

ISPC 5/10-STF-7,62 - PCB connector



1749052

<https://www.phoenixcontact.com/us/products/1749052>

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PCB connector, nominal cross section: 6 mm², color: green, nominal current: 32 A, rated voltage (III/2): 1000 V, contact surface: Sn, contact connection type: Pin, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: ISPC 5/..-STF, pitch: 7.62 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 5, locking: Screw locking mechanism, mounting method: Screw flange, type of packaging: packed in cardboard

Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Screwable flange for superior mechanical stability
- 600 V UL approval in the smallest of dimensions

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1749052 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Note | Made to order (non-returnable) |
| Sales key | AA04 |
| Product key | AA DFCC |
| GTIN | 4046356312714 |
| Weight per piece (including packing) | 48.44 g |
| Weight per piece (excluding packing) | 48.42 g |
| Customs tariff number | 85366990 |
| Country of origin | IN |

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Technical data

Product properties

| | |
|-----------------------|-----------------------|
| Product type | PCB connector |
| Product family | ISPC 5/...-STF |
| Product line | COMBICON Connectors L |
| Type | Inverted |
| Number of positions | 10 |
| Pitch | 7.62 mm |
| Number of connections | 10 |
| Number of rows | 1 |
| Number of potentials | 10 |
| Mounting type | Screw flange |

Electrical properties

Properties

| | |
|-----------------------------|---------|
| Nominal current I_N | 32 A |
| Nominal voltage U_N | 1000 V |
| Contact resistance | 0.55 mΩ |
| Rated voltage (III/3) | 1000 V |
| Rated surge voltage (III/3) | 8 kV |
| Rated voltage (III/2) | 1000 V |
| Rated surge voltage (III/2) | 8 kV |
| Rated voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |

Connection data

Connection technology

| | |
|-------------------------|-------------------|
| Type | Inverted |
| Connector system | COMBICON PC 5 |
| Nominal cross section | 6 mm ² |
| Contact connection type | Pin |

Interlock

| | |
|-------------------|-------------------------|
| Locking type | Screw locking mechanism |
| Mounting type | Screw flange |
| Tightening torque | 0.3 Nm ... 0.7 Nm |

Conductor connection

| | |
|------------------------------------|--|
| Connection method | Push-in spring connection |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross-section rigid | 0.2 mm ² ... 10 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 6 mm ² |

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| | |
|---|--|
| Conductor cross-section AWG | 24 ... 8 |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 0.25 mm ² ... 6 mm ² |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 4 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.25 mm ² ... 1.5 mm ² |
| Cylindrical gauge a x b / diameter | 4.3 mm x 4.0 mm / 4.0 mm |
| Stripping length | 15 mm |

Specifications for ferrules without insulating collar

| | |
|--|---|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
| | 1213144 CRIMPFOX CENTRUS 6S |
| | 1213146 CRIMPFOX CENTRUS 6H |
| ferrules without insulating collar, according to DIN 46228-1 | Cross section: 0.5 mm ² ; Length: 10 mm ... 15 mm |
| | Cross section: 0.75 mm ² ; Length: 10 mm ... 15 mm |
| | Cross section: 1 mm ² ; Length: 10 mm ... 15 mm |
| | Cross section: 1.5 mm ² ; Length: 12 mm ... 15 mm |
| | Cross section: 2.5 mm ² ; Length: 12 mm ... 15 mm |
| | Cross section: 4 mm ² ; Length: 12 mm ... 15 mm |
| Cross section: 6 mm ² ; Length: 12 mm ... 15 mm | |

Specifications for ferrules with insulating collar

| | |
|---|---|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
| | 1213144 CRIMPFOX CENTRUS 6S |
| | 1213146 CRIMPFOX CENTRUS 6H |
| ferrules with insulating collar, according to DIN 46228-4 | Cross section: 0.5 mm ² ; Length: 10 mm ... 15 mm |
| | Cross section: 0.75 mm ² ; Length: 12 mm ... 15 mm |
| | Cross section: 1 mm ² ; Length: 12 mm ... 15 mm |
| | Cross section: 1.5 mm ² ; Length: 12 mm ... 15 mm |
| | Cross section: 2.5 mm ² ; Length: 12 mm ... 15 mm |
| | Cross section: 4 mm ² ; Length: 12 mm ... 15 mm |

