

# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

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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: 7, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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

## 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
- 600 V UL approval in the smallest of dimensions



## Key Commercial Data

Packing unit	50 pc
GTIN	
GTIN	4046356522915

## 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	PC 5/..-ST1
Pitch	7.62 mm
Number of positions	7
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M3
Locking	without

# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

## Technical data

### Item properties

Number of levels	1
Number of connections	7
Number of potentials	7

### 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	Screw connection with tension sleeve
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 ... 10
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 same cross section, solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	3.6 mm x 3.1 mm / 3.4 mm
Stripping length	10 mm
Torque	0.5 Nm ... 0.8 Nm ( $\leq 4 \text{ mm}^2$ is 0.5 Nm to 0.6 Nm, $> 4 \text{ mm}^2$ is 0.7 Nm to 0.8 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 $\mu\text{m}$ Sn)
Metal surface contact area (top layer)	Tin (4 - 8 $\mu\text{m}$ Sn)

### Material data - housing

Housing color	green (6021)
Insulating material	PA

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## Technical data

### Material data - housing

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 ]	35.25 mm
Width [ w ]	53.29 mm
Height [ h ]	19.7 mm
Pitch	7.62 mm
Height (without solder pin)	19.7 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

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> / solid / > 80 N
	4 mm <sup>2</sup> / flexible / > 60 N
	6 mm <sup>2</sup> / flexible / > 80 N
	10 mm <sup>2</sup> / solid / > 90 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.	8 N
Withdraw strength per pos. approx.	4 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	29 N

### 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

### Current carrying capacity / derating curves

Caption	Type: PC 5/...-ST(F)1-7,62 with PC 5/...-G(F)U-7,62 Conductor cross section: 10 mm <sup>2</sup>
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.	8 N
Withdraw strength per pos. approx.	4 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	0.4 mΩ
Insertion/withdrawal cycles	50
Contact resistance R <sub>2</sub>	0.4 mΩ
Impulse withstand voltage at sea level	7.3 kV
Power-frequency withstand voltage	3.31 kV
Insulation resistance, neighboring positions	> 34 TΩ

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	12

# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

## Technical data

### Thermal tests (C)

Conductor cross section	10 mm <sup>2</sup>
Test current	41 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	7.3 kV
Power-frequency withstand voltage	3.31 kV

### Environmental and durability tests (E)

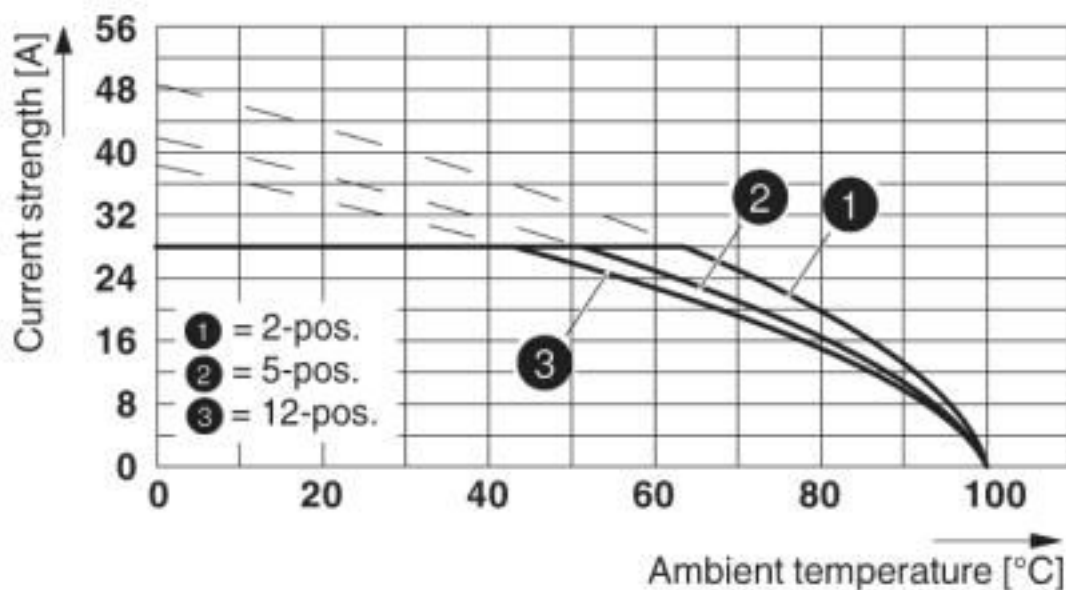
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Back of hand safety with IP10 access probe

