

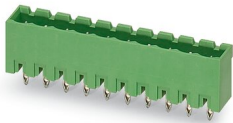
EMSTBVA 2,5/ 6-G-5,08 - PCB header



1859551

<https://www.phoenixcontact.com/us/products/1859551>

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: EMSTBVA 2,5/..-G, pitch: 5.08 mm, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.9 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

- Long-term stable press-in connection ensures high holding force without thermal load
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Vertical connection enables multi-row arrangement on the PCB
- Closed contour for optimum stability of the plug-in connection

Commercial data

Item number	1859551
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA01
Product key	AAC1EH
Catalog page	Page 311 (C-1-2013)
GTIN	4017918132972
Weight per piece (including packing)	2.417 g
Weight per piece (excluding packing)	2.08 g
Customs tariff number	85366930
Country of origin	DE

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Technical data

Product properties

Type	Standard
Product line	COMBICON Connectors M
Product type	PCB headers
Product family	EMSTBVA 2,5/...-G
Number of positions	6
Pitch	5.08 mm
Number of connections	6
Number of rows	1
Mounting flange	without
Number of potentials	6
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Degree of pollution	3
Contact resistance	1.1 mΩ
Rated voltage (III/3)	200 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)	320 V
Rated surge voltage (II/2)	4 kV

Mounting

Mounting type	Press-in technology
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 (1 - 2 μm Sn)
Metal surface contact area (middle layer)	Nickel (2 - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (1 - 2 μm Sn)
Metal surface soldering area (middle layer)	Nickel (2 - 3 μm Ni)

Material data - housing

EMSTBVA 2,5/ 6-G-5,08 - PCB header



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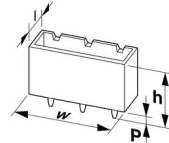
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Color ()	()
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

Notes

Notes on operation	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	32.48 mm
Height [h]	15.9 mm
Length [l]	8.6 mm
Installed height	12 mm
Solder pin length [P]	3.9 mm

Mechanical tests

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N

Electrical tests

Insulation resistance

Specification	IEC 60512-2:1985-00
Insulation resistance, neighboring positions	$10^{12} \Omega$

Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 225
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)	3.2 mm

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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)	3.2 mm
Rated insulation voltage (II/2)	320 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 60068-2-6:1982 + AMD 2:1985
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

Durability test

Specification	DIN VDE 0627:1993-05
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.1 m Ω
Contact resistance R_2	1.5 m Ω
Insertion/withdrawal cycles	25

Climatic test

Specification	DIN VDE 0627:1993-05
Corrosive stress	0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

Ambient conditions

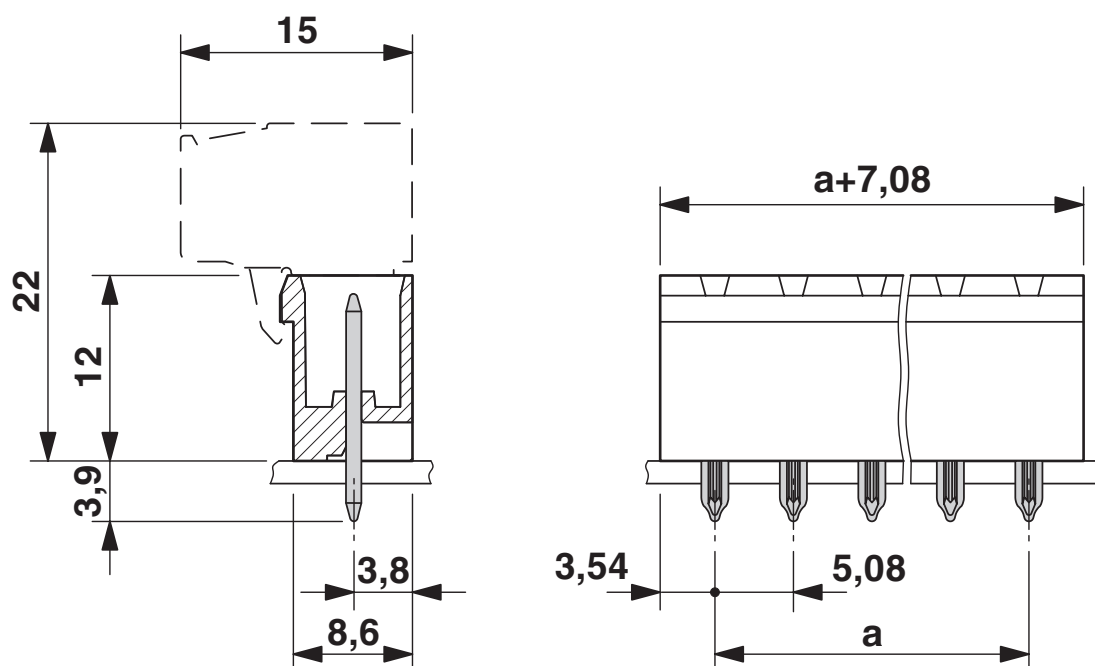
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

