

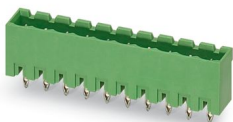
EMSTBVA 2,5/14-G-5,08 - PCB header



1859632

<https://www.phoenixcontact.com/pc/products/1859632>

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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	1859632
Packing unit	50 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	AAC1EH
Catalog page	Page 311 (C-1-2013)
GTIN	4017918133054
Weight per piece (including packing)	6.34 g
Weight per piece (excluding packing)	5.674 g
Customs tariff number	85366930
Country of origin	DE

Technical data

Product properties

Product type	PCB headers
Product family	EMSTBVA 2,5/..-G
Product line	COMBICON Connectors M
Type	Standard
Number of positions	14
Pitch	5.08 mm
Number of connections	14
Number of rows	1
Number of potentials	14
Mounting flange	without
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
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

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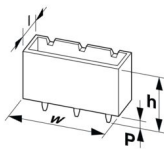
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Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

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]	73.12 mm
Height [h]	15.9 mm
Length [l]	8.6 mm
Installed height	12 mm
Solder pin length [P]	3.9 mm

PCB design	
Hole diameter	1.6 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

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minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 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)	3.2 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)
Acceleration	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 mΩ
Contact resistance R_2	1.5 mΩ
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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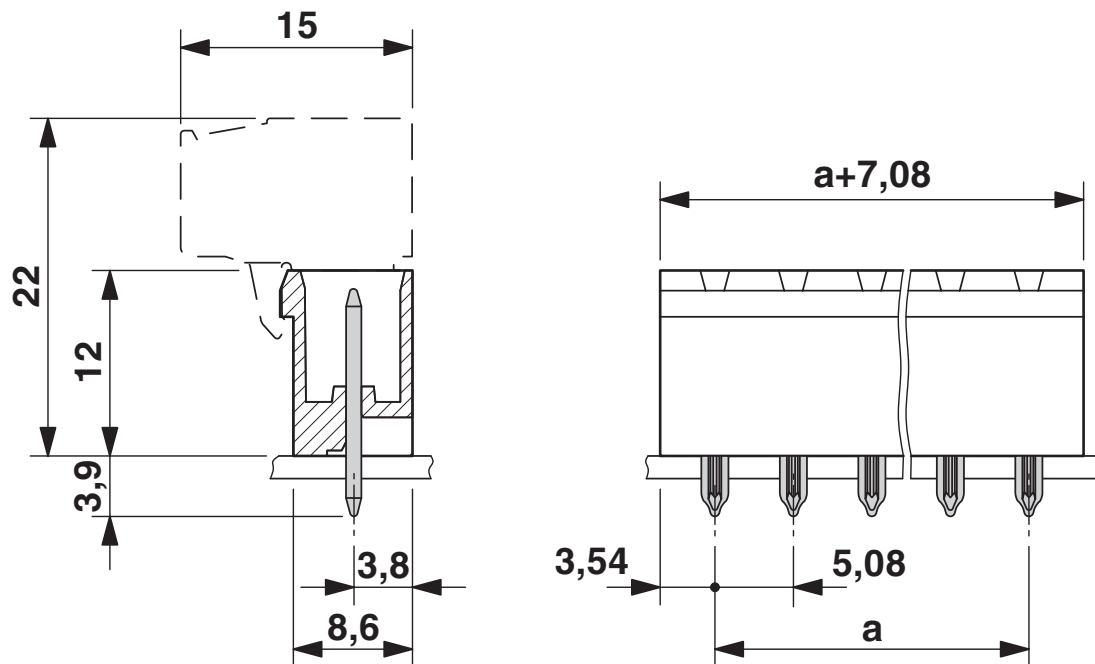
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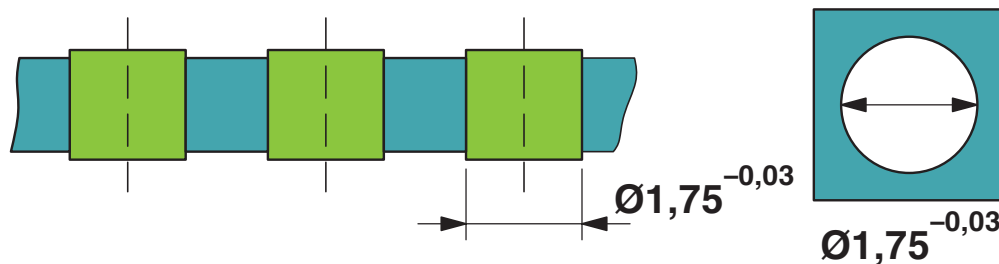
Drawings

