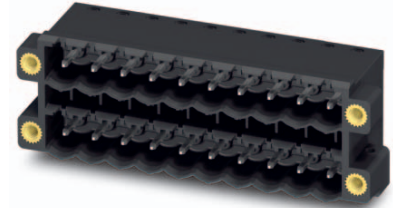


Order No.: 1734449

Type: CCDN 2,5/ 2-G1F P26 THR

Header, Reflow/wave soldering



The figure shows a 10-pos. version with 20 contacts

1 Main features



- | | | | |
|-------------------------|---------------------|------------------------|---------------------|
| • No. of pos. | 2 | • Nominal current | 12 A |
| • Nominal cross section | 2.5 mm ² | • Nominal voltage | 320 V |
| • Color | black | • Connection direction | 0 ° |
| • Pitch | 5 mm | • Type of packaging | packed in cardboard |
| • Mounting type | THR soldering | | |

2 Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ Conductor connection on several levels enables higher contact density
- ✓ Screwable flange for superior mechanical stability



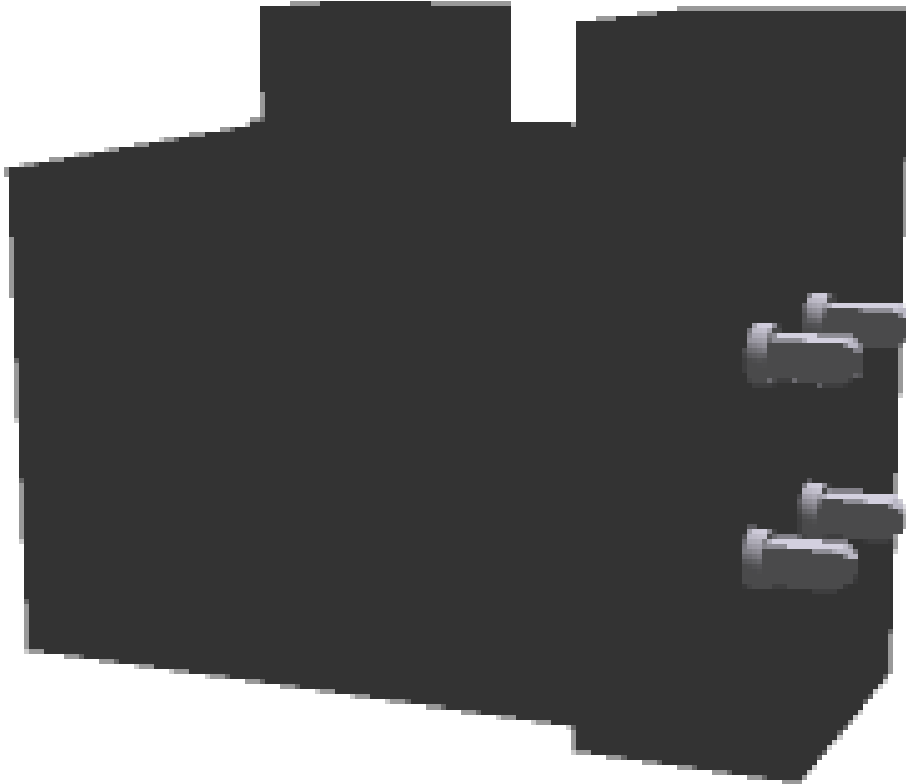
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1734449

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1734449 CCDN 2,5/ 2-G1F P26 THR

4 3D model in PDF can be activated (Acrobat Reader only)



1734449 CCDN 2,5/ 2-G1F P26 THR**5 item properties**

| | |
|---------------------|-------------------------|
| Order No. | 1734449 |
| Type | CCDN 2,5/ 2-G1F P26 THR |
| Type of contact | Male connector |
| Range of articles | CCDN 2,5/..-G1F-THR |
| Pitch | 5 mm |
| Number of positions | 2 |
| Locking | Threaded flange |
| Mounting type | THR soldering |
| Pin layout | Linear pinning |