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Diagram

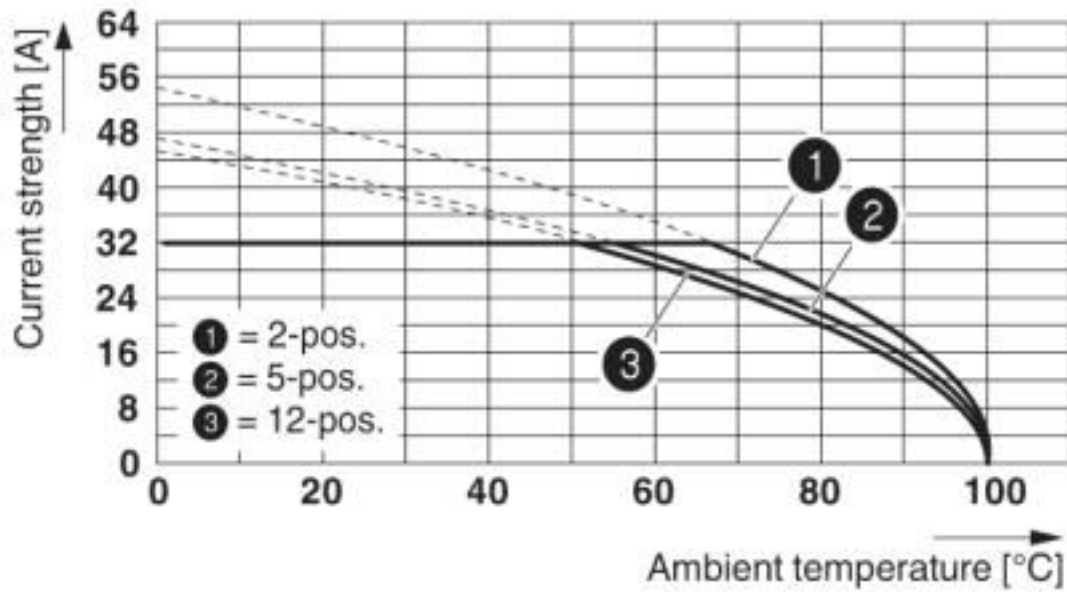


Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62

# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

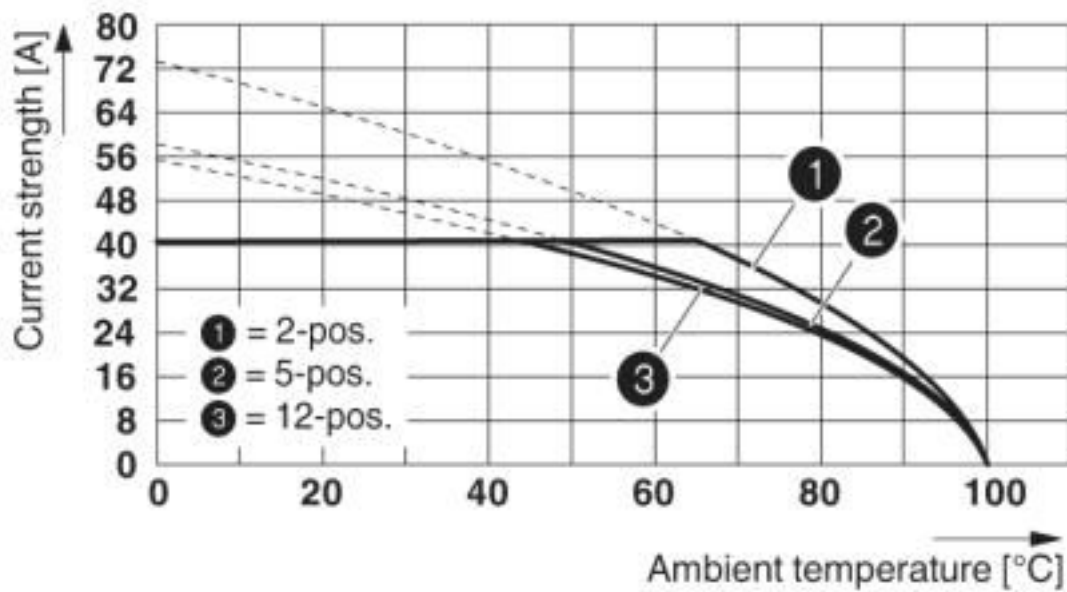
Conductor cross section: 4 mm<sup>2</sup>

