

# Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

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PCB connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



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
- ✓ 600 V UL approval in the smallest of dimensions



## Key Commercial Data

Packing unit	50 pc
GTIN	 4 046356 037969
GTIN	4046356037969

## Technical data

### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	POWER COMBICON 5
Type of contact	Female connector
Range of articles	SPC 5/..-STF
Pitch	7.62 mm
Number of positions	12
Connection method	Push-in spring connection
Locking	Screw flange

# Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

## Technical data

### Item properties

Number of levels	1
Number of connections	12
Number of potentials	12

### Electrical parameters

Nominal current	41 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	0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 8
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Stripping length	15 mm

### Specifications for ferrules

Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules without insulating collar, according to DIN 46228-1	Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm
	Cross section: 0.75 mm <sup>2</sup> ; Length: 10 mm ... 15 mm
	Cross section: 1 mm <sup>2</sup> ; Length: 10 mm ... 15 mm
	Cross section: 1.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm
	Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm
	Cross section: 4 mm <sup>2</sup> ; Length: 12 mm ... 15 mm
Recommended crimping pliers	1212034 CRIMPFOX 6
Ferrules with insulating collar, according to DIN 46228-4	Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm
	Cross section: 0.75 mm <sup>2</sup> ; Length: 12 mm ... 15 mm
	Cross section: 1 mm <sup>2</sup> ; Length: 12 mm ... 15 mm
	Cross section: 1.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm
	Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm
	Cross section: 4 mm <sup>2</sup> ; Length: 12 mm ... 15 mm

### Flange specifications

# Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

## Technical data

### 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

### 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

Length [ l ]	38.5 mm
Width [ w ]	106.66 mm
Height [ h ]	19.8 mm
Pitch	7.62 mm
Height (without solder pin)	19.8 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

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## Technical data

### Termination and connection method

	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	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	6 mm <sup>2</sup> / flexible / > 80 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.	5 N
Withdraw strength per pos. approx.	4 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)	5 A DC
Test current (maximum cross section)	32 A DC
Temperature cycles	192

### Current carrying capacity / derating curves

Caption	Type: SPC 5/...-STF-7,62 with DFK-PC 5/...-STF-7,62 Conductor cross section: 10 mm <sup>2</sup>
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## Technical data

### Current carrying capacity / derating curves

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.	5 N
Withdraw strength per pos. approx.	4 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>	0.6 mΩ
Impulse withstand voltage at sea level	9.8 kV
Power-frequency withstand voltage	4.26 kV

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	12
Conductor cross section	6 mm <sup>2</sup>
Test current	32 A
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