5.1 Material data

| | |
|--|---|
| Material of metal parts | |
| Note | WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface contact area | Ni 1 µm ... 3 µm , Sn 4 µm ... 8 µm |
| Soldering area surface | Ni 1 µm ... 3 µm , Sn 4 µm ... 8 µm |
| Surface characteristics | Tin-plated |
| Insulating material data | |
| Insulating material | Housing LCP |
| CTI according to IEC 60112 | 175 |
| Flammability rating according to UL 94 | V0 |
| Color | black (9005) |

6 Dimensions**6.1 Dimensions for the product**

| | |
|-----------------------------|----------|
| Length | 17.6 mm |
| Width | 19.96 mm |
| Height (without solder pin) | 20.1 mm |
| Total height | 22.7 mm |
| Solder pin [P] | 2.6 mm |
| Dimension a | 5 mm |

6.2 Dimensions for PCB design

| | |
|----------------|-----------|
| Hole diameter | 1.6 mm |
| Pin dimensions | 1,0 x 1,0 |
| Pin spacing | 5.00 mm |

1734449 CCDN 2,5/ 2-G1F P26 THR**7 Series drawing****8 Packaging information**

| | |
|--------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |

9 Application**9.1 Processing notes**

| | |
|----------------------------------|--|
| Process | Reflow/wave soldering |
| Specification | Following IPC/JEDEC J-STD-020D.1:2008-03 |
| Specification | Following IEC 61760-1:2006-04 |
| Specification | Following IEC 60068-2-58:2005-02 |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature T_c | max. 260 °C |
| Solder cycles in the reflow | 3 |
| swash circumference | see dimensional drawing |

9.2 Temperature limit values

| | |
|---|--|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C (dependent on the derating curve) |

1734449 CCDN 2,5/ 2-G1F P26 THR**10 Mechanical tests**

| Mechanical test group A | |
|-------------------------------------|------------------------|
| Specification | IEC 61984:2008-10 |
| Visual test | Test passed |
| Specification | IEC 60512-1-1:2002-02 |
| Dimensional test | Test passed |
| Specification | IEC 60512-1-2:2002-02 |
| Resistance of marking | Test passed |
| Specification | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | Test passed |
| Specification | IEC 60512-13-2:2006-02 |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 11 N |
| Withdraw strength per pos. approx. | 10 N |
| Polarization and coding | Test passed |
| Specification | IEC 60512-13-5:2006-02 |
| Test force | 20 N |
| Contact retention in insert | Test passed |
| Specification | IEC 60512-15-1:2008-05 |
| Test force per pos. | 38 N |

1734449 CCDN 2,5/ 2-G1F P26 THR**11 Electrical tests****11.1 Electrical data**

| | |
|---|----------------------------|
| Rated current / conductor cross section | 12 A / 2.5 mm ² |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Contact resistance | 1.1 mΩ |
| Degree of pollution | 2 |

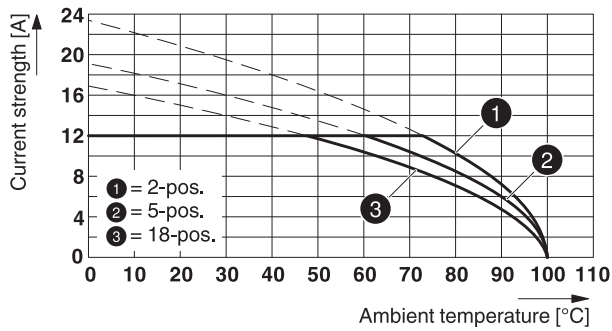
11.2 Air and creepage distances

| | | | |
|---|---------------------|-------|-------|
| Component | Header | | |
| Specification | IEC 60664-1:2007-04 | | |
| Mains type | unearthed mains | | |
| Insulating material group | IIIa | | |
| Comparative tracking index (IEC 60112:2003-01) | CTI 175 | | |
| Rated insulation voltage | 250 V | 320 V | 400 V |
| Rated surge voltage | 4 kV | 4 kV | 4 kV |
| Degree of pollution | 3 | 2 | 2 |
| Overvoltage category | III | III | II |
| Minimum clearance case A (inhomogeneous field) | 3 mm | 3 mm | 3 mm |
| Minimum value of the creepage path requirement in acc. with table | 4 mm | 4 mm | 4 mm |