Diagram



Derating curve for: PC 5/...-ST1-7,62 with PC 5/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

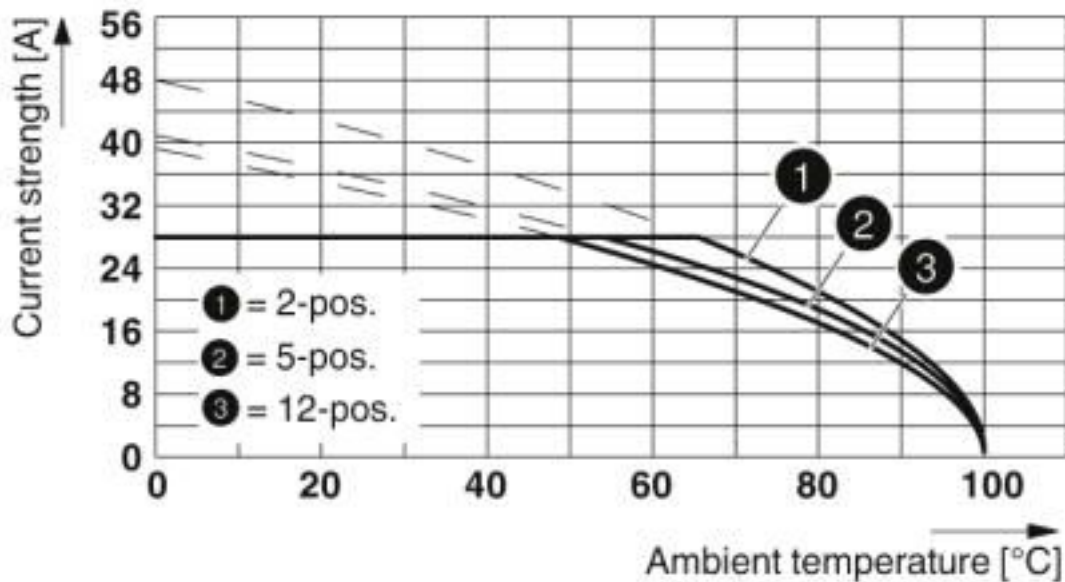
Diagram



Derating curve for: PC 5/...-ST1-7,62 with PC 5/...-G-7,62  
Conductor cross section: 10 mm<sup>2</sup>

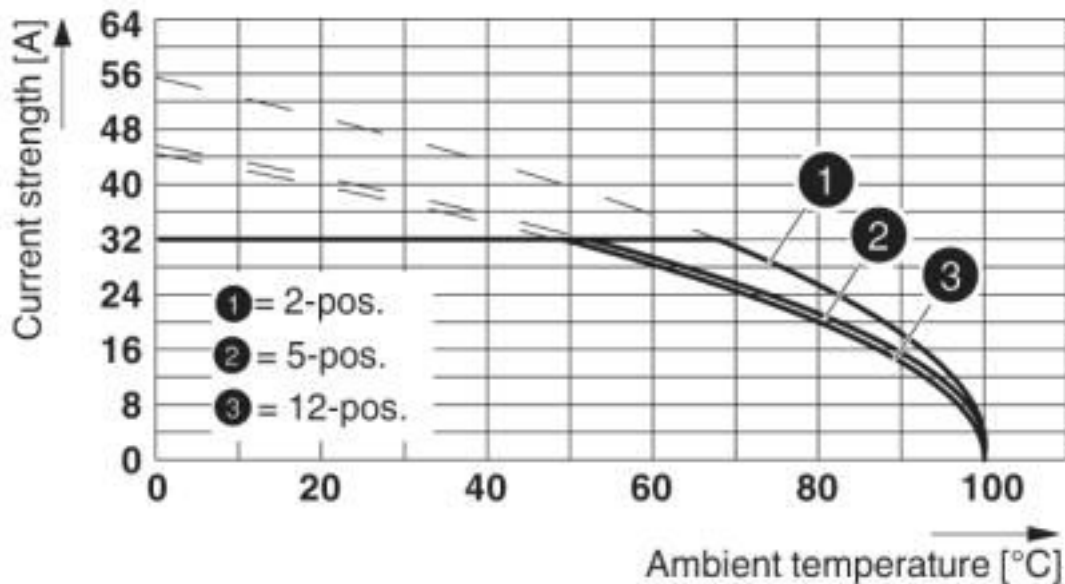
# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

