



Stamped contacts Crimp female contacts diameter 1,5 mm for wire gauge AWG 26 - 20 silver plated

Part No. VN 02 015 0046 (1)

Series **Contacts**

Subseries **Contact Stamped contacts**

Common Characteristics

| | | |
|------------------------------|--|------------------------------|
| Contact diameter | | 1,5 mm |
| Insulation diameter | | 1,0 - 2,0 mm |
| anschlussquerschnitt_von | | 0,35 |
| anschlussquerschnitt_bis | | 0,5 |
| anschlussquerschnitt_awg_von | | 22 |
| anschlussquerschnitt_awg_bis | | 20 |
| Packaging / supplied as | | Single contact |
| No. of pieces | | 100 |
| Sex of Contact | | Socket |
| Type of contact | | Stamped/rolled crimp contact |

Electrical Characteristics

| | | |
|--------------------|--|-------|
| Contact resistance | DIN EN 60512-2-1, Test 2a / IEC 60512-2-1, Test 2a | < 5 m |
|--------------------|--|-------|

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Main Features

- Metal locking ring; screw locking according to DIN EN 60130-9 / IEC 60130-9
- Full metal construction
- Protection class IP 65 and IP 67
- Number of contacts: 3 – 8, 12 and 14 contacts
- Internal strain relief
- Good shielding effectiveness when mated and locked
- Male and female cable connectors
 - Straight or right angled
 - Solder connection: 3 – 8, 12 and 14 contacts
 - Crimp connection: 3 – 8 contacts
 - With cable glands for cable diameter 4 – 6 mm or 6 – 8 mm
- Male and female receptacles
 - Panel mount types for front or rear panel mounting
 - Pcb mount types, straight
 - With 4-hole flange
 - With dip solder contacts of various contact lengths
 - Solder connection: 3 – 8, 12 and 14 contacts
 - Crimp connection: 3 – 8 contacts
- UL registered under file number E 63 093 UL













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¹⁾ In general approvals refer to representative versions of the connector series. Test report upon request.

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Characteristics

| General Characteristics | Standard | Characteristics | | | | | | | | | |
|--|--------------------------------------|--|---|---|---|---|---|---|---|---|---|
| Number of contacts | | 3 | 4 | 5 | 5 Stereo | 6 | 7 | 7 | 8 | 12 | 14 |
| View on termination side of contact insert | |  |  |  |  |  |  |  |  |  |  |
| Contact arrangement acc. to DIN | | 41 524 | – | – | 41 524 | 45 322 | – | 45 329 | 45 326 | – | – |
| Contact arrangement acc. to IEC | | 60130-9 | 60130-9 | – | 60130-9 | 60130-9 | – | 60130-9 | 60130-9 | – | – |
| Electrical Characteristics | | | | | | | | | | | |
| Rated voltage | IEC 60664-1 | 300 V ≈ | | | 100V ≈ | 300 V ≈ | | | 100 V ≈ | | 150 V ≈ |
| Rated voltage | UL 1977 | 250 V | | | | | | | | 60 V | |
| Rated impulse withstand voltage | IEC 60664-1 | 1500 V | | | 1200 V | 1500 V | | | 1200 V | | |
| Pollution degree | IEC 60664-1 | 1 | | | | | | | | | |
| Installation category | IEC 60664-1 | I | | | | | | | | | |
| Insulation group | IEC 60664-1 | II, 400 ≤ CTI < 600 | | | | | | | | | |
| Current rating | IEC 60512-5-2 Test 5 b UL 1977 | 5 A / + 40 °C / + 104 °F please refer also to current derating curves page 45 | | | | | | | | 3 A / + 40 °C / + 104 °F | |
| Insulation resistance | IEC 60512-3-1 Test 3 a | > 10 ¹⁰ Ω | | | | | | | | | |
| Contact resistance | IEC 60512-2-1 Test 2 a | < 5 m Ω | | | | | | | | | |
| Climatic Characteristics | | | | | | | | | | | |
| Climatic category | IEC 60668-1 | 40 / 100 / 56 | | | | | | | | | |
| Temperature range | IEC 60668-1 | - 40 °C ... + 100 °C / - 40 °F ... + 212 °F | | | | | | | | | |
| Mechanical Characteristics | | | | | | | | | | | |
| IP-degree | IEC 60529 | IP 67 / IP 65 | | | | | | | | | |
| Insertion and withdrawal forces | IEC 60512-13-2 Test 13 b | 25 N 90.oz | 30 N 110.oz | 35 N 125.oz | 50 N 180.oz | 55 N 200.oz | 60 N 220.oz | 50 N 180.oz | | | |
| Mechanical operation | IEC 60512 Test 9 a | Silver ≥ 500 mating cycles Gold ≥ 1000 mating cycles | | | | | | | | | |
| Materials | | | | | | | | | | | |
| Housing material | | die cast, nickel plated | | | | | | | | | |
| Dielectric material | | thermoplastic | | | | | | | | | |
| Sealing material | | neoprene | | | | | | | | | |
| Contact plating | | silver plated / gold plated * | | | | | | | | | |
| Further Characteristics | | | | | | | | | | | |
| Termination technique | | solder, crimp | | | | | | | | solder | |
| Wire gauge | | solder: ≤ 0,5 mm ² / 20 AWG crimp: 2 - 6 pol (excluding 5S): 0,09 - 1,00 mm ² / 28 - 18 AWG crimp: 5S, 7, 7S and 8-pol.: 0,09 - 0,75 mm ² / 28 - 20 AWG | | | | | | | | ≤ 0,25 mm ² /24 AWG | |
| Flammability | | UL 94 V0 | | | | | | | | | |
| Locking system | IEC 60130-9 | metal screw coupling; tightening torque 0,5 - 0,7 Nm | | | | | | | | | |
| UL | UL 1977 | Conditions of acceptability | | | | | | | | | |

Caution: Do not connect or disconnect under load. Metal housing parts shall be securely incorporated to protected ground.