Dimensional drawing

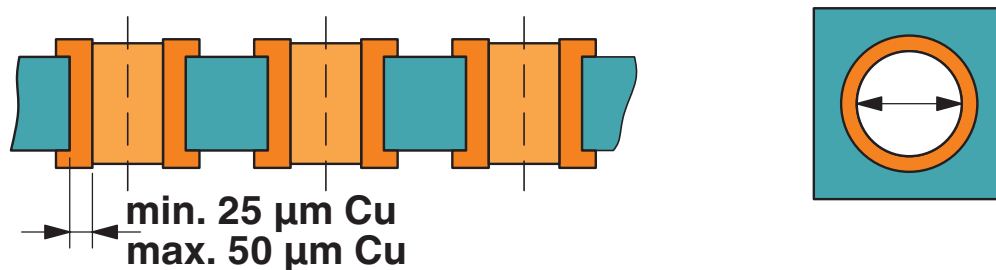


Drilling plan/solder pad geometry

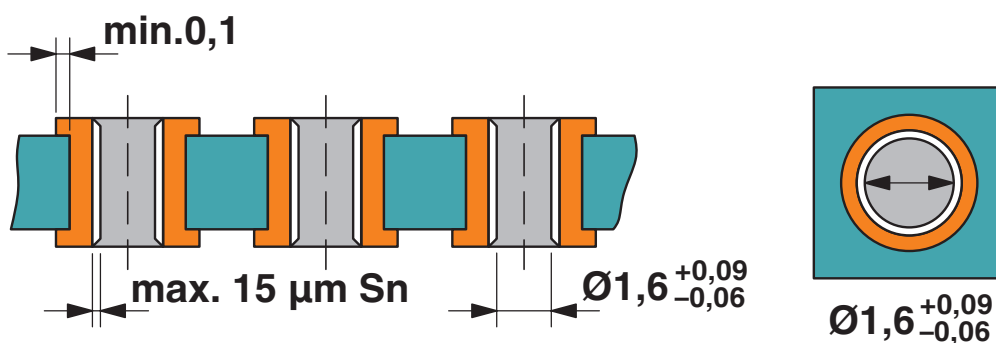
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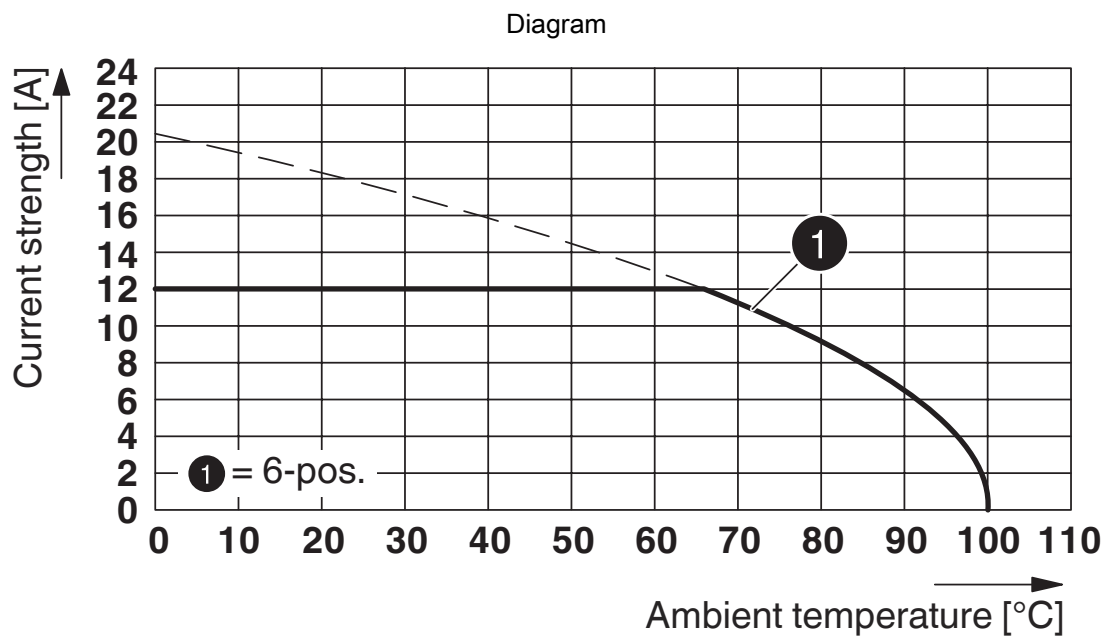
2)



3)