Diagram



Derating curve for: PC 5/...-ST1-7,62 with PCV 4/...-G-7,62  
Conductor cross section: 4 mm<sup>2</sup>

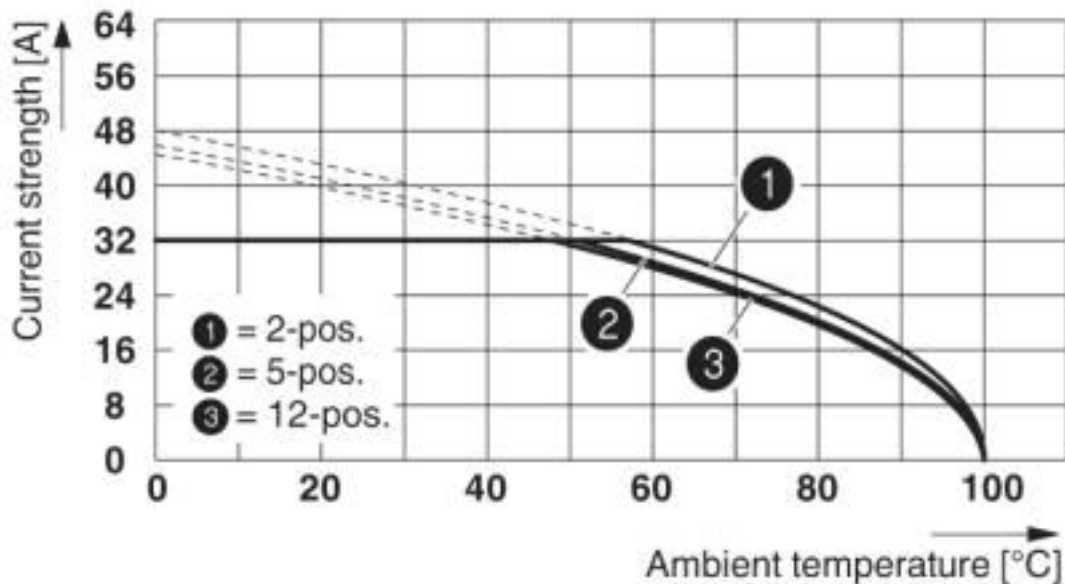
Diagram



Derating curve for: PC 5/...-ST1-7,62 with PCV 4/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

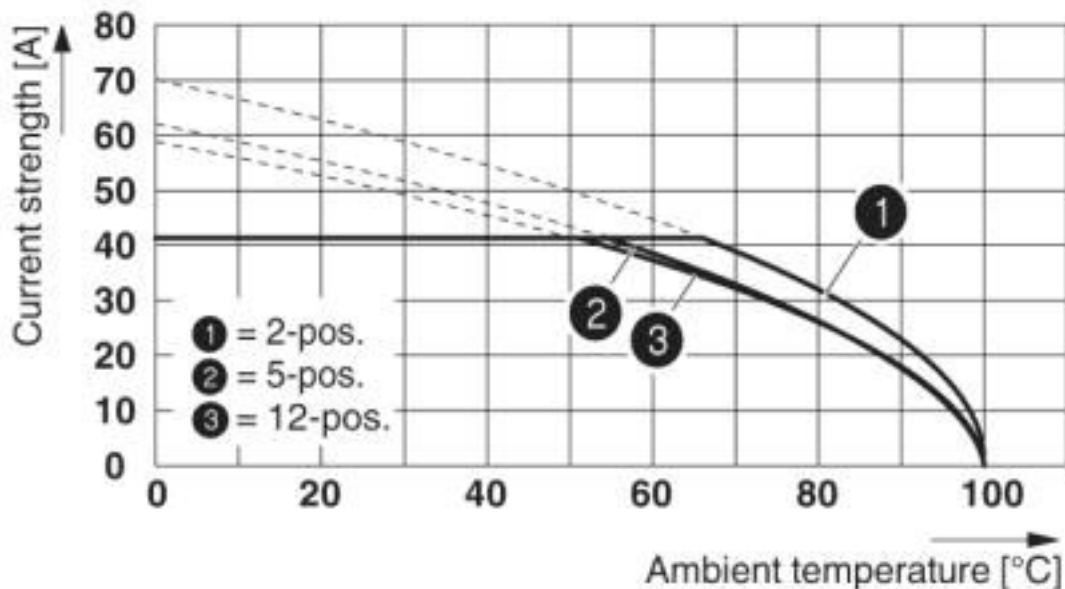
# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

