1757501

https://www.phoenixcontact.com/us/products/1757501



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PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTBA 2,5/..-G, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.23 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard

### Your advantages

- · Maximum flexibility when it comes to device design one header for connectors with different connection technologies
- · Well-known mounting principle allows worldwide use
- Plug-in direction parallel to the PCB
- · Closed contour for optimum stability of the plug-in connection
- · Easy PCB replacement thanks to plug-in modules

### Commercial data

Item number	1757501
Packing unit	250 рс
Minimum order quantity	250 рс
Sales key	AA03
Product key	AACSGG
Catalog page	Page 313 (C-1-2013)
GTIN	4017918030032
Weight per piece (including packing)	1.946 g
Weight per piece (excluding packing)	1.946 g
Customs tariff number	85366930
Country of origin	DE

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### Technical data

#### Product properties

Туре	Standard
Product line	COMBICON Connectors M
Product type	PCB headers
Product family	MSTBA 2,5/G
Number of positions	5
Pitch	5 mm
Number of connections	5
Number of rows	1
Mounting flange	without
Number of potentials	5
Pin layout	Linear pinning
Solder pins per potential	1

### **Electrical properties**

Nominal current I <sub>N</sub>	12 A
Nominal voltage U <sub>N</sub>	320 V
Degree of pollution	3
Contact resistance	1.4 mΩ
Rated voltage (III/3)	320 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

#### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### 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	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 μm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 μm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 μm Ni)

Material data - housing

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Color (Housing)	green (6021)
Insulating material	PA
Insulating material group	1
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

	Pr h
Pitch	5 mm
Width [w]	27 mm
Height [h]	11.8 mm
Length [I]	12 mm
Installed height	8.57 mm
Solder pin length [P]	3.23 mm
Pin dimensions	1 x 1 mm
PCB design	
PCB design Hole diameter echanical tests	1.4 mm
Hole diameter	1.4 mm IEC 60512-1-1:2002-02
Hole diameter echanical tests /isual inspection	
Hole diameter echanical tests /isual inspection Specification	IEC 60512-1-1:2002-02
Hole diameter echanical tests /isual inspection Specification Result	IEC 60512-1-1:2002-02
Hole diameter Achanical tests /isual inspection Specification Result Dimension check	IEC 60512-1-1:2002-02 Test passed
Hole diameter Achanical tests /isual inspection Specification Result Dimension check Specification Result	IEC 60512-1-1:2002-02 Test passed IEC 60512-1-2:2002-02
Hole diameter echanical tests /isual inspection Specification Result Dimension check Specification	IEC 60512-1-1:2002-02 Test passed IEC 60512-1-2:2002-02
Hole diameter Chanical tests /isual inspection Specification Result Dimension check Specification Result Result Result	IEC 60512-1-1:2002-02   Test passed   IEC 60512-1-2:2002-02   Test passed
Hole diameter Achanical tests /isual inspection Specification Result Dimension check Specification Result Result Result Result	IEC 60512-1-1:2002-02   Test passed   IEC 60512-1-2:2002-02   Test passed   IEC 60512-1-2:2002-02   Test passed   IEC 60068-2-70:1995-12
Hole diameter Chanical tests /isual inspection Specification Result Dimension check Specification Result Result Result Result Result Addition Result	IEC 60512-1-1:2002-02   Test passed   IEC 60512-1-2:2002-02   Test passed   IEC 60512-1-2:2002-02   Test passed   IEC 60068-2-70:1995-12

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Specification	IEC 60512-15-1:2008-05		
Contact holder in insert Requirements >20 N	Test passed		
nsertion and withdrawal forces			
Result	Test passed		
No. of cycles	25		
Insertion strength per pos. approx.	8 N		
Withdraw strength per pos. approx.	6 N		
ectrical tests			
Thermal test   Test group C			
Specification	IEC 60512-5-1:2002-02		
Tested number of positions	24		
nsulation resistance			
Specification	IEC 60512-3-1:2002-02		
Insulation resistance, neighboring positions	> 5 MΩ		
Air clearances and creepage distances			
Specification	IEC 60664-1:2007-04		
Insulating material group	1		
Comparative tracking index (IEC 60112)	CTI 600		
Rated insulation voltage (III/3)	320 V		
Rated surge voltage (III/3)	4 kV		
minimum clearance value - non-homogenous field (III/3)	3 mm		
minimum creepage distance (III/3)	4 mm		
Rated insulation voltage (III/2)	320 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)	630 V		
Rated surge voltage (II/2)	4 kV		
minimum clearance value - non-homogenous field (II/2)	3 mm		
minimum creepage distance (II/2)	3.2 mm		

### 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

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Outer packaging type

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pecification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R <sub>1</sub>	1.4 mΩ
Contact resistance R <sub>2</sub>	1.5 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ
matic test	
Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV
ibient 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

