

PC 16/ 3-STF-10,16 - PCB connector



1967469

<https://www.phoenixcontact.com/in/products/1967469>

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PCB connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PC 16/..-STF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- Screwable flange for superior mechanical stability
- Integrated protective guide prevents incorrect insertion of the conductor underneath the tension sleeve

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1967469 |
| Packing unit | 25 pc |
| Minimum order quantity | 25 pc |
| Sales Key | AAE |
| Product Key | AAEAAB |
| Catalog Page | Page 555 (C-1-2013) |
| GTIN | 4017918939328 |
| Weight per Piece (including packing) | 31.34 g |
| Weight per Piece (excluding packing) | 30.227 g |
| Customs tariff number | 85366990 |
| Country of origin | PL |

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Technical Data

Product properties

| | |
|-----------------------|------------------------|
| Type | Standard |
| Product line | COMBICON Connectors XL |
| Product type | PCB plug |
| Product family | PC 16/...STF |
| Number of positions | 3 |
| Pitch | 10.16 mm |
| Number of connections | 3 |
| Number of rows | 1 |
| Mounting flange | Screw flange |
| Number of potentials | 3 |

Electrical properties

| | |
|-----------------------------|----------------|
| Nominal current I_N | 76 A |
| Nominal voltage U_N | 1000 V |
| Degree of pollution | 3 |
| Contact resistance | 0.3 m Ω |
| 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 | Standard |
| Connector system | COMBICON PC 16 |
| Nominal cross section | 16 mm ² |
| Type of contact | Socket |

Interlock

| | |
|-----------------|---------------|
| Locking type | Screw locking |
| Mounting flange | Screw flange |

Conductor connection

| | |
|--|--|
| Connection method | Screw connection with tension sleeve |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross section rigid | 0.75 mm ² ... 16 mm ² |
| Conductor cross section flexible | 0.75 mm ² ... 16 mm ² |
| Conductor cross section AWG | 18 ... 6 |
| Conductor cross section flexible, with ferrule without plastic | 0.5 mm ² ... 16 mm ² (Only in connection with CRIMPFOX 16 S) |

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| | |
|---|--|
| sleeve | |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.5 mm ² ... 10 mm ² (Only in connection with CRIMPFOX 16 S) |
| 2 conductors with same cross section, solid | 0.75 mm ² ... 6 mm ² |
| 2 conductors with same cross section, flexible | 0.75 mm ² ... 6 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.5 mm ² ... 4 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 6 mm ² |
| Cylindrical gauge a x b / diameter | - / 5.4 mm |
| Stripping length | 12 mm |
| Tightening torque | 1.7 Nm ... 1.8 Nm |

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 | Selective coating |
| Metal surface terminal point (top layer) | Tin (4 - 8 µm Sn) |
| Metal surface terminal point (middle layer) | Nickel flash (Ni flash) |
| Metal surface contact area (top layer) | Silver (2 - 4 µm Ag) |
| Metal surface contact area (middle layer) | Nickel flash (Ni flash) |

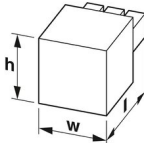
Material data - housing

| | |
|---|--------------|
| Color (Housing) | 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 |

Material data – actuating element

| | |
|-----------|-----|
| Color () | () |
|-----------|-----|

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Pitch | 10.16 mm |

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| | |
|------------|----------|
| Width [w] | 48.24 mm |
| Height [h] | 27.8 mm |
| Length [l] | 41.5 mm |

Mounting

| | |
|-----------------------|-------------|
| Drive form screw head | Slotted (L) |
| Drive form screw head | Slotted (L) |

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

Test for conductor damage and slackening

| | |
|---------------|---------------------|
| 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 | 0.75 mm ² / solid / > 30 N |
| | 0.75 mm ² / flexible / > 30 N |
| | 16 mm ² / solid / > 100 N |
| | 16 mm ² / flexible / > 100 N |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 12 N |
| Withdraw strength per pos. approx. | 8 N |