Diagram



Derating curve for: PC 5/...-ST1-7,62 with PCV 5/...-G-7,62  
Conductor cross section: 6 mm<sup>2</sup>

Diagram

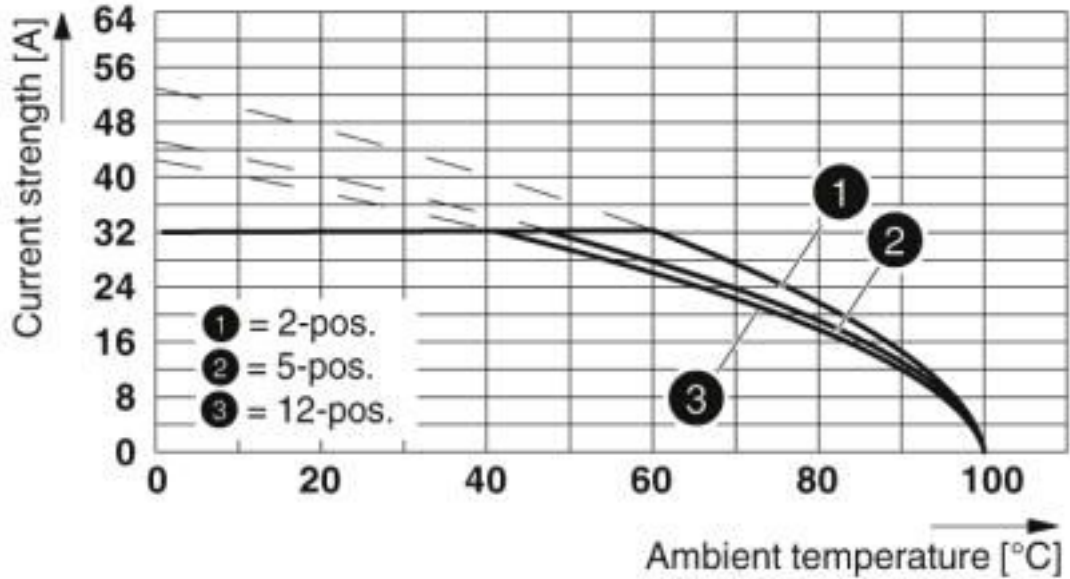


Derating curve for: PC 5/...-ST1-7,62 with PCV 5/...-G-7,62  
Conductor cross section: 10 mm<sup>2</sup>



