

Potential distributors - ZPV 1,5/2,5 (8/1)



3031047

<https://www.phoenixcontact.com/gb/products/3031047>

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Potential distributors, nom. voltage: 500 V, nominal current: 24 A, connection method: Spring-cage connection, 1st level connection left, Rated cross section: 2.5 mm², cross section: 0.14 mm² - 4 mm², connection method: Spring-cage connection, 1st level connection right, Rated cross section: 1.5 mm², cross section: 0.14 mm² - 2.5 mm², mounting: NS 35/7,5, NS 35/15, color: gray

Your advantages

- The operating voltage is supplied via a 2.5 mm² spring-cage connection and distributed using eight 1.5 mm² connections
- Actuators and active initiators are simply and clearly supplied with operating voltage
- They are mainly used in small control cabinets with high-performance controllers

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 3031047 |
| Packing unit | 50 pc |
| Minimum order quantity | 1 pc |
| Sales Key | BE6211 |
| Product Key | BE6211 |
| Catalog Page | Page 240 (C-3-2013) |
| GTIN | 4017918169572 |
| Weight per Piece (including packing) | 23 g |
| Weight per Piece (excluding packing) | 21.663 g |
| Customs tariff number | 85369010 |
| Country of origin | TR |

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Technical Data

Product properties

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

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 | 2 |
| Nominal cross section | 1.5 mm ² |

1st level connection left

| | |
|---|---|
| Stripping length | 10 mm |
| Internal cylindrical gage | A3 |
| Conductor cross section solid | 0.14 mm ² ... 4 mm ² |
| Cross section AWG | 26 ... 12 |
| Conductor cross section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible [AWG] | 26 ... 16 |
| Flexible conductor cross section flexible (ferrule, w/o plastic sleeve) | 0.14 mm ² ... 2.5 mm ² |
| Flexible conductor cross section (ferrule with plastic sleeve) | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible (2 conductors with the same cross-section, with TWIN ferrule and plastic sleeve) | 0.5 mm ² |
| Nominal current | 24 A |
| Maximum load current | 24 A (with 4 mm ² conductor cross section) |
| Nominal voltage | 500 V |
| Nominal cross section | 2.5 mm ² |

1st level connection right

| | |
|---|--|
| Stripping length | 10 mm |
| Internal cylindrical gage | A1 |
| Conductor cross section solid | 0.14 mm ² ... 2.5 mm ² |
| Cross section AWG | 26 ... 16 |
| Conductor cross section flexible | 0.14 mm ² ... 1.5 mm ² |
| Flexible conductor cross section flexible (ferrule, w/o 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 |

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| | |
|-----------------------|---------------------|
| Nominal current | 17.5 A |
| Maximum load current | 17.5 A |
| Nominal voltage | 500 V |
| Nominal cross section | 1.5 mm ² |

Dimensions

| | |
|------------------|---------|
| Width | 5.2 mm |
| End cover width | 2 mm |
| Height NS 35/15 | 58.5 mm |
| Height NS 35/7,5 | 51 mm |
| Height | 2.008 " |
| Length | 141 mm |

Material specifications

| | |
|---|-------------|
| Color | gray |
| 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 |

Electrical tests

Surge voltage test

| | |
|-----------------------|-------------|
| Test voltage setpoint | 7.3 kV |
| Result | Test passed |

Temperature-rise test

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

Power-frequency withstand voltage

| | |
|-----------------------|---------|
| Test voltage setpoint | 1.89 kV |
|-----------------------|---------|

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

Mechanical properties

Mechanical data

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

Mechanical tests

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 |
| | 2.5 mm ² / 0.7 kg |
| | 4 mm ² / 0.9 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 |

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| | |
|--------------------------------|-----------------------------------|
| 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 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 |
| | IEC 60947-7-1 |
| | IEC 60947-7-1 |
| | IEC 60947-7-1 |

Mounting

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

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Drawings

Circuit diagram



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Approvals

**EAC**

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

**cULus Recognized**

Approval ID: E60425

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B | 300 V | 15 A | 24 - 10 | - |
| Use group C | 150 V | 15 A | 24 - 10 | - |
| Use group D | 300 V | 10 A | 24 - 10 | - |

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27141120 |
| ECLASS-10.0.1 | 27141120 |
| ECLASS-11.0 | 27141120 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC000897 |
|----------|----------|

UNSPSC

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

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Environmental Product Compliance

China RoHS

Environmentally friendly use period: unlimited = EFUP-e

No hazardous substances above threshold values

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