

Printed-circuit board connector - SPC 16/ 7-ST-10,16 - 1711310

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PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Push-in spring connection, color: green, contact surface: Silver


The figure shows a 5-pos. version of the product

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
- ✓ Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- ✓ Optimized for tight installation situations: operation and conductor connection from one direction



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 046356 081092 |
| GTIN | 4046356081092 |

Technical data

Item properties

| | |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system | POWER COMBICON 16 |
| Type of contact | Female connector |
| Range of articles | SPC 16/..-ST |
| Pitch | 10.16 mm |
| Number of positions | 7 |
| Connection method | Push-in spring connection |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 7 |

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Technical data

Item properties

| | |
|----------------------|---|
| Number of potentials | 7 |
|----------------------|---|

Electrical parameters

| | |
|-----------------------------|--------|
| Nominal current | 76 A |
| Nom. voltage | 1000 V |
| Rated voltage | 1000 V |
| Rated voltage (III/2) | 1000 V |
| Rated voltage (II/2) | 1000 V |
| Rated surge voltage (III/3) | 8 kV |
| Rated surge voltage (III/2) | 8 kV |
| Rated surge voltage (II/2) | 6 kV |

Connection capacity

| | |
|---|---|
| Connection method | Push-in spring connection |
| pluggable | Yes |
| Conductor cross section solid | 0.75 mm ² ... 16 mm ² |
| Conductor cross section flexible | 0.75 mm ² ... 16 mm ² |
| Conductor cross section AWG / kcmil | 18 ... 4 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.75 mm ² ... 16 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.75 mm ² ... 10 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.75 mm ² ... 4 mm ² |
| Cylindrical gauge a x b / diameter | 4.3 mm x 4.0 mm / 5.4 mm |
| Stripping length | 18 mm |

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 | Silver-plated strip |
| Metal surface terminal point (top layer) | Silver (4 - 8 µm Ag) |
| Metal surface contact area (top layer) | Silver (4 - 8 µm Ag) |

Material data - housing

| | |
|---|--------------|
| Housing color | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| 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 for the product

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Technical data

Dimensions for the product

| | |
|-----------------------------|----------|
| Length [l] | 44.5 mm |
| Width [w] | 71.12 mm |
| Height [h] | 25.1 mm |
| Pitch | 10.16 mm |
| Height (without solder pin) | 25.1 mm |

Packaging information

| | |
|----------------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |
| Denomination packing units | Pcs. |

Ambient conditions

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

Termination and connection method

| | |
|--|---|
| Conductor connection test | The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force. |
| Test result | Test passed |
| Test – repeated connection and release | IEC 60999-1:1999-11 |
| | Test passed |
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

Pull-out test

| | |
|--|--|
| Pull-out test | IEC 60999-1:1999-11 |
| | Test passed |
| Conductor cross section / conductor type / tensile force | 0.75 mm ² / solid / > 30 N |
| | 0.75 mm ² / flexible / > 30 N |
| | 16 mm ² / solid / > 100 N |
| | 16 mm ² / flexible / > 100 N |

Mechanical tests according to standard

| | |
|-------------------------------------|------------------------|
| Test specification | IEC 61984 |
| Visual inspection | IEC 60512-1-1:2002-02 |
| Dimension check | IEC 60512-1-2:2002-02 |
| Resistance of inscriptions | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | IEC 60512-13-2:2006-02 |
| No. of cycles | 50 |
| Insertion strength per pos. approx. | 7 N |
| Withdraw strength per pos. approx. | 7 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |

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Technical data

Air clearances and creepage distances

| | |
|---|---------------------|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 8 mm |
| Minimum clearance - inhomogeneous field (III/2) | 8 mm |
| Minimum clearance - inhomogeneous field (II/2) | 5.5 mm |
| Minimum creepage distance value (III/3) | 12.5 mm |
| Minimum creepage distance value (III/2) | 5 mm |
| Minimum creepage distance value (II/2) | 5 mm |

