |                             |
| Output                    | 150 V                 | 20 A                  | 26 - 12           | -                           |
| Input                     | 150 V                 | 30 A                  | 24 - 10           | -                           |

| CB<br>IECEE CB Scheme<br>Approval ID: DE1-63084 |                       |                       |                   |                             |
|-------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                 | 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                             |                       |                       |                   |                             |

# PTFIX 4/12X1,5 BN - Distribution block



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<https://www.phoenixcontact.com/it/products/1046964>

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



EAC

Approval ID: EACKZ 08593



# PTFIX 4/12X1,5 BN - Distribution block



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<https://www.phoenixcontact.com/it/products/1046964>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 27250118 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000897 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

# PTFIX 4/12X1,5 BN - Distribution block



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<https://www.phoenixcontact.com/it/products/1046964>

## 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%               |

# PTFIX 4/12X1,5 BN - Distribution block



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<https://www.phoenixcontact.com/it/products/1046964>

## Accessories

**i** Note: Applying some accessories below might limit this product.

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

3030116

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



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

**i** Max. current carrying capacity: 17.5 A

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

3030118

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



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

**i** Max. current carrying capacity: 17.5 A

## PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>



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

3030117

<https://www.phoenixcontact.com/it/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/it/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 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>

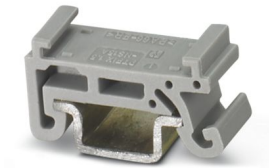


## PTFIX 1,5-NS15A - DIN rail adapter

1049500

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

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



## PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>



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

1049498

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



Adapter for direct mounting

## PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>



## PTFIX 1,5-RZ - Mounting adapter

1632415

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

Insulating sleeve, color: white



## PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>



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

3031034

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

Insulating sleeve, color: gray



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

0825990

<https://www.phoenixcontact.com/it/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





# PTFIX 4/12X1,5 BN - Distribution block



1046964

<https://www.phoenixcontact.com/it/products/1046964>

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

0801837

<https://www.phoenixcontact.com/it/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, Number of individual labels: 12, text field height: 3.8 mm, text field width: 30000 mm

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

0801833

<https://www.phoenixcontact.com/it/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, Number of individual labels: 2500, text field height: 3.8 mm, text field width: 104 mm

# PTFIX 4/12X1,5 BN - Distribution block



1046964

<https://www.phoenixcontact.com/it/products/1046964>

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

0801832

<https://www.phoenixcontact.com/it/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, Number of individual labels: 2500, text field height: 2.8 mm, text field width: 104 mm

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

0801836

<https://www.phoenixcontact.com/it/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, Number of individual labels: 14, text field height: 2.8 mm, text field width: 30000 mm

## PTFIX 4/12X1,5 BN - Distribution block

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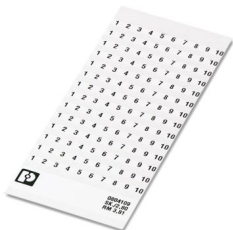
<https://www.phoenixcontact.com/it/products/1046964>



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

8199987

<https://www.phoenixcontact.com/it/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

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

0830768

<https://www.phoenixcontact.com/it/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, Number of individual labels: 22, text field height: 3.8 mm, text field width: 104 mm

## PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>



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

0830767

<https://www.phoenixcontact.com/it/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, Number of individual labels: 26, text field height: 2.8 mm, text field width: 104 mm

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

0803906

<https://www.phoenixcontact.com/it/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, Number of individual labels: 1440, text field height: 3.8 mm, text field width: 186 mm

## PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/it/products/1046964>



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

0803883

<https://www.phoenixcontact.com/it/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, Number of individual labels: 3600, text field height: 2.8 mm, text field width: 186 mm

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

1092026

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



Label, Roll, white/black, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, Number of individual labels: 1, text field height: 3.8 mm, text field width: 8000 mm

# PTFIX 4/12X1,5 BN - Distribution block

1046964

<https://www.phoenixcontact.com/lt/products/1046964>



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

1982800

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

Test plug terminal block



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