

# Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

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PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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
- Screwable flange for superior mechanical stability



## Key Commercial Data

Packing unit	50 pc
GTIN	 4 046356 081191
GTIN	4046356081191

## 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/...STF
Pitch	10.16 mm
Number of positions	9
Connection method	Push-in spring connection
Locking	Screw flange
Number of levels	1

# Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

## Technical data

### Item properties

Number of connections	9
Number of potentials	9

### 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 <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section flexible	0.75 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section AWG / kcmil	18 ... 4
Conductor cross section flexible, with ferrule without plastic sleeve	0.75 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.75 mm <sup>2</sup> ... 10 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.75 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	4.3 mm x 4.0 mm / 5.4 mm
Stripping length	18 mm

### Flange specifications

Type of locking	Screw locking
Mounting flange	Screw flange
Torque	0.3 Nm ... 0.7 Nm

### 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

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## Technical data

### Material data - housing

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

Length [ l ]	44.5 mm
Width [ w ]	109.2 mm
Height [ h ]	25.1 mm
Pitch	10.16 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 <sup>2</sup> / solid / > 30 N
	0.75 mm <sup>2</sup> / flexible / > 30 N
	16 mm <sup>2</sup> / solid / > 100 N
	16 mm <sup>2</sup> / 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

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## Technical data

### Mechanical tests according to standard

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

### 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
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### 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 <sub>1</sub>	0.5 mΩ
Insertion/withdrawal cycles	50
Contact resistance R <sub>2</sub>	0.5 mΩ
Impulse withstand voltage at sea level	9.8 kV
Power-frequency withstand voltage	4.26 kV

# Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

## Technical data

### Durability tests (B)

Insulation resistance, neighboring positions	4.7 TΩ
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### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	9
Conductor cross section	16 mm <sup>2</sup>
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 <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /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

