

PTRV 8-PV /BU - Potential distributors



3270249

<https://www.phoenixcontact.com/sg/products/3270249>

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Potential distributors, nom. voltage: 250 V, nominal current: 17.5 A, connection method: Push-in connection, 1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th level, Rated cross section: 1.5 mm², cross section: 0.14 mm² - 2.5 mm², mounting: NS 35/7,5, NS 35/15, color: gray, color of connection elements: blue

Your advantages

- High contact quality thanks to push-in technology as a replacement for Wire-Wrap®, TERMI-POINT®, etc.
- Potential distributor for distributing potentials up to 17.5 A
- Tool-free wiring in a confined space thanks to compact size
- The 2.3 mm test pick-off enables testing between the conductors with commercially available test probes

Commercial data

| | |
|--------------------------------------|--------------------|
| Item number | 3270249 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | ***** |
| Product key | BE6211 |
| Catalog page | Page 51 (C-1-2019) |
| GTIN | 4055626282541 |
| Weight per piece (including packing) | 33.8 g |
| Weight per piece (excluding packing) | 33.8 g |
| Customs tariff number | 85369010 |
| Country of origin | PL |

Technical data

Product properties

| | |
|-----------------------|-----------------------|
| Product type | Potential distributor |
| Number of positions | 2 |
| Number of connections | 32 |
| Number of rows | 8 |
| Potentials | 1 |

Data management status

| | |
|------------------|----|
| Article revision | 02 |
|------------------|----|

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
|----------------------|-----|

Electrical properties

| | |
|---|--------|
| Rated surge voltage | 4 kV |
| Maximum power dissipation for nominal condition | 0.56 W |

Connection data

| | |
|---------------------------------|---------------------|
| Number of connections per level | 4 |
| Nominal cross section | 1.5 mm ² |

1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th level

| | |
|---|--|
| Stripping length | 8 mm ... 10 mm |
| Connection in acc. with standard | IEC 60947-7-1 |
| Conductor cross section rigid | 0.14 mm ² ... 2.5 mm ² |
| Cross section AWG | 26 ... 14 (converted acc. to IEC) |
| Conductor cross section flexible | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section, flexible [AWG] | 26 ... 16 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.14 mm ² ... 1.5 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.14 mm ² ... 1.5 mm ² |
| Nominal current | 17.5 A |
| Maximum load current | 20 A (in case of a 2.5 mm ² conductor cross section, the maximum load current must not be exceeded by the total current of all connected conductors.) |
| Nominal voltage | 250 V |
| Nominal cross section | 1.5 mm ² |

1st, 2nd, 3rd, 4th, 5th, 6th, 7th and 8th level Connection cross sections directly pluggable

| | |
|---|--|
| Conductor cross section rigid | 0.34 mm ² ... 2.5 mm ² |
| Conductor cross section, rigid [AWG] | 20 ... 14 (converted acc. to IEC) |
| Conductor cross-section flexible (ferrule without plastic sleeve) | 0.34 mm ² ... 1.5 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.34 mm ² ... 1.5 mm ² |

Dimensions

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| | |
|--------------------|---------|
| Width | 8.3 mm |
| Height | 100 mm |
| Depth on NS 35/7,5 | 87.5 mm |
| Depth on NS 35/15 | 95 mm |

Material specifications

| | |
|---|-----------------|
| Color | gray (RAL 7042) |
| Color of connection elements | blue |
| 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 |
| Specific optical density of smoke NFPA 130 (ASTM E 662) | passed |
| Smoke gas toxicity NFPA 130 (SMP 800C) | passed |

Electrical tests

Surge voltage test

| | |
|-----------------------|-------------|
| Test voltage setpoint | 4.8 kV |
| Result | Test passed |

Temperature-rise test

| | |
|--|-------------------------------------|
| Requirement temperature-rise test | Increase in temperature \leq 45 K |
| Result | Test passed |
| Short-time withstand current 1.5 mm ² | 0.18 kA |
| Short-time withstand current 2.5 mm ² | 0.3 kA |
| Result | Test passed |