Material specifications

Material data - contact

| | |
|--|--|
| Note | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201 |
| Contact material | Cu alloy |
| Surface characteristics | Tin-plated |
| Metal surface terminal point (top layer) | Tin (4 µm - 8 µm Sn) |
| Metal surface contact area (top layer) | Tin (4 µm - 8 µm Sn) |

Material data - housing

| | |
|----------------------------|--------------|
| Color (Housing) | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |

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| | |
|---|--------|
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

Dimensions

| | |
|---------------------|----------|
| Dimensional drawing | |
| Pitch | 7.62 mm |
| Width [w] | 91.42 mm |
| Height [h] | 19.8 mm |
| Length [l] | 40.5 mm |

Mounting

Flange

| | |
|-------------------|-------------------|
| Tightening torque | 0.3 Nm ... 0.7 Nm |
|-------------------|-------------------|

Notes

| | |
|--------------------|--|
| Notes on operation | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|--------------------|--|

Mechanical tests

Conductor connection

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Test for conductor damage and slackening

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Repeated connection and disconnection

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Pull-out test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 10 mm ² / solid / > 90 N |

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| | |
|--|---------------------------------------|
| | 6 mm ² / flexible / > 80 N |
|--|---------------------------------------|

Insertion and withdrawal forces

| | |
|-------------------------------------|------------------------|
| Specification | IEC 60512-13-2:2006-02 |
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 7.5 N |
| Withdraw strength per pos. approx. | 5 N |

Resistance of inscriptions

| | |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result | Test passed |

Polarization and coding

| | |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result | Test passed |

Visual inspection

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result | Test passed |

Dimension check

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result | Test passed |

Environmental and real-life conditions

Durability test

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 9.8 kV |
| Contact resistance R ₁ | 0.55 mΩ |
| Contact resistance R ₂ | 0.6 mΩ |
| Insertion/withdrawal cycles | 25 |

Climatic test

| | |
|-----------------------------------|---|
| Specification | ISO 6988:1985-02 |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Thermal stress | 100 °C/168 h |
| Power-frequency withstand voltage | 4.26 kV |

Vibration test

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

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Ambient conditions

| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 12 |

Insulation resistance

| | |
|--|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | $>10^{12} \Omega$ |

Temperature cycles

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Air clearances and creepage distances |

| | |
|--|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 1000 V |
| Rated surge voltage (III/3) | 8 kV |
| minimum clearance value - non-homogenous field (III/3) | 8 mm |
| minimum creepage distance (III/3) | 12.5 mm |
| Rated insulation voltage (III/2) | 1000 V |
| Rated surge voltage (III/2) | 8 kV |
| minimum clearance value - non-homogenous field (III/2) | 8 mm |
| minimum creepage distance (III/2) | 8 mm |
| Rated insulation voltage (II/2) | 1000 V |
| Rated surge voltage (II/2) | 6 kV |
| minimum clearance value - non-homogenous field (II/2) | 5.5 mm |
| minimum creepage distance (II/2) | 5.5 mm |

Packaging specifications

| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

Drawings

Diagram



Type: ISPC 5/...-STF-7,62 with IPC 5/...-GF-7,62

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1749052>

|  cULus Recognized Approval ID: E60425-19920722 | | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|---|--|-----------------------|-----------------------|-------------------|-----------------------------|
| B | | 600 V | 35 A | 24 - 8 | - |
| C | | 600 V | 35 A | 24 - 8 | - |

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002638 |
|-----------|----------|

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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|-------------|
| CO2e kg | 0.1 kg CO2e |
|---------|-------------|

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