Torque test

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

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 |
|---------------|-----------------------|

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

Environmental and real-life conditions

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) |
| Sweep speed | 5g (60.1 Hz ... 150 Hz) |
| Test duration per axis | 2.5 h |

Durability test

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 9.8 kV |
| Contact resistance R_1 | 0.3 m Ω |
| Contact resistance R_2 | 0.3 m Ω |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 M Ω |

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 |

Shocks

| | |
|-----------------|-----------------------------------|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 30g |
| Shock duration | 18 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Ambient conditions

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

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 9 |

Insulation resistance

| | |
|---------------|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
|---------------|-----------------------|

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| | |
|--|--------|
| Insulation resistance, neighboring positions | > 5 MΩ |
|--|--------|

Air clearances and creepage distances |

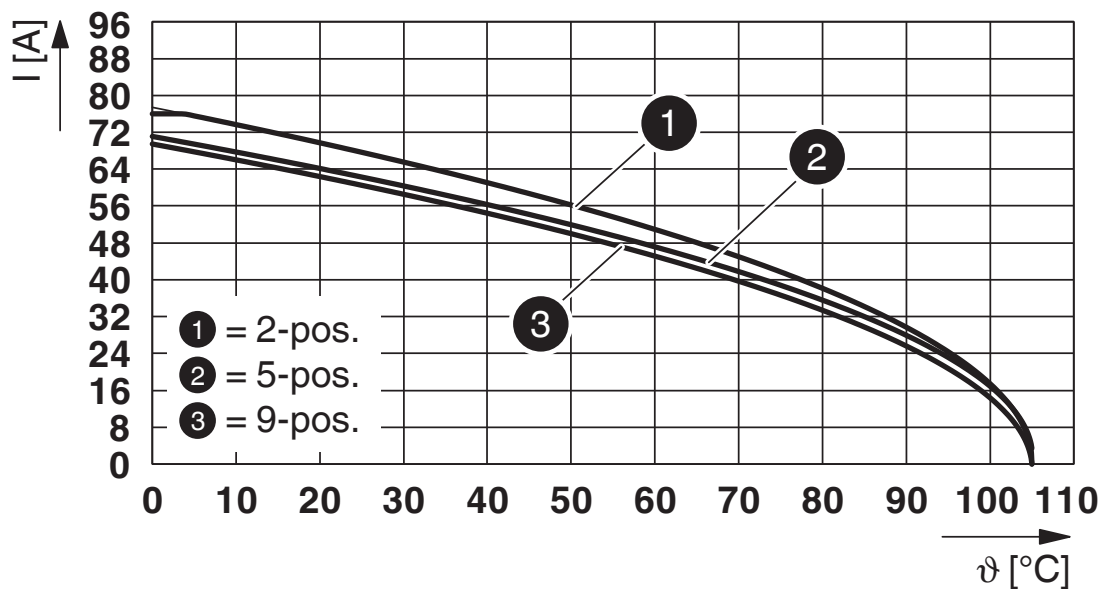
| | |
|--|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 1000 V |
| Rated surge voltage (III/3) | 8 kV |
| minimum clearance value - non-homogenous field (III/3)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

