

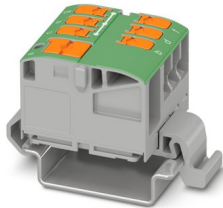
# PTVFIX 6/6X2,5-NS35A GN - Distribution block



1019545

<https://www.phoenixcontact.com/us/products/1019545>

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Distribution block, nom. voltage: 690 V, nominal current: 24 A, number of connections: 7, number of positions: 1, connection method: Push-in connection, Rated cross section: 2.5 mm<sup>2</sup>, Load contact, cross section: 0.14 mm<sup>2</sup> - 4 mm<sup>2</sup>, Line contact, Rated cross section: 6 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 10 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, color: green

## Your advantages

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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1019545       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | BE09          |
| Product key                          | BEA222        |
| GTIN                                 | 4055626506289 |
| Weight per piece (including packing) | 20.43 g       |
| Weight per piece (excluding packing) | 19.393 g      |
| Customs tariff number                | 85369010      |
| Country of origin                    | PL            |

## 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 positions   | 1                          |
| Number of connections | 7                          |
| Number of rows        | 1                          |
| Potentials            | 1                          |

#### Insulation characteristics

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

### Electrical properties

|   |        |
|---|--------|
| Rated surge voltage                             | 8 kV   |
| Maximum power dissipation for nominal condition | 0.77 W |

### Connection data

|                                 |                     |
|---------------------------------|---------------------|
| Service Entrance                | yes                 |
| Number of connections per level | 7                   |
| Nominal cross section           | 2.5 mm <sup>2</sup> |

#### Load contact

|   |  |
|---|--|
| Connection method   | Push-in connection                           |
| Stripping length  | 8 mm ... 10 mm                               |
| Internal cylindrical gage   | A3   |
|   | B3   |
| Connection in acc. with standard  | IEC 60947-7-1                                |
| 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> |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 mm <sup>2</sup>                          |
| Nominal cross section   | 2.5 mm <sup>2</sup>                          |

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1019545

<https://www.phoenixcontact.com/us/products/1019545>

|                       |   |
|-----------------------|---|
| Nominal current       | 24 A  |
| Maximum load current  | 32 A (with 4 mm <sup>2</sup> conductor cross-section)                   |
| Maximum total current | 57 A (with 10 mm <sup>2</sup> conductor cross-section)                  |
| Nominal voltage       | 690 V   |
| Note                  | The IEC 60947-7-1 standard applies for the use of mounting accessories. |

## Line contact

|   |   |
|---|---|
| Stripping length  | 10 mm ... 12 mm   |
| Internal cylindrical gage   | A5  |
|   | B4  |
| Conductor cross-section rigid   | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                      |
| Cross section AWG   | 20 ... 8 (converted acc. to IEC)  |
| Conductor cross-section flexible  | 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>                                      |
| Conductor cross-section, flexible [AWG]   | 20 ... 8 (converted acc. to IEC)  |
| Conductor cross-section flexible (ferrule without plastic sleeve)   | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>                                       |
| Flexible conductor cross-section (ferrule with plastic sleeve)  | 0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>                                       |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                     |
| Nominal cross section   | 6 mm <sup>2</sup>   |
| Nominal current   | 41 A (with 6 mm <sup>2</sup> conductor cross-section)                           |
| Maximum load current  | 57 A (with 10 mm <sup>2</sup> conductor cross-section)                          |
| Maximum total current   | The maximum load current of the individual terminal point must not be exceeded. |
| Connection in acc. with standard  | IEC 60998-2-2   |
| Nominal voltage   | 450 V (in accordance with IEC 60998-2-2)  |

## Load contact 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]                              | 22 ... 18 (converted acc. to IEC)            |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.5 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> |

## Line contact Connection cross sections directly pluggable

|   |  |
|---|--|
| Conductor cross-section rigid                                     | 1 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross-section, rigid [AWG]                              | 18 ... 8 (converted acc. to IEC)         |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Flexible conductor cross-section (ferrule with plastic sleeve)    | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |