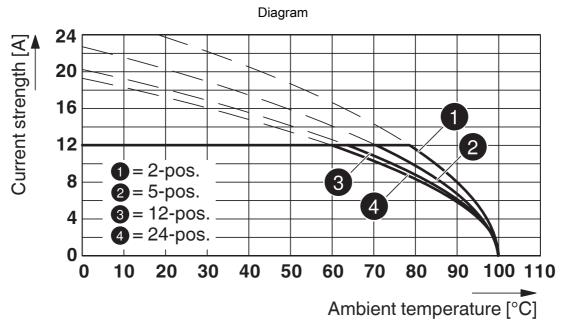
Carton



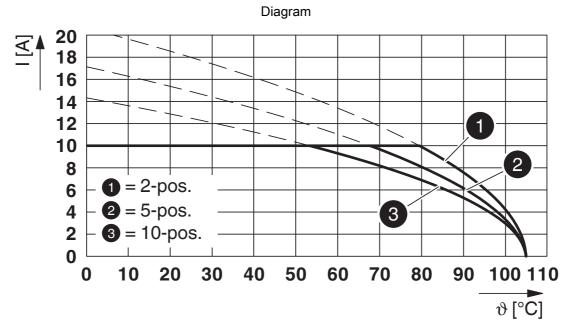
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### Drawings



Type: MSTBP 2,5/...-ST with MSTBA 2,5/...-G

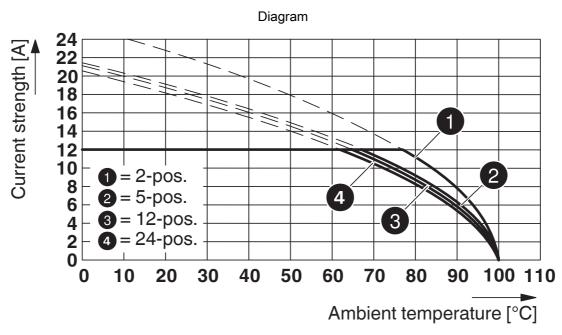


Type: TVFKC 1,5/...-ST with MSTBA 2,5/...-G

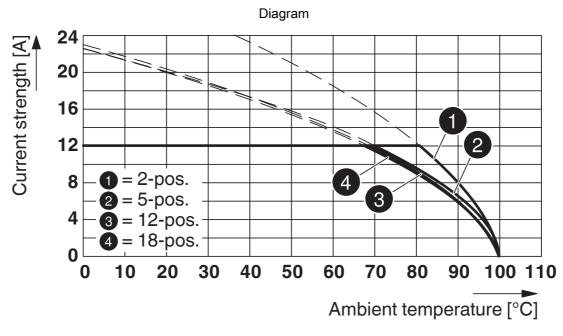


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Type: MSTB 2,5/...-ST with MSTBA 2,5/...-G

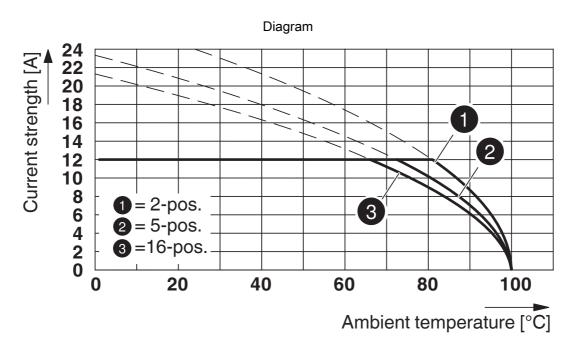


Type: MSTBT 2,5/...-ST with MSTBA 2,5/...-G

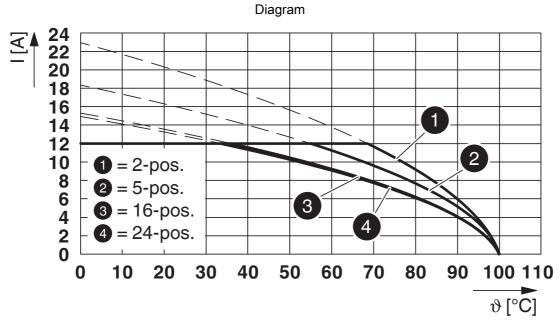


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Type: FKCVW 2,5/...-ST with MSTBA 2,5/...-G

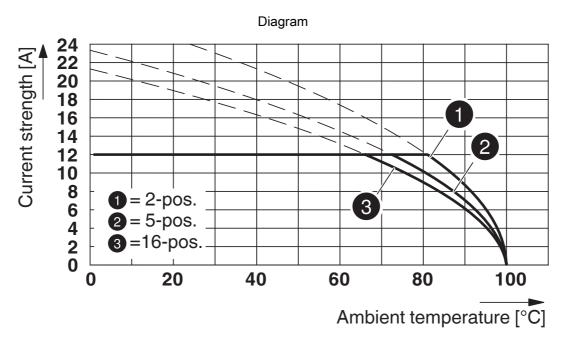


Type: MVSTBR 2,5/...-ST with MSTBA 2,5/...-G

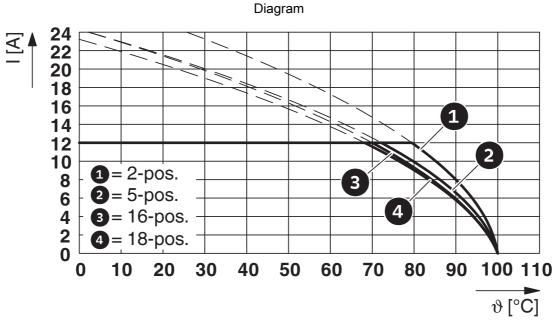


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Type: FKCVR 2,5/...-ST with MSTBA 2,5/...-G