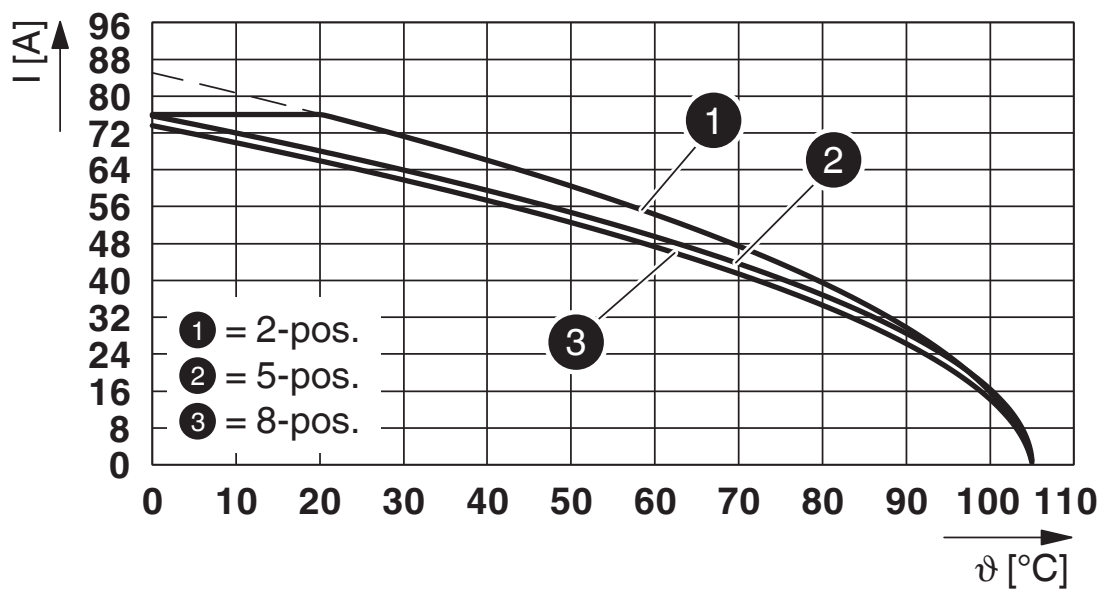
Drawings

Diagram

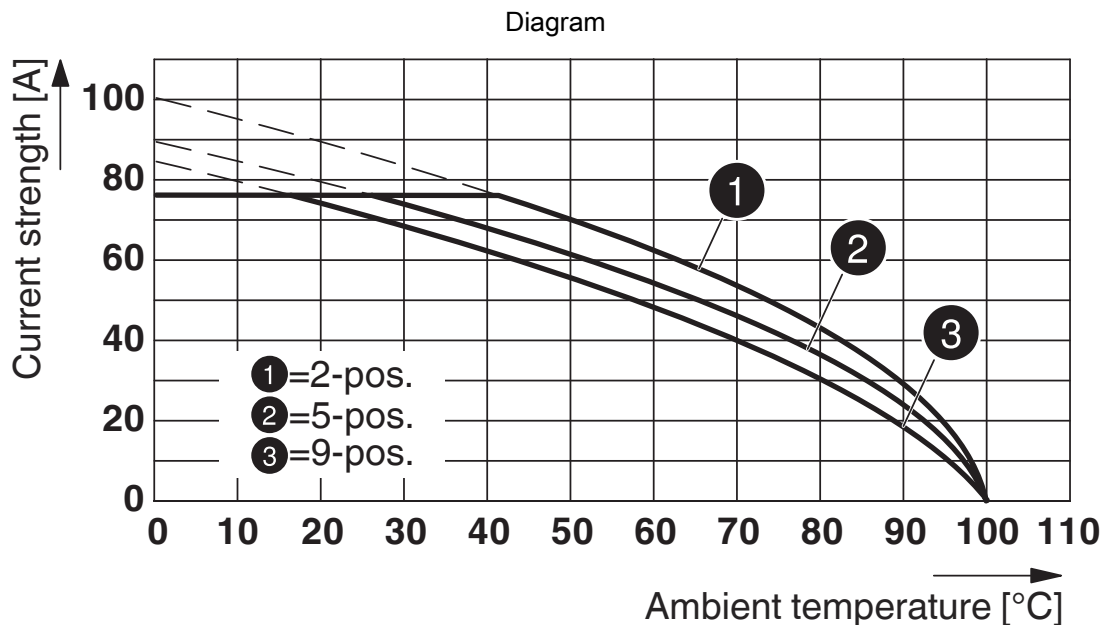


Type: PC 16/...-STF-10,16 with PC 6-16/...-G1F-10,16

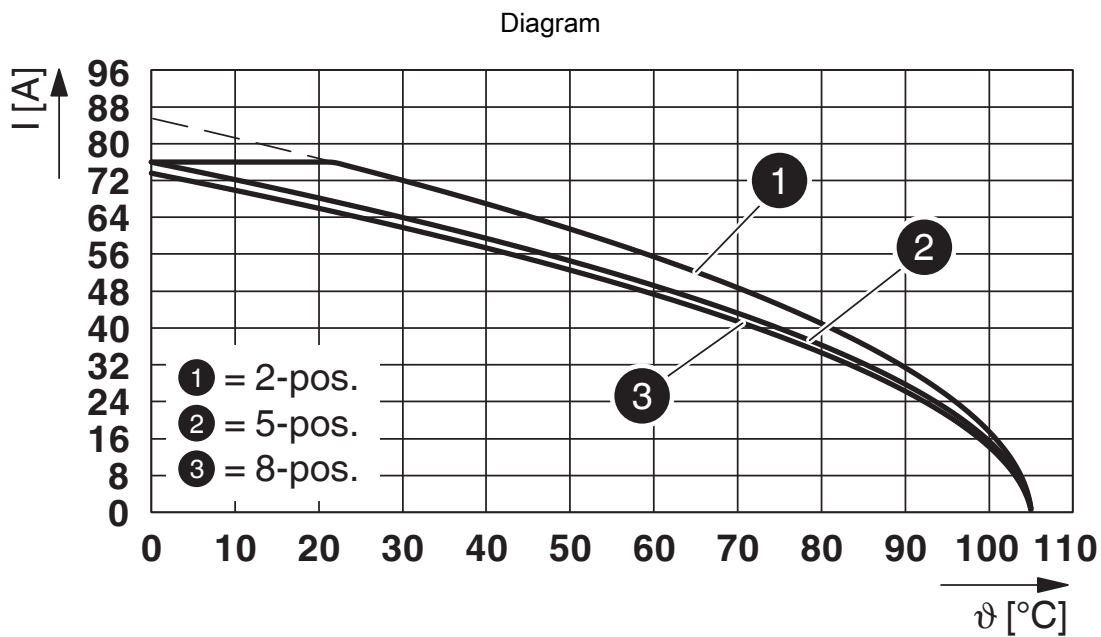
Diagram