Power-frequency withstand voltage

| | |
|-----------------------|-------------|
| Test voltage setpoint | 1.5 kV |
| Result | Test passed |

Mechanical properties

Mechanical data

| | |
|-----------------|-----|
| Open side panel | Yes |
|-----------------|-----|

Mechanical tests

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Mechanical strength

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

Attachment on the carrier

| | |
|-------------------------|-------------|
| DIN rail/fixing support | NS 35 |
| Test force setpoint | 1 N |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|--------------------------------|-------------------------------|
| Rotation speed | 10 rpm |
| Revolutions | 135 |
| Conductor cross section/weight | 0.14 mm ² / 0.2 kg |
| | 1.5 mm ² / 0.4 kg |
| | 2.5 mm ² / 0.7 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):2008-03 |
| Spectrum | Service life test category 2, bogie-mounted |
| Frequency | $f_1 = 5 \text{ Hz}$ to $f_2 = 250 \text{ Hz}$ |
| ASD level | 6.12 (m/s ²) ² /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 ... 105 °C (max. short-term operating temperature RTI) |
|---------------------------------|---|

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| | |
|--|---|
| | 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 (storage/transport) | 30 % ... 70 % |

Standards and regulations

| | |
|----------------------------------|---------------|
| Connection in acc. with standard | IEC 60947-7-1 |
|----------------------------------|---------------|

Mounting

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

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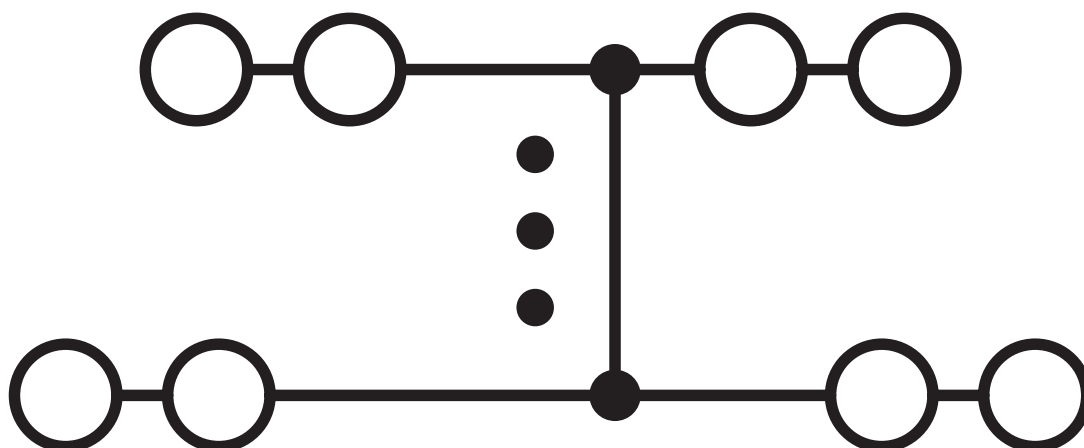


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Drawings

Circuit diagram



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Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/sg/products/3270249>


|  CSA Approval ID: 2030668 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Use group B | 300 V | 10 A | 26 - 14 | - |
| Use group D | 300 V | 10 A | 26 - 14 | - |

|  IECEE CB Scheme Approval ID: NL-58817 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 250 V | 17.5 A | - | - |

|  EAC Approval ID: RU C-DE.BL08.B.00682 | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

|  cULus Recognized Approval ID: E60425 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

|  KEMA-KEUR Approval ID: 71-102890 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| Only flexible conductors | 250 V | 17.5 A | - | 0.14 - 1.5 |
| Only rigid conductors | 250 V | 17.5 A | - | 0.14 - 2.5 |

|  cULus Recognized Approval ID: E60425 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

| DNV Approval ID: TAE000016Y | | | | |
|---------------------------------------|--|--|--|--|
|---------------------------------------|--|--|--|--|

|  cULus Recognized Approval ID: E60425 | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

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Approval ID: E60425



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27141120 |
| ECLASS-13.0 | 27250119 |

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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