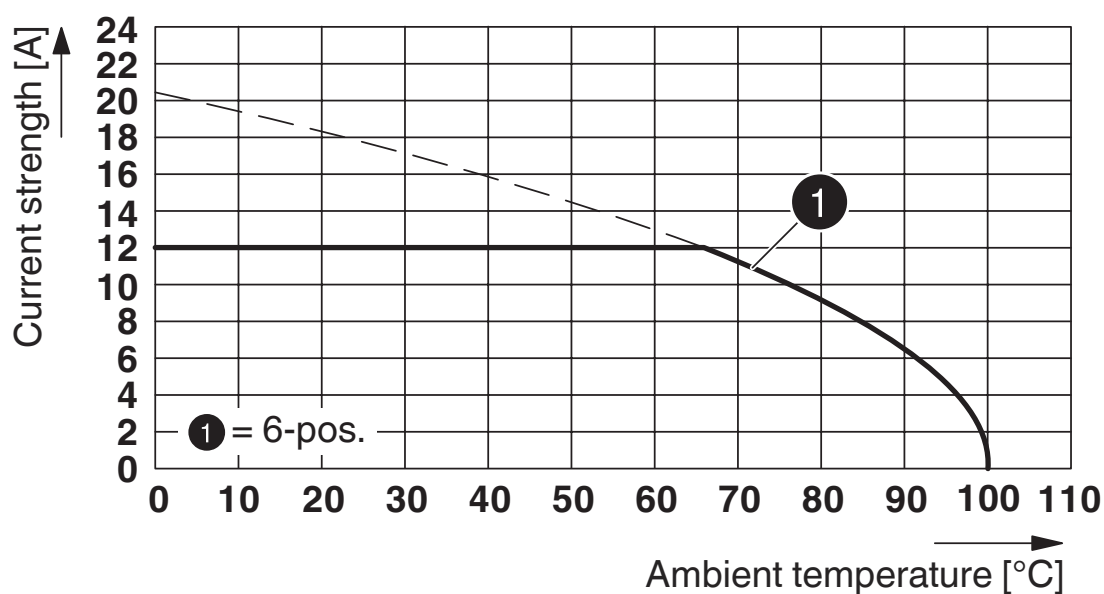
Type of packaging	packed in cardboard
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Drawings

Dimensional drawing



Diagram



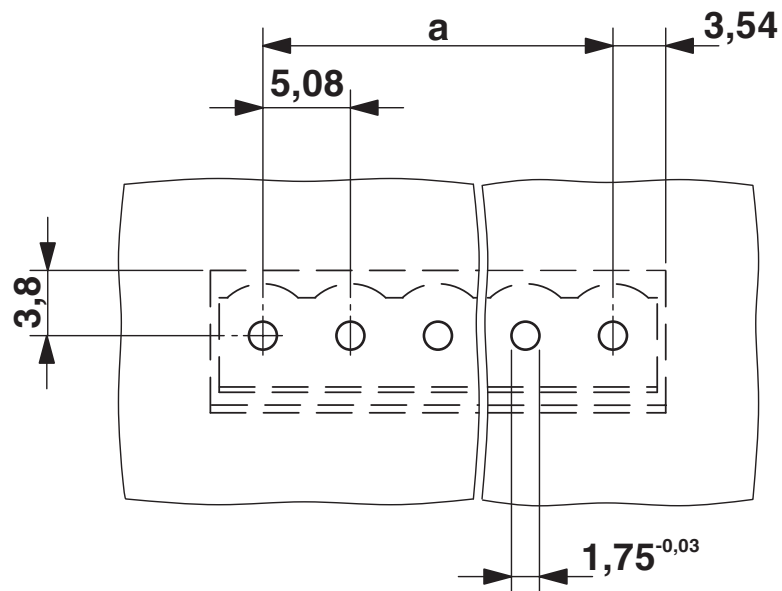
Type: MSTB 2,5/...-ST(-5,08) with EMSTBVA 2,5/...-G(-5,08)