Type: PC 16/...-STF-10,16 with PCV 6-16/...-G1F-10,16



Type: PC 16/...-STF-10,16 with IPC 16/...-STGF-10,16



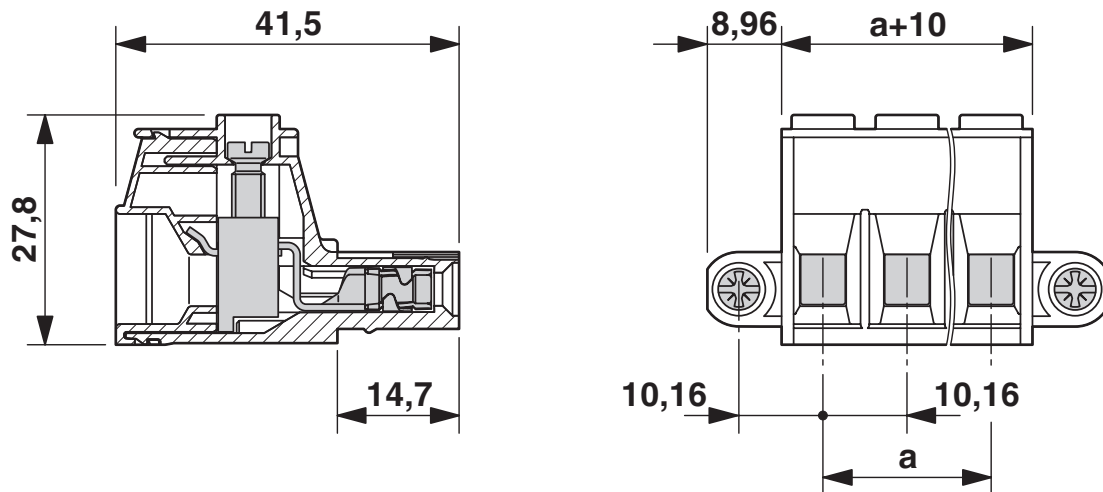
Type: PC 16/...-STF-10,16 with PC 6-16/...-GF-10,16

