

# QC 0,5/12-ST-3,81 - Printed-circuit board connector



1897490

<https://www.phoenixcontact.com/pc/products/1897490>

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PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Socket, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: QC 0,5/..-ST, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MC 1,5, locking: without, mounting: without, type of packaging: packed in cardboard

## Your advantages

- Connection without conductor pretreatment for huge time savings
- Quick and convenient testing using integrated test option

## Commercial Data

Item number	1897490
Packing unit	50 pc
Minimum order quantity	1 pc
Product Key	AAAQQA
Catalog Page	Page 204 (C-1-2013)
GTIN	4017918164997
Weight per Piece (including packing)	11.08 g
Weight per Piece (excluding packing)	10.54 g
Customs tariff number	85366990
Country of origin	CN

# QC 0,5/12-ST-3,81 - Printed-circuit board connector



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## Technical Data

### Product properties

Type	Standard
Product line	COMBICON Connectors XS
Product type	PCB connector
Product family	QC 0,5/...-ST
Number of positions	12
Pitch	3.81 mm
Number of connections	12
Number of rows	1
Mounting flange	without
Number of potentials	12

### Electrical properties

Nominal current $I_N$	6 A
Nominal voltage $U_N$	200 V
Degree of pollution	3
Rated voltage (III/3)	200 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	200 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV

### Connection data

#### Connection technology

Type	Standard
Connector system	COMBICON MC 1,5
Nominal cross section	0.5 mm <sup>2</sup>
Type of contact	Socket

#### Interlock

Locking type	without
Mounting flange	without

#### Conductor connection

Connection method	Displacement connection
Conductor/PCB connection direction	0 °
Conductor cross section flexible	0.34 mm <sup>2</sup> ... 0.5 mm <sup>2</sup>
Conductor cross section AWG	22 ... 20

### Material specifications

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## 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 (5 - 7 µm Sn)
Metal surface contact area (top layer)	Tin (5 - 7 µm Sn)

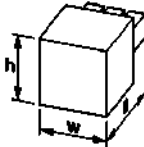
## Material data - housing

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 (Actuating element)	orange (2003)
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

Dimensional drawing	
Pitch	3.81 mm
Width [w]	46.51 mm
Height [h]	12.9 mm
Length [l]	26.8 mm

## Mounting

Connection method	Displacement connection
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## Environmental and real-life conditions

### 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

### 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)	200 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3 mm
Rated insulation voltage (III/2)	200 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3 mm

# QC 0,5/12-ST-3,81 - Printed-circuit board connector

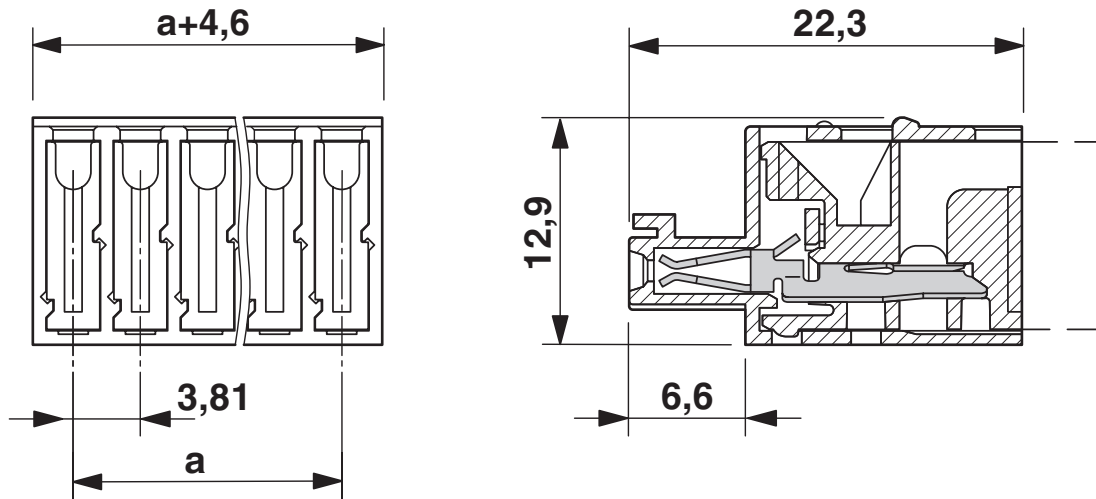


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## Drawings

Dimensional drawing



# QC 0,5/12-ST-3,81 - Printed-circuit board connector





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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1897490>

 <b>cULus Recognized</b> Approval ID: E60425-20010309				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B	300 V	6 A	24 - 20	-
Use group C	300 V	6 A	24 - 20	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-60987-B1B2				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	320 V	5 A	-	0.34 - 0.5

 <b>EAC</b> Approval ID: B.01687				
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 <b>VDE Zeichengenehmigung</b> Approval ID: 40011723				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	320 V	5 A	-	0.34 - 0.5

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002638
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental Product Compliance

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



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## Accessories

### SZS 0,4X2,0 - Screwdriver

1205202

<https://www.phoenixcontact.com/pc/products/1205202>



Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

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### SK 3,81/2,8:FORTL.ZAHLEN - Marker card

0804109

<https://www.phoenixcontact.com/pc/products/0804109>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm

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## MCV 1,5/12-G-3,81 P14 THR - PCB header

1707104

<https://www.phoenixcontact.com/pc/products/1707104>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MCV 1,5/..-G-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 1.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, For user information and design recommendations for through-hole reflow technology, go to: Downloads

## MCV 1,5/12-G-3,81 P26 THR - PCB header

1707528

<https://www.phoenixcontact.com/pc/products/1707528>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MCV 1,5/..-G-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, For user information and design recommendations for through-hole reflow technology, go to: Downloads

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## MCV 1,5/12-G-3,81 P26 THRR72 - PCB header

1712982

<https://www.phoenixcontact.com/pc/products/1712982>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MCV 1,5/..-G-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 72 mm wide tape

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## MC 1,5/12-G-3,81 P20 THRR72 - PCB header

1782679

<https://www.phoenixcontact.com/pc/products/1782679>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MC 1,5/..-G-THR, pitch: 3.81 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: 72 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

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## MC 1,5/12-G-3,81 - PCB header

1803374

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PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MC 1,5/..-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

## MCV 1,5/12-G-3,81 - PCB header

1803523

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PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: MCV 1,5/..-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

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## SMC 1,5/12-G-3,81 - PCB header

1827376

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PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, product range: SMC 1,5/..-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

## MCD 1,5/12-G-3,81 - PCB header

1830059

<https://www.phoenixcontact.com/pc/products/1830059>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 24, number of rows: 2, number of positions: 12, number of connections: 24, product range: MCD 1,5/..-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

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## MCDV 1,5/12-G-3,81 - PCB header

1830509

<https://www.phoenixcontact.com/pc/products/1830509>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 24, number of rows: 2, number of positions: 12, number of connections: 24, product range: MCDV 1,5/..-G, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

## MCDV 1,5/12-G1-3,81 - PCB header

1847835

<https://www.phoenixcontact.com/pc/products/1847835>



PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 24, number of rows: 2, number of positions: 12, number of connections: 24, product range: MCDV 1,5/..-G1, pitch: 3.81 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.4 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstraße 8  
D-32825 Blomberg  
+49 (0) 5235-3 00  
[info@phoenixcontact.com](mailto:info@phoenixcontact.com)