EMSTBVA 2,5/ 6-G-5,08 - PCB header

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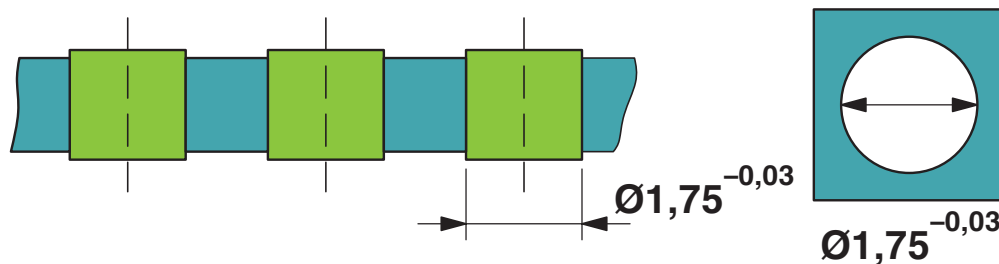
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Drilling plan/solder pad geometry

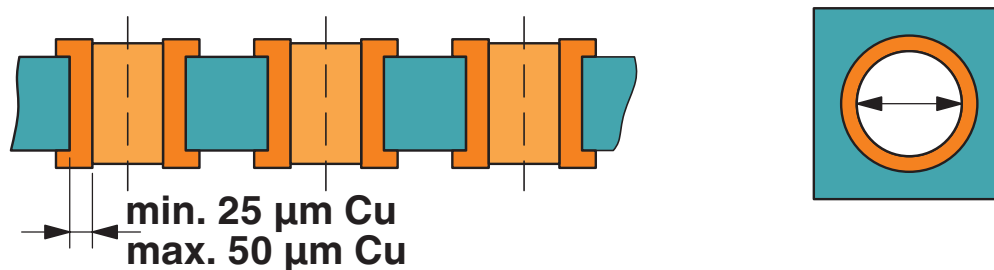


Drilling plan/solder pad geometry

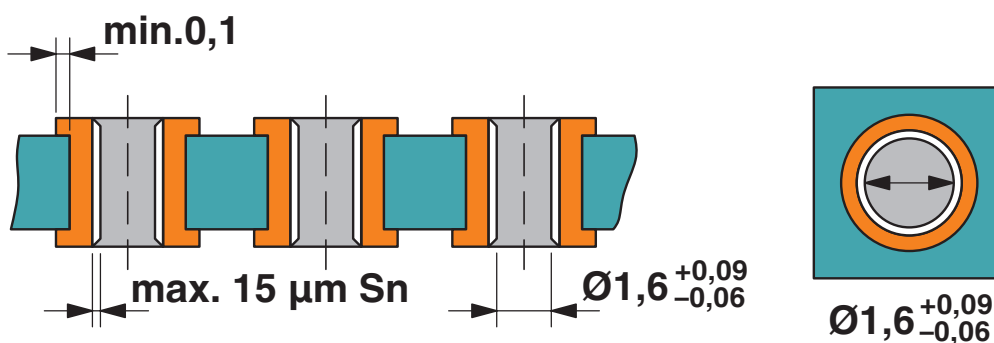
1)



2)



3)



Drill hole layout in FR4 or EP-GC basic material

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Classifications

ETIM

ETIM 7.0	EC002637
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EMSTBVA 2,5/ 6-G-5,08 - PCB header



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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

CR-MSTB - Coding section

1734401

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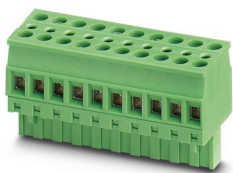
Coding section, inserted into the recess in the header or the inverted plug, red insulating material



TVMSTB 2,5/ 6-ST-5,08 - PCB connector

1719040

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 400 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 12, product range: TVMSTB 2,5/..-ST, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header

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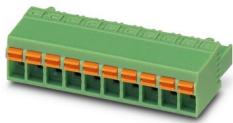
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FKCN 2,5/ 6-ST-5,08 - PCB connector

1754607

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FKCN 2,5/...-ST, pitch: 5.08 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

MSTB 2,5/ 6-STZ-5,08 - PCB connector

1776126

<https://www.phoenixcontact.com/us/products/1776126>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTB 2,5/...-STZ, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header



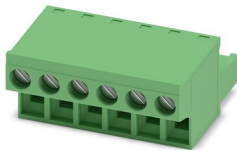
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FRONT-MSTB 2,5/ 6-ST-5,08 - PCB connector

1777329

<https://www.phoenixcontact.com/us/products/1777329>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FRONT-MSTB 2,5/..-ST, pitch: 5.08 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

MSTBT 2,5/ 6-ST-5,08 - PCB connector

1781027

<https://www.phoenixcontact.com/us/products/1781027>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTBT 2,5/..-ST, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header



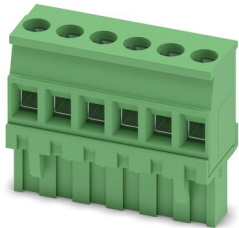
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MVSTBR 2,5/ 6-ST-5,08 - PCB connector