PC 16/ 3-STF-10,16 - PCB connector

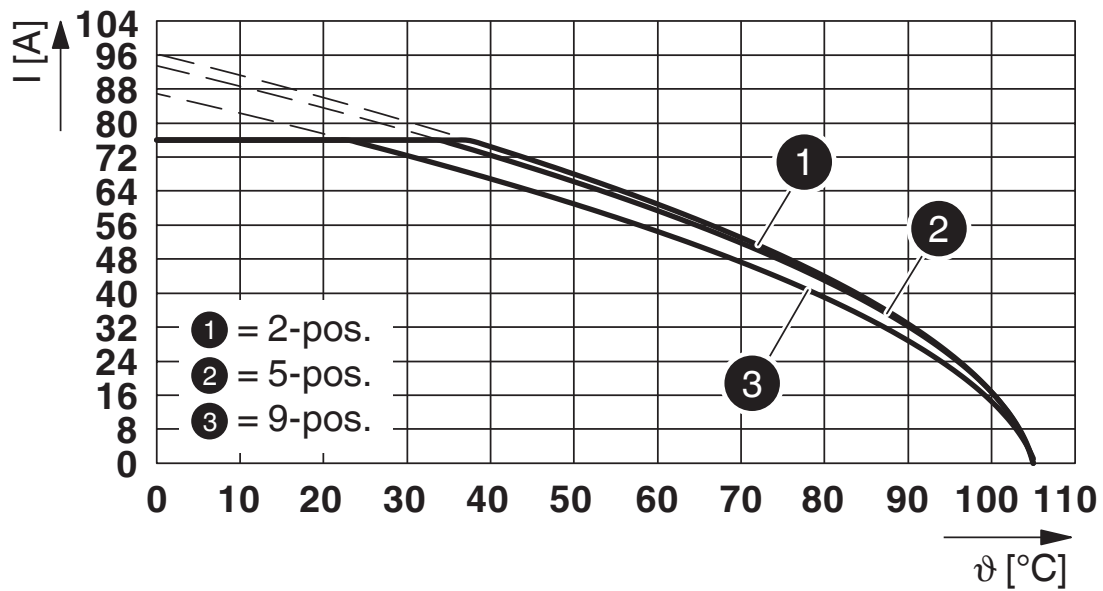
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Dimensional drawing