## Dimensions

|                    |         |
|--------------------|---------|
| Width              | 26 mm   |
| Height             | 45.7 mm |
| Depth              | 29.2 mm |
| Depth on NS 35/7,5 | 30.9 mm |

## Material specifications

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1019545

<https://www.phoenixcontact.com/us/products/1019545>

|  |                  |
|--|------------------|
| Color  | green (RAL 6021) |
| Flammability rating according to UL 94                           | V0               |
| Insulating material group  | I                |
| Insulating material  | PA               |
| Static insulating material application in cold                   | -60 °C           |
| Relative insulation material temperature index (Elec., UL 746 B) | 130 °C           |
| Fire protection for rail vehicles (DIN EN 45545-2) R22           | HL 1 - HL 3      |
| Fire protection for rail vehicles (DIN EN 45545-2) R23           | HL 1 - HL 3      |
| Fire protection for rail vehicles (DIN EN 45545-2) R24           | HL 1 - HL 3      |
| Fire protection for rail vehicles (DIN EN 45545-2) R26           | HL 1 - HL 3      |
| Surface flammability NFPA 130 (ASTM E 162)                       | passed           |
| Specific optical density of smoke NFPA 130 (ASTM E 662)          | passed           |
| Smoke gas toxicity NFPA 130 (SMP 800C)                           | passed           |

## Electrical tests

### Surge voltage test

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

### Temperature-rise test

|   |                                     |
|---|-------------------------------------|
| Requirement temperature-rise test               | Increase in temperature $\leq 45$ K |
| Result  | Test passed                         |
| Short-time withstand current 6 mm <sup>2</sup>  | 0.72 kA                             |
| Short-time withstand current 10 mm <sup>2</sup> | 1.2 kA                              |
| Result  | Test passed                         |

### Power-frequency withstand voltage

|                       |             |
|-----------------------|-------------|
| Test voltage setpoint | 1.89 kV     |
| Result                | Test passed |

## Mechanical properties

### Mechanical data

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

## Mechanical tests

### Mechanical strength

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

### Attachment on the carrier

|                         |  |
|-------------------------|--|
| DIN rail/fixing support | NS 35  |
| 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.<br>For versions with 6 or 7 connections, it is enough to place one DIN rail adapter centrally per block and place flange elements |

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1019545

<https://www.phoenixcontact.com/us/products/1019545>

|  |   |
|--|---|
|  | after every other block.  |
|  | Depending on the application case and mechanical load, other arrangements of the mounting accessory can also be chosen. |
|  | When using the DIN rail adapter PTFIX-NS35, an aligned block must not protrude by more than a half.                     |

## Test for conductor damage and slackening

|                                |                              |
|--------------------------------|------------------------------|
| Rotation speed                 | 10 rpm                       |
| Revolutions                    | 135                          |
| Conductor cross-section/weight | 0.5 mm <sup>2</sup> / 0.3 kg |
|                                | 6 mm <sup>2</sup> / 1.4 kg   |
|                                | 10 mm <sup>2</sup> / 2 kg    |
| Result                         | Test passed                  |

## Environmental and real-life conditions

### Aging

|                    |             |
|--------------------|-------------|
| Temperature cycles | 192         |
| Result             | Test passed |

### Needle-flame test

|                  |             |
|------------------|-------------|
| Time of exposure | 30 s        |
| Result           | Test passed |

### Oscillation/broadband noise

|                        |  |
|------------------------|--|
| Specification          | DIN EN 50155 (VDE 0115-200):2018-05            |
| Spectrum               | Long life test category 2, bogie-mounted       |
| Frequency              | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level              | 6.12 (m/s <sup>2</sup> ) <sup>2</sup> /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)  |

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1019545

<https://www.phoenixcontact.com/us/products/1019545>

|  |                 |
|--|-----------------|
| 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 60947-7-1 |
|                                  | IEC 60998-2-2 |

## Mounting

|               |           |
|---------------|-----------|
| Mounting type | NS 35/7,5 |
|               | NS 35/15  |

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1019545

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## Drawings

Circuit diagram



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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

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1019545

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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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