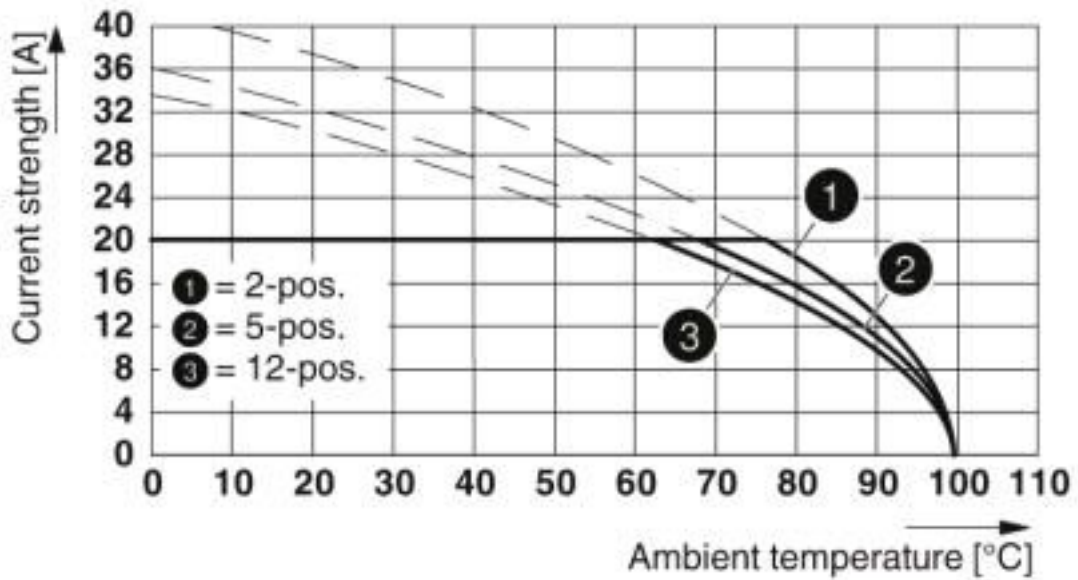
# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 177778

Diagram



Derating curve for: PC 5/...-ST1-7,62 with PC 4/...-G-7,62  
 Conductor cross section: 6 mm<sup>2</sup>