Electrical tests - Function

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

Temperature cycles

| | |
|--------------------------------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Test current (minimum cross section) | 9 A DC |
| Test current (maximum cross section) | 76 A DC |
| Temperature cycles | 192 |

Current carrying capacity / derating curves

| | |
|------------------|---|
| Caption | Type: SPC 16/...-ST(F)-10,16 with DFK-PC 16/...-ST(F)-10,16 |
| Specification | IEC 61984:2008-10 |
| Reduction factor | 0.8 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| | For number of positions, see diagram |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 7 N |
| Withdraw strength per pos. approx. | 7 N |
| Polarization when inserted requirement >20 N | Test passed |

Durability tests (B)

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Contact resistance R ₁ | 0.5 mΩ |
| Insertion/withdrawal cycles | 50 |
| Contact resistance R ₂ | 0.5 mΩ |
| Impulse withstand voltage at sea level | 9.8 kV |
| Power-frequency withstand voltage | 4.26 kV |
| Insulation resistance, neighboring positions | 4.7 TΩ |

Thermal tests (C)

| | |
|-------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 9 |
| Conductor cross section | 16 mm ² |

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Technical data

Thermal tests (C)

| | |
|---|-------------|
| Test current | 60 A DC |
| Upper limiting temperature requirements <100 °C | Test passed |

Climatic tests (D)

| | |
|--|---|
| Specification | ISO 6988:1985-02 |
| Cold stress | -40 °C/2 h |
| Thermal stress | 100 °C/168 h |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 9.8 kV |
| Power-frequency withstand voltage | 4.26 kV |

Environmental and durability tests (E)

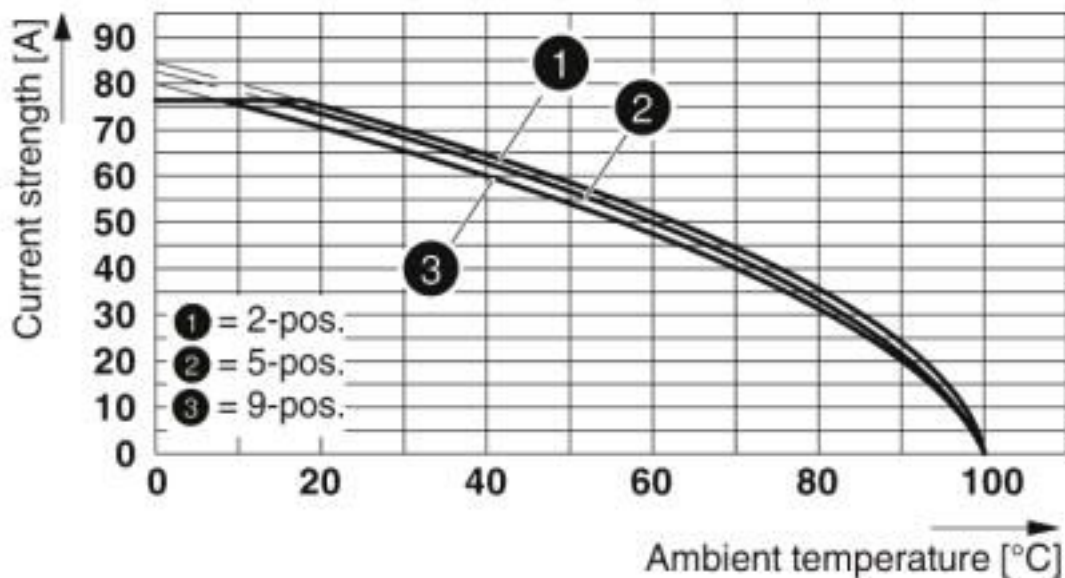
| | |
|---------------------------------------|-------------------------------------|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