Diagram

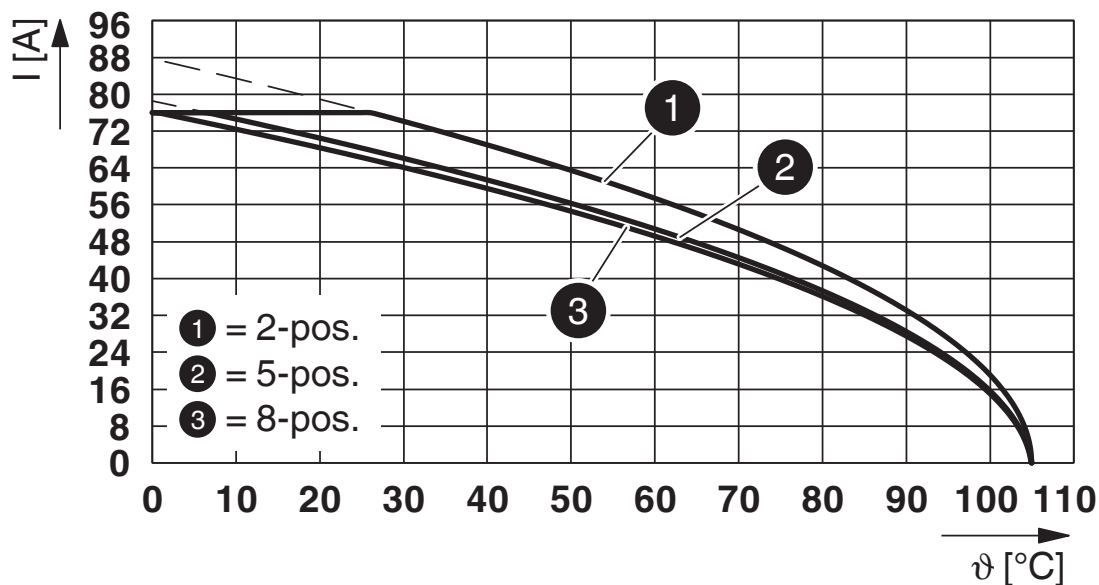


Type: PC 16/...-STF-10,16 with ISPC 16/...-STGF-10,16

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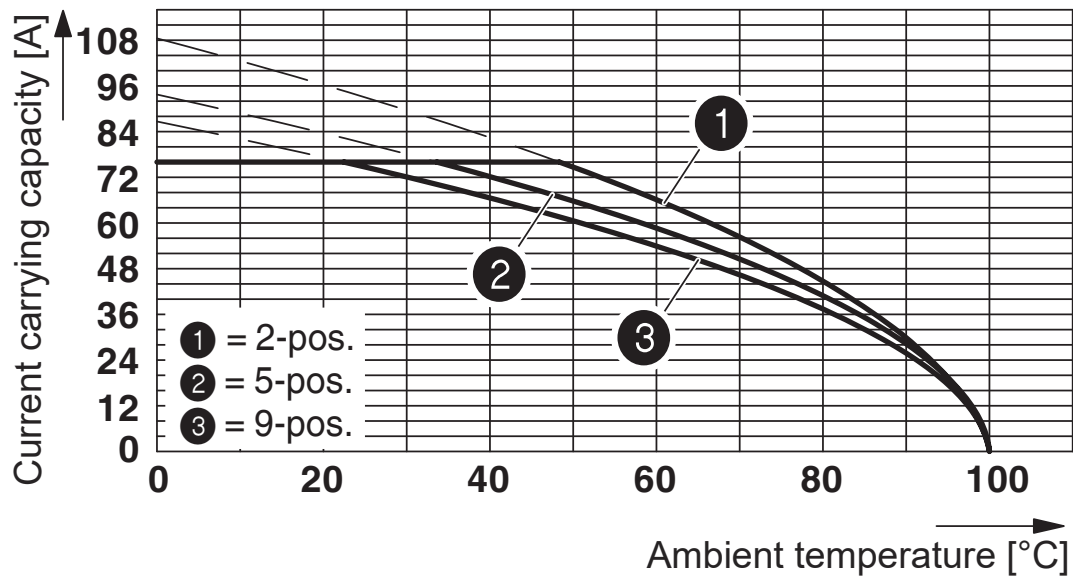
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Diagram



Type: PC 16/...-STF-10,16 with PCV 6-16/...-GF-10,16

Diagram



Type: PC 16/...-STF-10,16 with DFK-PC 16/...-STF-10,16

PC 16/ 3-STF-10,16 - PCB connector



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Approvals



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-20040202

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 600 V | 55 A | 20 - 6 | - |
| | 600 V | 55 A | 20 - 6 | - |



IECEE CB Scheme

Approval ID: DE1-66677

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | - | 76 A | - | 0.75 - 16 |



VDE Zeichengenehmigung

Approval ID: 40055586

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | - | 76 A | - | 0.75 - 16 |