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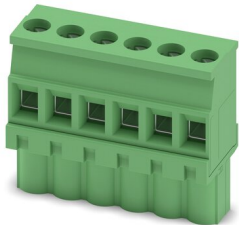


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MVSTBR 2,5/...-ST, pitch: 5.08 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

MVSTBW 2,5/ 6-ST-5,08 - PCB connector

1792799

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MVSTBW 2,5/...-ST, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header



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MSTBC 2,5/ 6-ST-5,08 - PCB connector

1808858

<https://www.phoenixcontact.com/us/products/1808858>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTBC 2,5/...-ST, pitch: 5.08 mm, connection method: Crimp 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, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

MSTBC 2,5/ 6-STZ-5,08 - PCB connector

1809543

<https://www.phoenixcontact.com/us/products/1809543>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTBC 2,5/...-STZ, pitch: 5.08 mm, connection method: Crimp 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, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

EMSTBVA 2,5/ 6-G-5,08 - PCB header

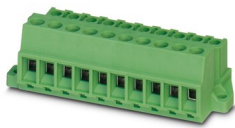
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MSTBU 2,5/ 6-STD-5,08 - Printed-circuit board connector

1824162

<https://www.phoenixcontact.com/us/products/1824162>



Direct plug-in block, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTBU 2,5/...-STD, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: Direct mounting, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MSTBVK 2,5/ 6-ST-5,08 - DIN rail connector

1831359

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DIN rail connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTBVK 2,5/...-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: DIN rail, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

EMSTBVA 2,5/ 6-G-5,08 - PCB header

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UMSTBVK 2,5/ 6-ST-5,08 - DIN rail connector

1833852

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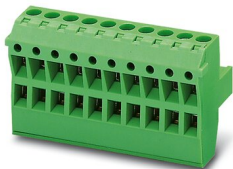


DIN rail connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: UMSTBVK 2,5/...-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, mounting: DIN rail, conductor/PCB connection direction: 0 °, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

TMSTBP 2,5/ 6-ST-5,08 - PCB connector

1853052

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 12, product range: TMSTBP 2,5/...-ST, pitch: 5.08 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, The plug allows conductors to be looped through from module to module.

EMSTBVA 2,5/ 6-G-5,08 - PCB header



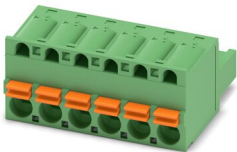
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FKC 2,5/ 6-ST-5,08 - PCB connector

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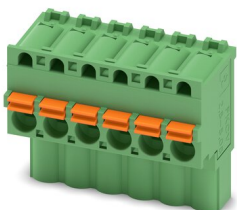


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FKC 2,5/...-ST, pitch: 5.08 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

FKCVW 2,5/ 6-ST-5,08 - PCB connector

1873692

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FKCVW 2,5/...-ST, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header



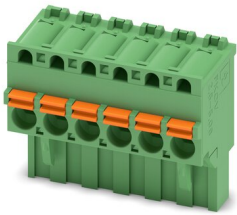
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FKCVR 2,5/ 6-ST-5,08 - PCB connector

1873993

<https://www.phoenixcontact.com/us/products/1873993>

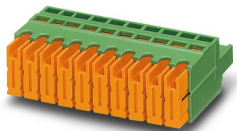


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FKCVR 2,5/..-ST, pitch: 5.08 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

QC 1/ 6-ST-5,08 - PCB connector

1883297

<https://www.phoenixcontact.com/us/products/1883297>



PCB connector, nominal cross section: 1 mm², color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: QC 1/..-ST, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header



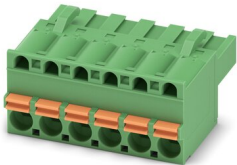
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FKCT 2,5/ 6-ST-5,08 - PCB connector

1902152

<https://www.phoenixcontact.com/us/products/1902152>

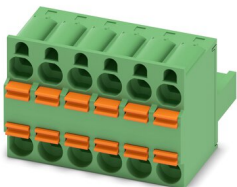


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FKCT 2,5/...-ST, pitch: 5.08 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

TFKC 2,5/ 6-ST-5,08 - PCB connector

1962642

<https://www.phoenixcontact.com/us/products/1962642>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 12, product range: TFKC 2,5/...-ST, pitch: 5.08 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

EMSTBVA 2,5/ 6-G-5,08 - PCB header

1859551

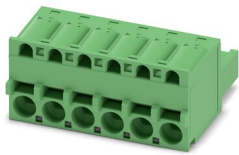
<https://www.phoenixcontact.com/us/products/1859551>



FKCS 2,5/ 6-ST-5,08 - PCB connector

1975118

<https://www.phoenixcontact.com/us/products/1975118>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: FKCS 2,5/...-ST, pitch: 5.08 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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