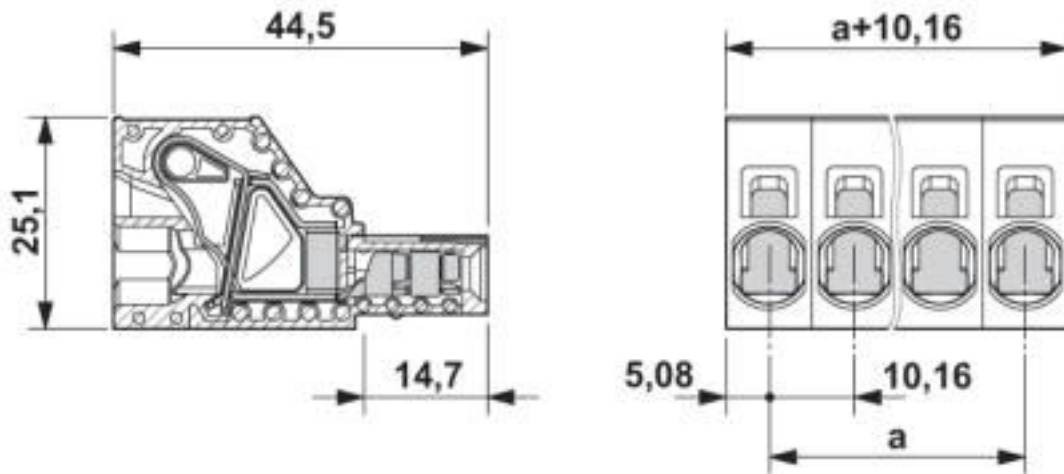
Diagram



Type: SPC 16/...-ST(F)-10,16 with DFK-PC 16/...-ST(F)-10,16

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Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 8.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |

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Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121409 |
|-------------|----------|

Approvals

Approvals

Approvals

IECEE CB Scheme / SEV / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|----------------------------|--------|---|-------------|
| IECEE CB Scheme | | http://www.iecee.org/ | CH-10653-M1 |
| Nominal voltage UN | 1000 V | | |
| Nominal current IN | 76 A | | |
| mm ² /AWG/kcmil | 16 | | |

| | | | |
|----------------------------|--------|---|------------|
| SEV | | https://www.eurofins.ch/de/ | IK-4468-M1 |
| Nominal voltage UN | 1000 V | | |
| Nominal current IN | 76 A | | |
| mm ² /AWG/kcmil | 16 | | |

| | | |
|-----|--|---------|
| EAC | | B.01687 |
|-----|--|---------|

| | | | |
|----------------------------|-------|---|-----------------|
| cULus Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-20040202 |
| | B | C | |
| Nominal voltage UN | 600 V | 600 V | |
| Nominal current IN | 66 A | 66 A | |
| mm ² /AWG/kcmil | 20-4 | 20-4 | |

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Accessories

Accessories

Coding element

Coding profile - CP-PC RD - 1701967



Coding profile, for plugging into the coding ribs of the plug at a later date, insulating material, color: Red

Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm²

Jumper

Plug-in bridge - FBS 2-10 - 3005947



Plug-in bridge, pitch: 10.2 mm, number of positions: 2, color: red

Screwdriver tools

Screwdriver - SZF 2-0,8X4,0 - 1204520



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip

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Accessories

Terminal marking

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5#mm, Number of individual labels: 90000

Additional products

Feed-through header - PCV 6-16/ 7-G1-10,16 - 1998836



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm

Feed-through header - PC 6-16/ 7-G1-10,16 - 1998988



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm

Feed-through header - PC 6-16/ 7-G1U-10,16 - 1996281



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm

Printed-circuit board connector - ISPC 16/ 7-ST-10,16 - 1748590



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Push-in spring connection, color: green, contact surface: Silver

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Accessories

Printed-circuit board connector - IPC 16/ 7-ST-10,16 - 1969425



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

Feed-through header - DFK-PC 6-16/ 7-G-10,16 - 1701508



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm

Feed-through header - DFK-PC 6-16/ 7-GU-10,16 - 1701663



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm

Feed-through header - DFK-PCV 6-16/ 7-G-10,16 - 1702141



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.2 mm

Feed-through plug - DFK-PC 16/ 7-ST-10,16 - 1703425



Feed-through connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm², number of positions: 7, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

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