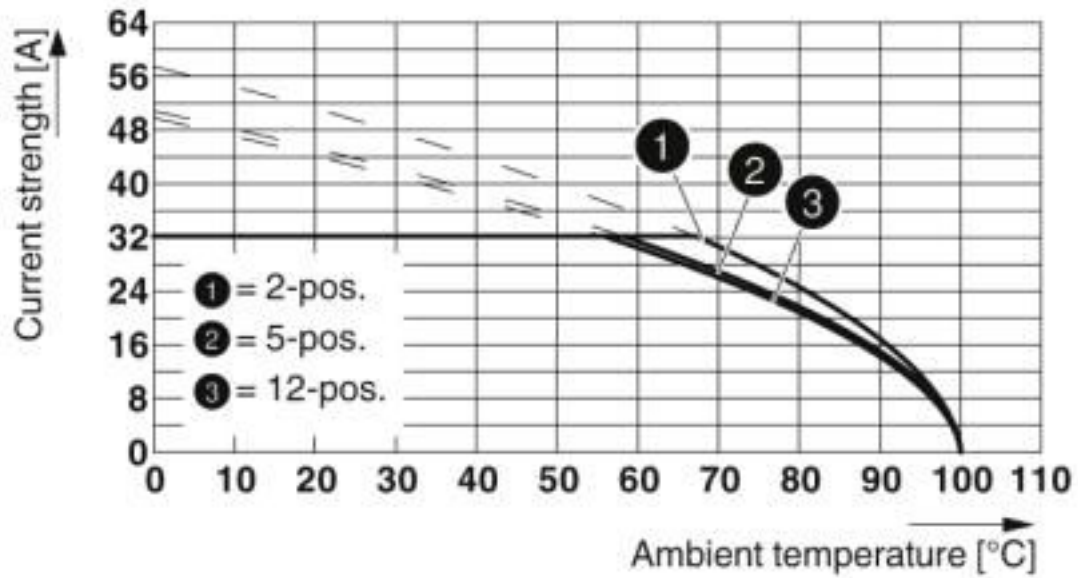
Diagram



Type: PC 5/...-ST1-7,62 with PCVK 4-7,62

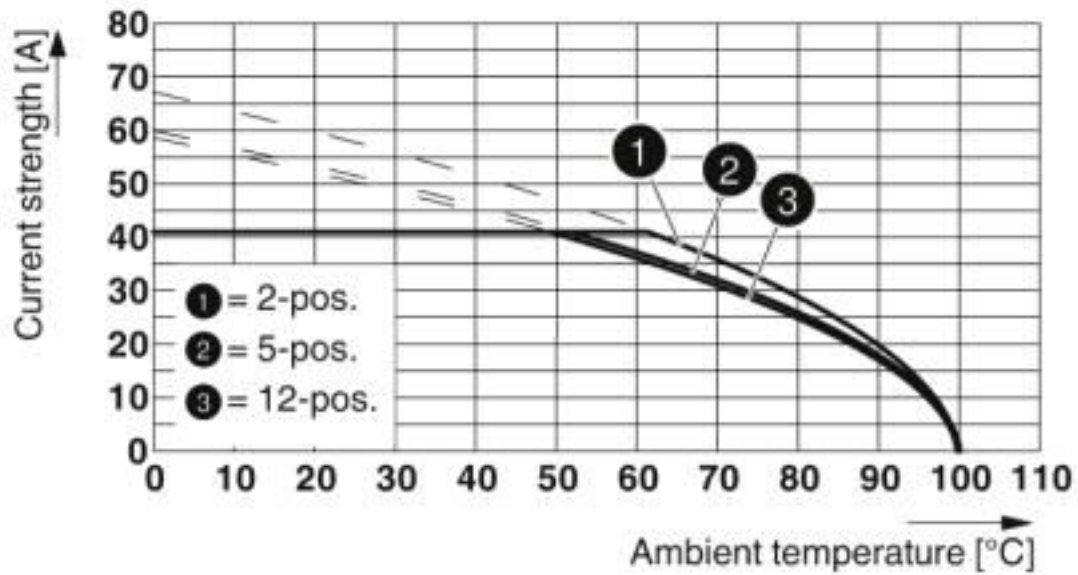
# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

Diagram



Type: PC 5/...-ST(F)1-7,62 with PC 5/...-GU(F)-7,62  
Conductor cross section: 6 mm<sup>2</sup>