PC 16/ 3-STF-10,16 - PCB connector



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27460202 |
| ECLASS-12.0 | 27460202 |
| ECLASS-13.0 | 27460202 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002638 |
|----------|----------|

UNSPSC

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

PC 16/ 3-STF-10,16 - PCB connector



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Environmental Product Compliance

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

PC 16/ 3-STF-10,16 - PCB connector

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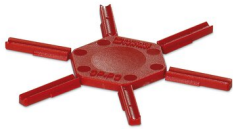
Accessories

CP-PC RD - Coding profile

1701967

<https://www.phoenixcontact.com/in/products/1701967>

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



SZS 1,0X4,0 VDE - Screwdriver

1205066

<https://www.phoenixcontact.com/in/products/1205066>

Screwdriver, slot-headed, VDE insulated, size: 1.0 x 4.0 x 100 mm, 2-component grip, with non-slip grip



PC 16/ 3-STF-10,16 - PCB connector



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CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/in/products/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

PCV 6-16/ 3-G1F-10,16 - PCB header

1998878

<https://www.phoenixcontact.com/in/products/1998878>



PCB headers, nominal cross section: 16 mm², color: green, nominal current: 76 A (41 A in combination with PC 6 plug), rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PCV 6-16/...-G1F, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

PC 16/ 3-STF-10,16 - PCB connector

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PC 6-16/ 3-G1F-10,16 - PCB header

1999013

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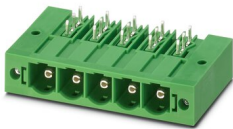


PCB headers, nominal cross section: 16 mm², color: green, nominal current: 76 A (41 A in combination with PC 6 plug), rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PC 6-16/..-G1F, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

PC 6-16/ 3-G1FU-10,16 - PCB header

1996320

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PCB headers, nominal cross section: 16 mm², color: green, nominal current: 76 A (41 A in combination with PC 6 plug), rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: PC 6-16/..-G1FU, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: reversed, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

PC 16/ 3-STF-10,16 - PCB connector

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IPC 16/ 3-STGF-10,16 - PCB connector

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PCB connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: IPC 16/..-STGF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

ISPC 16/ 3-STGF-10,16 - PCB connector

1748710

<https://www.phoenixcontact.com/in/products/1748710>



PCB connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: ISPC 16/..-STGF, pitch: 10.16 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON PC 16, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

PC 16/ 3-STF-10,16 - PCB connector

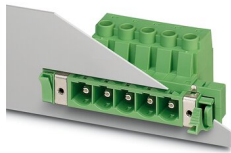
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DFK-PC 16/ 3-STF-10,16 - Feed-through plug

1703467

<https://www.phoenixcontact.com/in/products/1703467>

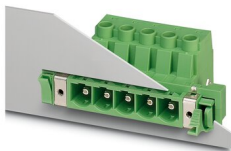


Feed-through connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: DFK-PC 16/...-STF, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

DFK-PC 16/ 3-STF-SH-10,16 - Feed-through plug

1703629

<https://www.phoenixcontact.com/in/products/1703629>



Feed-through connector, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: DFK-PC 16/...-STF-SH, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, solder pin [P]: 4.1 mm, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PC 16/ 3-STF-10,16 - PCB connector



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DFK-PC 6-16/ 3-GF-10,16 - Feed-through header

1701540

<https://www.phoenixcontact.com/in/products/1701540>



Feed-through header, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: DFK-PC 6-16/...-GF, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

DFK-PC 6-16/ 3-GF-SH-10,16 - Feed-through header

1701948

<https://www.phoenixcontact.com/in/products/1701948>



Feed-through header, nominal cross section: 16 mm², color: green, nominal current: 76 A, rated voltage (III/2): 1000 V, contact surface: Silver, type of contact: Pin, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: DFK-PC 6-16/...-GF-SH, pitch: 10.16 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 16, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

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PHOENIX CONTACT (I) Pvt. Ltd.
A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420
info@phoenixcontact.co.in