Type: FKCN 2,5/...-ST with MSTBA 2,5/...-G

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### Approvals

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1757501

CSA Approval ID: 13631				
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
Use group B				
	300 V	10 A	-	-
Use group D				
	300 V	10 A	-	-

CULus Recogni Approval ID: E60425	Approval ID: E60425-19931011				
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>	
Use group B					
	300 V	15 A	-	-	
Use group D					
	300 V	10 A	-	-	

VDE Zeichengenehmigung Approval ID: 40050648				
	Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
	250 V	12 A	-	-



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### Classifications

#### ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

### ETIM

	ETIM 9.0	EC002637
U	NSPSC	
	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	

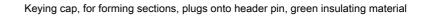
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### Accessories

### **MSTB-BL** - Accessories

1755477 https://www.phoenixcontact.com/us/products/1755477





### SK 5/3,8:FORTL.ZAHLEN - Marker card

#### 0804183

https://www.phoenixcontact.com/us/products/0804183



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size:  $5\Box x \Box 3.8\Box$ mm

1757501

https://www.phoenixcontact.com/us/products/1757501



**CR-MSTB** - Coding section

#### 1734401

https://www.phoenixcontact.com/us/products/1734401

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



### SK 5/3,8:UNBEDRUCKT - Marker card

0805409

https://www.phoenixcontact.com/us/products/0805409



Marker card, Sheet, white, unlabeled, can be labeled with: Marker pen: without print, mounting type: adhesive, for terminal block width: 5 mm, lettering field size:  $5\Box x \Box 3.8\Box mm$ , Number of individual labels: 120

1757501 https://www.phoenixcontact.com/us/products/1757501



### TVFKC 1,5/ 5-ST - PCB connector

1713868

https://www.phoenixcontact.com/us/products/1713868



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 10, product range: TVFKC 1,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### TVFKCL 1,5/ 5-ST - PCB connector

1715950 https://www.phoenixcontact.com/us/products/1715950



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 10, product range: TVFKCL 1,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### QC 1,5/ 5-ST - PCB connector

1717990

https://www.phoenixcontact.com/us/products/1717990



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: QC 1,5/..-ST, pitch: 5 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### FKCN 2,5/ 5-ST - PCB connector

1732771 https://www.phoenixcontact.com/us/products/1732771



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKCN 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### MSTB 2,5/ 5-ST - PCB connector

1754504

https://www.phoenixcontact.com/us/products/1754504



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### MSTBP 2,5/ 5-ST - PCB connector

1765807 https://www.phoenixcontact.com/us/products/1765807



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTBP 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### SMSTB 2,5/ 5-ST - PCB connector

1768794

https://www.phoenixcontact.com/us/products/1768794



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: SMSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -45 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### FRONT-MSTB 2,5/ 5-ST - PCB connector

1779440 https://www.phoenixcontact.com/us/products/1779440



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FRONT-MSTB 2,5/..-ST, pitch: 5 mm, connection method: Front screw connection, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### MSTBT 2,5/ 5-ST - PCB connector

1779864

https://www.phoenixcontact.com/us/products/1779864



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTBT 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### MVSTBR 2,5/ 5-ST - PCB connector

1792045 https://www.phoenixcontact.com/us/products/1792045



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MVSTBR 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### MVSTBW 2,5/ 5-ST - PCB connector

1792553

https://www.phoenixcontact.com/us/products/1792553



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MVSTBW 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

#### FKCT 2,5/ 5-ST - PCB connector

1909249 https://www.phoenixcontact.com/us/products/1909249



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### FKCVR 2,5/ 5-ST - PCB connector

1909744

https://www.phoenixcontact.com/us/products/1909744



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKCVR 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

#### FKCVW 2,5/ 5-ST - PCB connector

1910063 https://www.phoenixcontact.com/us/products/1910063



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKCVW 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

1757501 https://www.phoenixcontact.com/us/products/1757501



#### FKC 2,5/ 5-ST - PCB connector

1910380

https://www.phoenixcontact.com/us/products/1910380



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKC 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

### QC 1/ 5-ST-BUS - PCB connector

1921706 https://www.phoenixcontact.com/us/products/1921706



PCB connector, nominal cross section: 1 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: QC 1/..-ST-BUS, pitch: 5 mm, connection method: Displacement connection, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module, without interruption

1757501 https://www.phoenixcontact.com/us/products/1757501



#### FKCS 2,5/ 5-ST - PCB connector

1974766

https://www.phoenixcontact.com/us/products/1974766



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKCS 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

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