* **Remark for gold plated contacts:** In order to avoid brittle inter-metallic connections, gold-plated terminals have to be tin-plated in the solder area.

C 091

Crimp contacts

Stamped single contacts

Stamped contacts on reel for hand crimping tools

Stamped contacts on reel for crimp machines





packaging unit 100 pcs



200 pcs



2000 pcs
(feeding left or right hand side)

| Type of Contact | Contact Ø | Wire Gauge | max. Insul. Ø | Supplied as | Pcs. | Part Number | |
|---|---------------------------|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | | | | | silver | gold |
| Pin contact  | 1.5 mm | 0.09-0.25 mm ² | 0.7-1.6 | single contact | 100 | VN01 015 0052 (1) | VN01 015 0052 (2) |
| | | | | contacts on reel | 200 | ZN01 015 0052 (1) | ZN01 015 0052 (2) |
| | | | | | 2000 | HN01 015 0052 (1) | HN01 015 0052 (2) |
| | left | 2000 | TN01 015 0052 (1) | TN01 015 0052 (2) | | | |
| | 0.35-0.50 mm ² | 1.0-2.0 | single contact | 100 | VN01 015 0046 (1) | VN01 015 0046 (2) | |
| | | | contacts on reel | 200 | ZN01 015 0046 (1) | ZN01 015 0046 (2) | |
| | | | | 2000 | HN01 015 0046 (1) | HN01 015 0046 (2) | |
| | | right | 2000 | TN01 015 0046 (1) | TN01 015 0046 (2) | | |
| | | 0.75-1.0 mm ² | 1.6-2.1 | single contact | 100 | VN01 015 0047 (1) | VN01 015 0047 (2) |
| contacts on reel | | | | 200 | ZN01 015 0047 (1) | ZN01 015 0047 (2) | |
| | 2000 | | | HN01 015 0047 (1) | HN01 015 0047 (2) | | |
| left | 2000 | TN01 015 0047 (1) | TN01 015 0047 (2) | | | | |
| Socket contact  | 1.5 mm | 0.09-0.25 mm ² | 0.7-1.6 | single contact | 100 | VN02 015 0052 (1) | VN02 015 0052 (2) |
| | | | | contacts on reel | 200 | ZN02 015 0052 (1) | ZN02 015 0052 (2) |
| | | | | | 2000 | HN02 015 0052 (1) | HN02 015 0052 (2) |
| | left | 2000 | TN02 015 0052 (1) | TN02 015 0052 (2) | | | |
| | 0.35-0.50 mm ² | 1.0-2.0 | single contact | 100 | VN02 015 0046 (1) | VN02 015 0046 (2) | |
| | | | contacts on reel | 200 | ZN02 015 0046 (1) | ZN02 015 0046 (2) | |
| | | | | 2000 | HN02 015 0046 (1) | HN02 015 0046 (2) | |
| | | right | 2000 | TN02 015 0046 (1) | TN02 015 0046 (2) | | |
| | | 0.75-1.0 mm ² | 1.6-2.1 | single contact | 100 | VN02 015 0047 (1) | VN02 015 0047 (2) |
| contacts on reel | | | | 200 | ZN02 015 0047 (1) | ZN02 015 0047 (2) | |
| | 2000 | | | HN02 015 0047 (1) | HN02 015 0047 (2) | | |
| left | 2000 | TN02 015 0047 (1) | TN02 015 0047 (2) | | | | |

| Connecting Range | Wire Gauge | | Stripping length | Crimp height (average values) | Crimp retention force acc. DIN EN 60352-2 |
|------------------|-----------------|-----------|------------------|----------------------------------|---|
| | mm ² | AWG | | | |
| 0.09-0.25 | 0.09 | 28 | 3.0 + 0.5 | 0.85-0.89 | 11 |
| | | 26 | | | 15 |
| | 0.14 | 24 | | 0.86-0.90 | 18 |
| | | | | | 28 |
| 0.25 | | 0.91-0.97 | 32 | | |
| | | | | | |
| 0.35-0.50 | 0.35 | 22 | 3.0 + 0.5 | 0.90-1.06 | 40 |
| | 0.50 | 20 | | | 60 |
| 0.75-1.00 | 0.75 | 18 | 3.5 + 1.0 | 1.33-1.50 | 85 |
| | | | | | 90 |
| | 1.00 | | | 1.36-1.53 | 108 |

These min. values are based on the copper wire tensile strength with $\delta_B \approx 230 \text{ N/mm}^2$.