

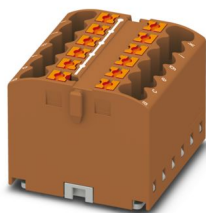
# PTFIX 12X2,5 BN - Distribution block



3273296

<https://www.phoenixcontact.com/nl/products/3273296>

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Distribution block, Basic terminal block, nom. voltage: 450 V, nominal current: 24 A, number of connections: 12, connection method: Push-in connection, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: for snapping onto a DIN rail adapter, Direct mounting with flange, Free-hanging, color: brown

## Your advantages

- Flexible use, thanks to DIN rail mounting, direct mounting or adhesive mounting
- Space savings of up to 50 % on the DIN rail, thanks to transverse mounting
- Time savings of up to 80 %, thanks to ready-to-mount blocks without manual bridging
- Time-saving conductor connection, thanks to tool-free Push-in direct connection technology
- Clear wiring, thanks to eleven different color variants

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 3273296       |
| Packing unit                         | 8 pc          |
| Minimum order quantity               | 8 pc          |
| Sales key                            | BEA114        |
| Product key                          | BEA114        |
| GTIN                                 | 4055626392141 |
| Weight per piece (including packing) | 22,875 g      |
| Weight per piece (excluding packing) | 22,875 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

|                       |    |
|-----------------------|----|
| Number of connections | 12 |
| 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 | 0.77 W |

### Connection data

|                                                                   |                                              |
|-------------------------------------------------------------------|----------------------------------------------|
| Number of connections per level                                   | 12                                           |
| Nominal cross section                                             | 2.5 mm <sup>2</sup>                          |
| Rated cross section AWG                                           | 12                                           |
| 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> ... 4 mm <sup>2</sup>   |
| Cross section AWG                                                 | 26 ... 12 (converted acc. to IEC)            |
| Conductor cross-section flexible                                  | 0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross-section, flexible [AWG]                           | 26 ... 12 (converted acc. to IEC)            |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Nominal current                                                   | 24 A                                         |
| Maximum load current                                              | 32 A                                         |
| Maximum total current                                             | 48 A                                         |
| Nominal voltage                                                   | 450 V                                        |

### Connection cross sections directly pluggable

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

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

## Dimensions

|        |         |
|--------|---------|
| Width  | 31.5 mm |
| Height | 28.6 mm |
| Depth  | 21.7 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)) | 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   | <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 |
|------------------|------|

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

## Oscillation/broadband noise

|                        |                                                |
|------------------------|------------------------------------------------|
| Specification          | DIN EN 50155 (VDE 0115-200):2008-03            |
| 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):2008-03 |
| 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 |
|----------------------------------|---------------|

## Mounting

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

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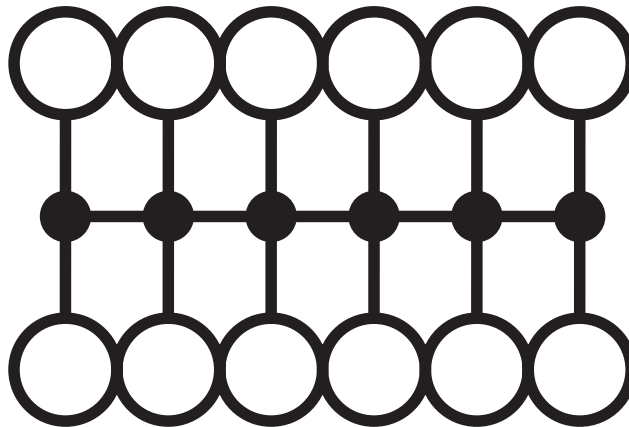
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## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/nl/products/3273296>

| DNV<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                  | -                 | -                           |

| CSA<br>Approval ID: 13631 |                       |                       |                   |                             |
|---------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                         |                       |                       |                   |                             |
|                           | 300 V                 | 20 A                  | 26 - 12           | -                           |
| C                         |                       |                       |                   |                             |
|                           | 300 V                 | 20 A                  | 26 - 12           | -                           |
| D                         |                       |                       |                   |                             |
|                           | 600 V                 | 5 A                   | 26 - 12           | -                           |

| CB<br>IECEE CB Scheme<br>Approval ID: DE1-63085 |                       |                       |                   |                             |
|-------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                 | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                           |                       |                       |                   |                             |
|                                                 | 450 V                 | 24 A                  | -                 | -                           |

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

| VDE Zeichengenehmigung<br>Approval ID: 40047798 |                       |                       |                   |                             |
|-------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                 | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                           |                       |                       |                   |                             |
|                                                 | 450 V                 | 24 A                  | -                 | -                           |

| EAC<br>Approval ID: KZ7500651131219505 |  |  |  |  |
|----------------------------------------|--|--|--|--|
|----------------------------------------|--|--|--|--|

| cULus<br>cULus Recognized<br>Approval ID: E60425 |  |  |  |  |
|--------------------------------------------------|--|--|--|--|
|--------------------------------------------------|--|--|--|--|

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|   | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| B |                       |                       |                   |                             |
|   | 300 V                 | 20 A                  | 26 - 12           | -                           |
| C |                       |                       |                   |                             |
|   | 300 V                 | 20 A                  | 26 - 12           | -                           |
| D |                       |                       |                   |                             |
|   | 600 V                 | 5 A                   | 26 - 12           | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27250118 |
| ECLASS-15.0 | 27250118 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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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PHOENIX CONTACT B.V.  
Hengelder 56 6902 PA Zevenaar  
Postbus 246 6900 AE Zevenaar  
(0316) 59 17 20  
[sales@phoenixcontact.nl](mailto:sales@phoenixcontact.nl)