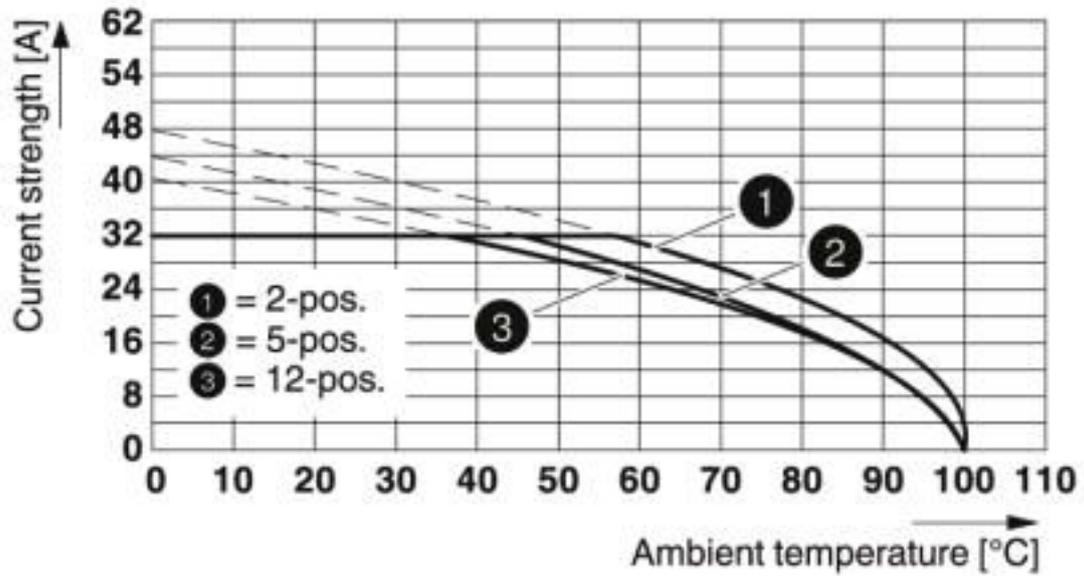
### Environmental Product Compliance

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

## Drawings

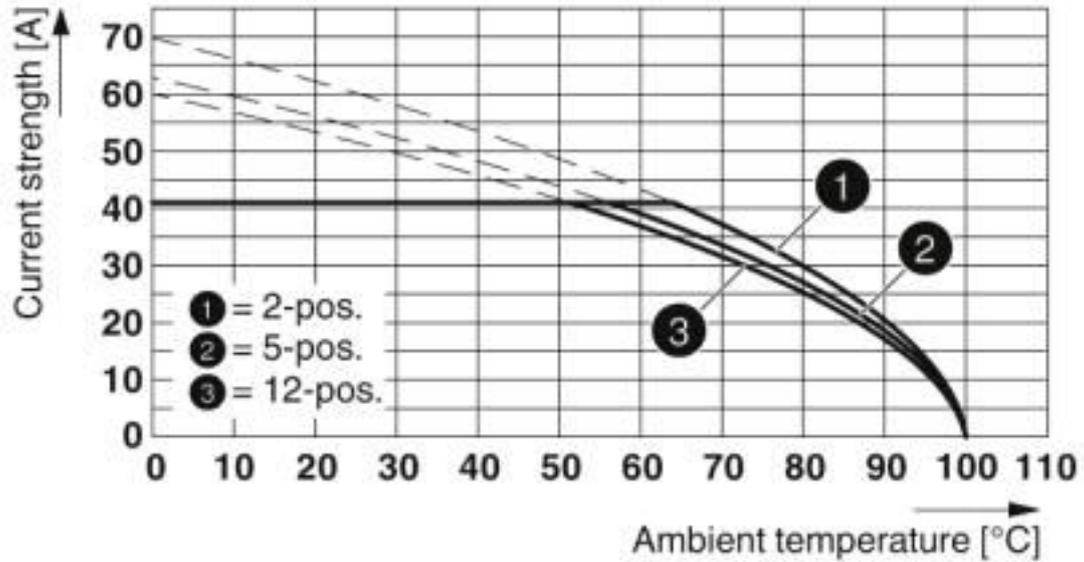
# Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

Diagram



Derating curve for: SPC 5/...-ST-7,62 with PC 5/...-G-7,62

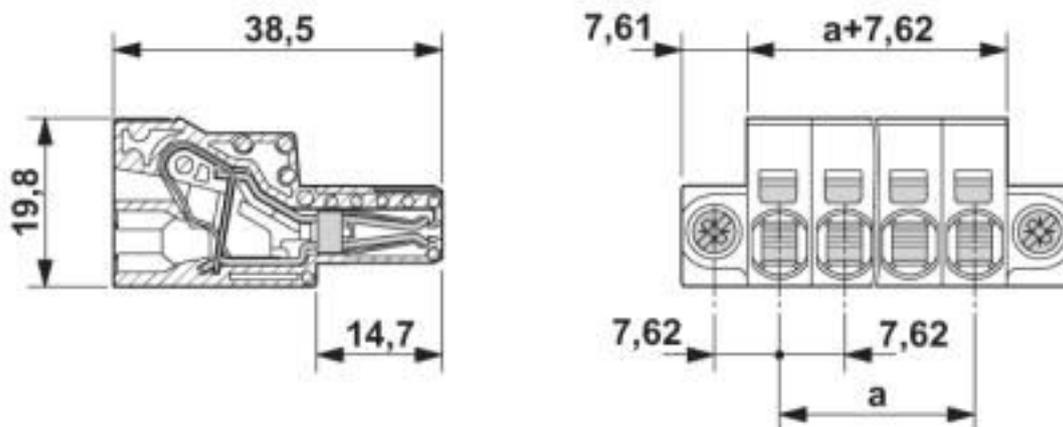
Diagram



Type: SPC 5/...-STF-7,62 with DFK-PC 5/...-STF-7,62  
Conductor cross section: 10 mm<sup>2</sup>

# Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

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
UNSPSC 21.0	39121409

# Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

## Approvals

### Approvals

Approvals

EAC / cULus Recognized

Ex Approvals

### Approval details

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>	E60425-19920722
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	B	C
Nominal voltage UN	600 V	600 V
Nominal current IN	35 A	35 A
mm <sup>2</sup> /AWG/kcmil	24-8	24-8

## Accessories

### Accessories

#### Cable end sleeve

Ferrule - AI 4 -15 GY - 1200264



Ferrule, sleeve length: 15 mm, length: 23 mm, color: gray

### 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

## Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

### Accessories

#### 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

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#### Labeled terminal marker

Marker card - SK 7,62/3,8:FORTL.ZAHLEN - 0804549



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: 7.62 x 3.8 mm

Marker card - SK 3,8 REEL P7,62 WH CUS - 0825128



Marker card, Card, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, for terminal block width: 7.62 mm, lettering field size: continuous x 3.8#mm

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#### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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#### Terminal marking

Marker card - SK U/3,8 WH:UNBEDRUCKT - 0803906



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

## Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

### Accessories

Marker strip - SK 3,8 WH:REEL - 0805218



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: 90000 mm, lettering field size: continuous x 3.8#mm, Number of individual labels: 210000

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### Additional products

Printed-circuit board connector - DFK-PC 5/12-GFU-7,62 - 1716056



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.26 mm

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Printed-circuit board connector - DFK-PC 5/12-GF-SH-7,62 - 1716166



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

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Printed-circuit board connector - DFK-PC 5/12-GFU-SH-7,62 - 1716276



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.26 mm

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Printed-circuit board connector - DFK-PCV 5/12-GF-7,62 - 1716496



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

## Printed-circuit board connector - SPC 5/12-STF-7,62 - 1996223

### Accessories

#### Printed-circuit board connector - PC 5/12-GF-7,62 - 1720893



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

#### Printed-circuit board connector - PCV 5/12-GF-7,62 - 1721009



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 5 mm

#### Printed-circuit board connector - PC 5/12-GFU-7,62 - 1721119



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.2 mm

#### Printed-circuit board connector - DFK-PC 5/12-GF-7,62 - 1727799



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 12, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.9 mm

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