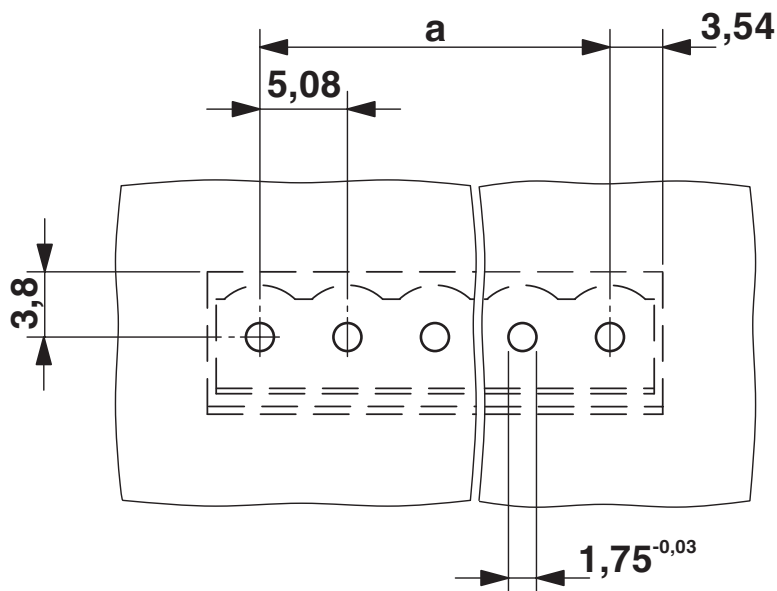


Drill hole layout in FR4 or EP-GC basic material



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

Drilling plan/solder pad geometry



Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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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

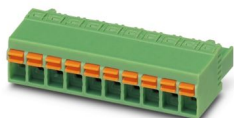


FKCN 2,5/14-ST-5,08 - PCB connector

1754681

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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



EMSTBVA 2,5/14-G-5,08 - PCB header



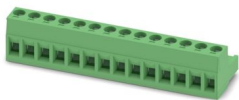
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MSTB 2,5/14-ST-5,08 - PCB connector

1757132

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MSTB 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

FRONT-MSTB 2,5/14-ST-5,08 - PCB connector

1777400

<https://www.phoenixcontact.com/pc/products/1777400>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

EMSTBVA 2,5/14-G-5,08 - PCB header



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MSTBT 2,5/14-ST-5,08 - PCB connector

1781108

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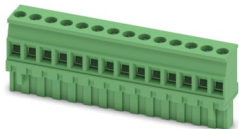


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MSTBT 2,5/...-ST, pitch: 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

MVSTBR 2,5/14-ST-5,08 - PCB connector

1792362

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

EMSTBVA 2,5/14-G-5,08 - PCB header

1859632

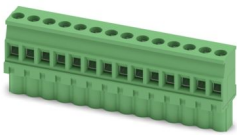
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MVSTBW 2,5/14-ST-5,08 - PCB connector

1792870

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

MSTBC 2,5/14-ST-5,08 - PCB connector

1808939

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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 connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

EMSTBVA 2,5/14-G-5,08 - PCB header



1859632

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MSTBC 2,5/14-STZ-5,08 - PCB connector

1809624

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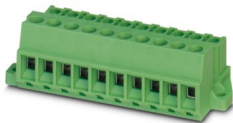


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: MSTBC 2,5/...-STZ, pitch: 5.08 mm, connection 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

MSTBU 2,5/14-STD-5,08 - PCB connectors

1824243

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

EMSTBVA 2,5/14-G-5,08 - PCB header



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MSTBVK 2,5/14-ST-5,08 - DIN rail connector

1831430

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

UMSTBVK 2,5/14-ST-5,08 - DIN rail connector

1833933

<https://www.phoenixcontact.com/pc/products/1833933>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

EMSTBVA 2,5/14-G-5,08 - PCB header

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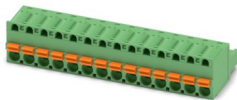
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FKC 2,5/14-ST-5,08 - PCB connector

1873171

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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 2,5/14-ST-5,08 - PCB connector

1873773

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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 2,5/14-G-5,08 - PCB header



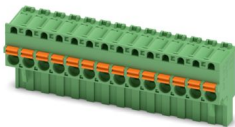
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FKCVR 2,5/14-ST-5,08 - PCB connector

1874073

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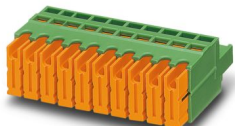


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 14, number of rows: 1, number of positions: 14, number of connections: 14, product range: FKCVR 2,5/...-ST, pitch: 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 1/14-ST-5,08 - PCB connector

1883828

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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 2,5/14-G-5,08 - PCB header

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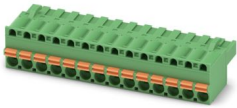
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FKCT 2,5/14-ST-5,08 - PCB connector

1902233

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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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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

FKCS 2,5/14-ST-5,08 - PCB connector

1975192

<https://www.phoenixcontact.com/pc/products/1975192>



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: 14, number of rows: 1, number of positions: 14, number of connections: 14, 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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