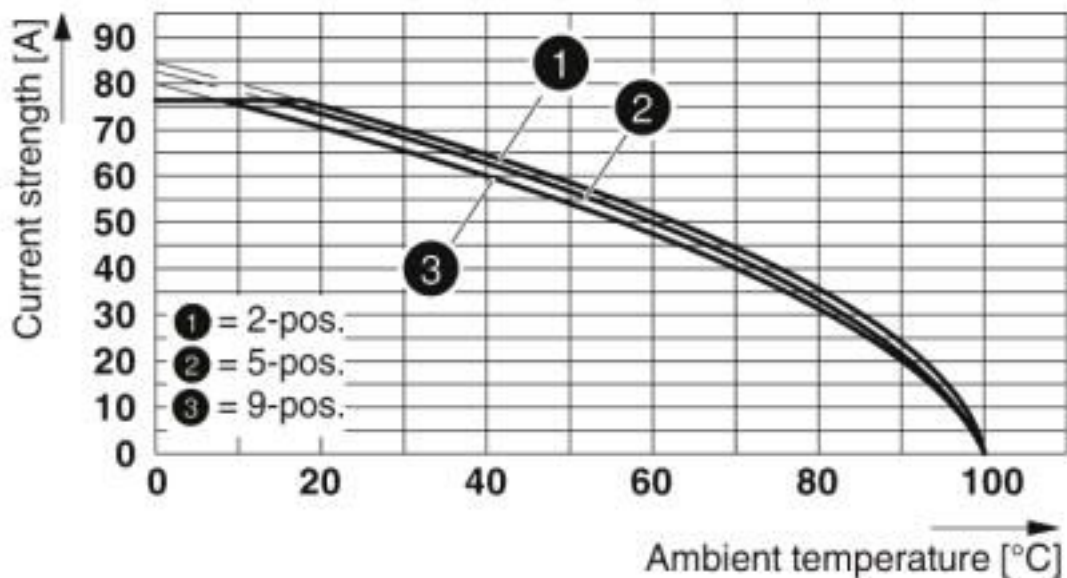
### Environmental Product Compliance

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

## Drawings

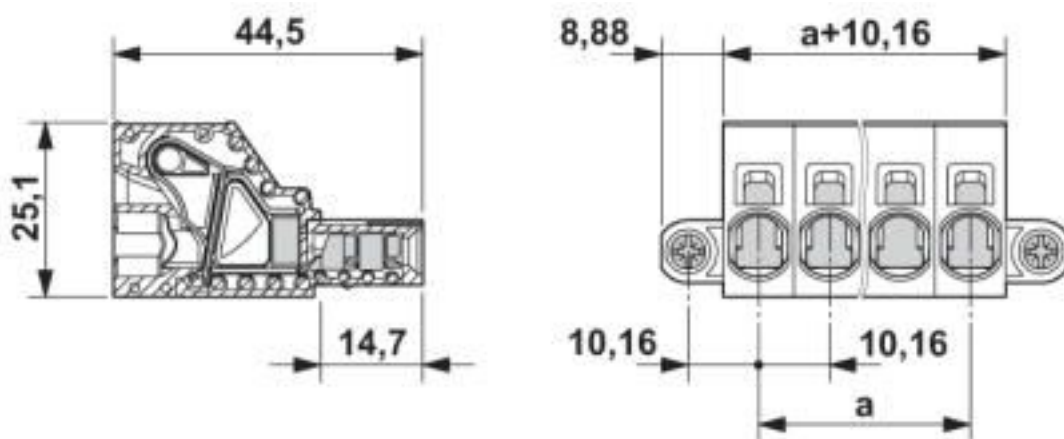
# Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

Diagram



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

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

# Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

## Classifications

### eCl@ss

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
UNSPSC 21.0	39121409

## Approvals


### Approvals

#### Approvals

IECEE CB Scheme / SEV / EAC / cULus Recognized

#### Ex Approvals

### Approval details

IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	CH-10653-M1
Nominal voltage UN	1000 V		
Nominal current IN	76 A		
mm <sup>2</sup> /AWG/kcmil	16		

# Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

## Approvals

SEV		<a href="https://www.eurofins.ch/de/">https://www.eurofins.ch/de/</a>	IK-4468-M1
Nominal voltage UN		1000 V	
Nominal current IN		76 A	
mm <sup>2</sup> /AWG/kcmil		16	

EAC		B.01687
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-20040202
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	66 A	66 A	
mm <sup>2</sup> /AWG/kcmil	20-4	20-4	

## 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 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp



## Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

### Accessories

Crimping pliers - CRIMPFOX 16 S - 1207983



Crimping pliers for ferrules up to 16 mm<sup>2</sup>

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### Jumper

Plug-in bridge - FBS 2-10 - 3005947



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

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### 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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### 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

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### Additional products

Feed-through header - PCV 6-16/ 9-G1F-10,16 - 1996414



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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 - SPC 16/ 9-STF-10,16 - 1711446

### Accessories

#### Feed-through header - PC 6-16/ 9-G1F-10,16 - 1996401



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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/ 9-G1FU-10,16 - 1996388



PCB headers, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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/ 9-STGF-10,16 - 1748778



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, pitch: 10.16 mm, connection method: Push-in spring connection, color: green, contact surface: Silver

#### Printed-circuit board connector - IPC 16/ 9-STGF-10,16 - 1975888



PCB connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

#### Feed-through header - DFK-PC 6-16/ 9-GF-10,16 - 1701605



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.1 mm

## Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

### Accessories

#### Feed-through header - DFK-PC 6-16/ 9-GFU-10,16 - 1701760



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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/ 9-GF-SH-10,16 - 1702002



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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/ 9-GFU-SH-10,16 - 1702086



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, 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/ 9-GF-10,16 - 1702329



Feed-through header, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, pitch: 10.16 mm, color: green, contact surface: Silver, mounting: Wave soldering, pin layout: Linear pinning

#### Feed-through plug - DFK-PC 16/ 9-STF-10,16 - 1703522



Feed-through connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver

## Printed-circuit board connector - SPC 16/ 9-STF-10,16 - 1711446

### Accessories

Feed-through plug - DFK-PC 16/ 9-STF-SH-10,16 - 1703687



Feed-through connector, nominal current: 76 A, rated voltage (III/2): 1000 V, nominal cross section: 16 mm<sup>2</sup>, number of positions: 9, pitch: 10.16 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Silver, solder pin [P]: 4.1 mm

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