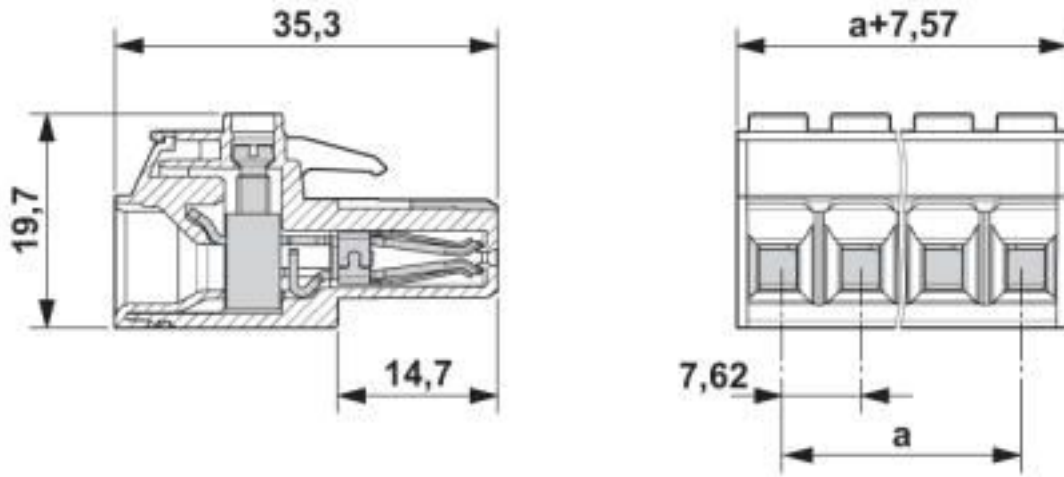
Diagram



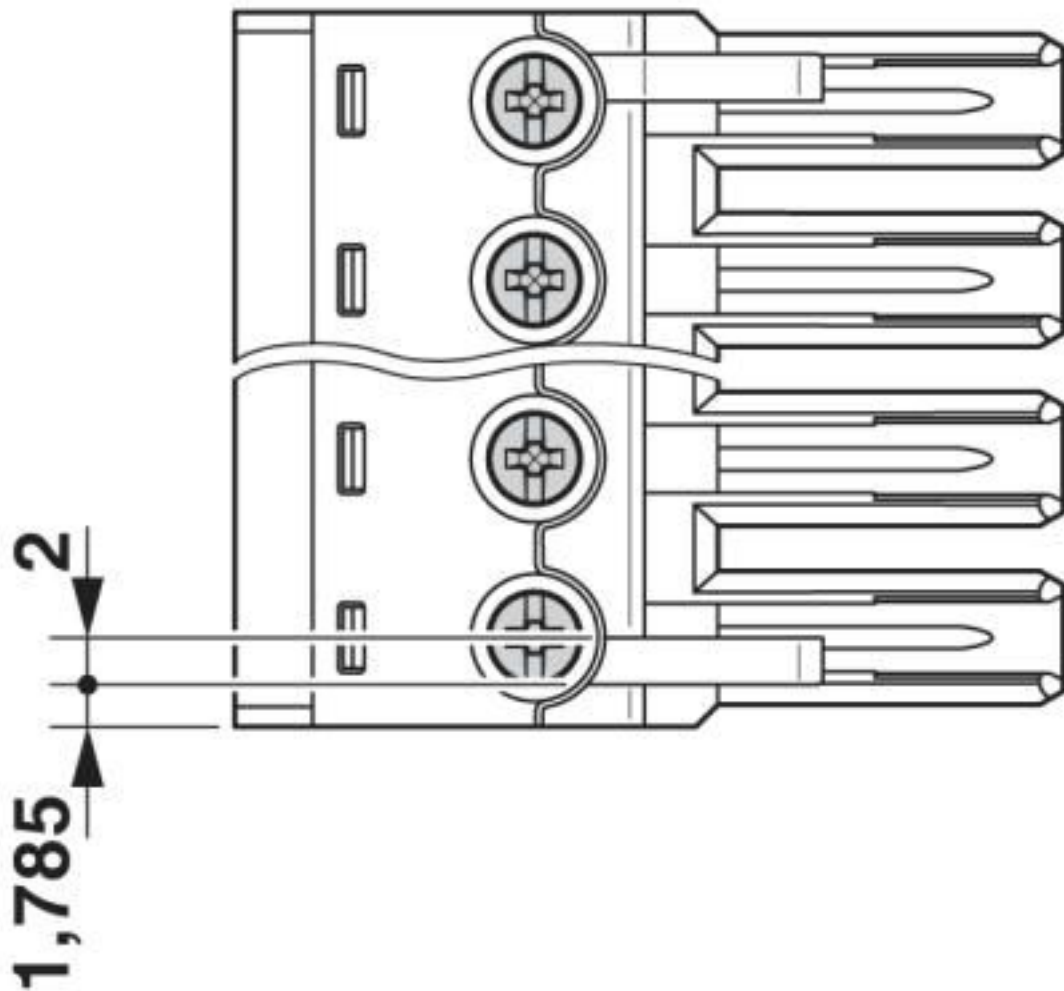
Type: PC 5/...-ST(F)1-7,62 with PC 5/...-G(F)U-7,62  
Conductor cross section: 10 mm<sup>2</sup>

# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

Dimensional drawing



Dimensional drawing



# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

## 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

## Approvals

### Approvals

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#### Approvals

EAC / cULus Recognized

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#### Ex Approvals

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### Approval details

# Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

## Approvals

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
	B	C	
Nominal voltage UN	600 V	600 V	
Nominal current IN	41 A	41 A	
mm <sup>2</sup> /AWG/kcmil	24-8	24-8	

## 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

### 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

### Screwdriver tools

## Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

### Accessories

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, 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

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 - IPC 5/ 7-ST-7,62 - 1709092



PCB connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - ISPC 5/ 7-STGCL-7,62 - 1748914



PCB connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

## Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

### Accessories

#### Printed-circuit board connector - PC 5/ 7-G-7,62 - 1720518



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, 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/ 7-GU-7,62 - 1720738



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, 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 - PCV 5/ 7-G-7,62 - 1720628



PCB headers, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, 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 - DFK-PC 5/ 7-G-7,62 - 1727634



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.9 mm

#### Printed-circuit board connector - DFK-PC 5/ 7-GU-7,62 - 1727854



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.26 mm

## Printed-circuit board connector - PC 5/ 7-ST1-7,62 - 1777778

### Accessories

#### Printed-circuit board connector - DFK-PCV 5/ 7-G-7,62 - 1716331



Feed-through header, nominal current: 41 A, rated voltage (III/2): 630 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, 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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#### Feed-through plug - DFK-PC 5/ 7-ST-7,62 - 1716551



Feed-through connector, nominal current: 41 A, rated voltage (III/2): 1000 V, nominal cross section: 6 mm<sup>2</sup>, number of positions: 7, pitch: 7.62 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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