1734449 CCDN 2,5/ 2-G1F P26 THR

12 Current carrying capacity/derating curves

| | |
|-------------------------|---|
| Specification | IEC 61984:2008-10 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| Reduction factor | 0.8 |
| Number of positions | See diagram |
| Conductor cross section | 2.5 mm ² |
| Note | |

Type: FKCN 2,5/...-ST with CCDN 2,5/...-G1F P26 THR


1734449 CCDN 2,5/ 2-G1F P26 THR**13 Environmental and durability tests****13.1 Vibration test**


| | |
|------------------------|------------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Result | Test passed |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 - 60.1 Hz) |
| Acceleration | 5 g (60.1 - 150 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

14 Classification for connectors

| | |
|-----------------------------------|--|
| Specification | IEC 61984:2008-10 |
| Main features | Connectors without switching capacity (COC) |
| Construction form | Fixed connectors |
| Strain relief elements | without strain relief |
| Protection against electric shock | Not encapsulated - touch-proof when inserted |
| Protection class | |
| Protective conductor | without PE |
| Lock | no |

15 Approvals

| UL Recognized  | | | | |
|---|-------|-------|--|--|
| Use group | B | D | | |
| mm ² /AWG/kcmil | | | | |
| Voltage | 300 V | 300 V | | |
| Current | 10 A | 10 A | | |

| cUL Recognized  | | | | |
|--|-------|-------|--|--|
| Use group | B | D | | |
| mm ² /AWG/kcmil | | | | |
| Voltage | 300 V | 300 V | | |
| Current | 10 A | 10 A | | |

| EAC  | | | | |
|---|--|--|--|--|
|---|--|--|--|--|

| cULus Recognized  | | | | |
|--|--|--|--|--|
|--|--|--|--|--|

1734449 CCDN 2,5/ 2-G1F P26 THR**16 Commercial Data**

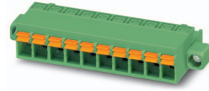
| | |
|--------------------|--|
| Order No. | 1734449 |
| Type | CCDN 2,5/ 2-G1F P26 THR |
| Pieces per package | 50 |
| Net weight | 5.598 g |
| GTIN | 4046356177313 |
| | Information that applies locally, see link on page 1 |
| Country of origin | Information that applies locally, see link on page 1 |

17 corresponding plugs

| | |
|-----------|-----------------|
| Order No. | Type |
| 1732962 | FKCN 2,5/ 2-STF |

1734449 CCDN 2,5/ 2-G1F P26 THR

18 Combination tests

**CCDN 2,5/..-G1F-THR****FKCN 2,5/..-STF**

| | | | | |
|--|---|--|--|--|
| Specification | IEC 61984 | | | |
| Mechanical tests (A) | | | | |
| Insertion/withdrawal force per position | approx. 11 N / 10 N | | | |
| Polarization when inserted Requirement >20 N | Test passed | | | |
| Contact holder in insert Requirements >20 N | Test passed | | | |
| Durability tests (B) | | | | |
| Contact resistance R ₁ | 1.1 mΩ | | | |
| Insertion/withdrawal cycles | 25 | | | |
| Contact resistance R ₂ | 1.1 mΩ | | | |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 4.8 kV | | | |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 2.21 kV | | | |
| Insulation resistance Requirements > 5 MΩ | > 50 TΩ | | | |
| Thermal tests (C) | | | | |
| Tested number of positions | 18 | | | |
| Tested conductor cross section | 2.5 mm ² | | | |
| Test current | 12 A | | | |
| Upper limiting temperature Requirements < 100°C | Test passed | | | |
| Climatic tests (D) | | | | |
| Test sequence 1: low temperature storage | -40 °C/2 h | | | |
| Test sequence 2: heat storage | 100 °C/168 h | | | |
| Test sequence 3: noxious gas storage (ISO 6988) | 0.2 dm ³ SO ₂ on 300 dm ³ / 40 °C/1 cycle | | | |
| Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 μs) | 4.8 kV | | | |
| Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz) | 2.21 kV | | | |
| Environmental and endurance tests (E) | | | | |
| Specification | IEC 61984:2008-10 | | | |
| Degree of protection | Finger safety with IP20 test finger | | | |