

https://www.phoenixcontact.com/us/products/1754575



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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, product range: MSTB 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
- Easy PCB replacement thanks to plug-in modules
- · Well-known mounting principle allows worldwide use
- · Items that can be aligned in various pitches support flexible and space-saving PCB assembly

Commercial data

Item number	1754575
Packing unit	100 pc
Minimum order quantity	100 pc
Sales key	AA03
Product key	AACSGB
Catalog page	Page 312 (C-1-2013)
GTIN	4017918028749
Weight per piece (including packing)	3.194 g
Weight per piece (excluding packing)	3.194 g
Customs tariff number	85366930
Country of origin	DE



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Technical data

Product properties

Product type	PCB headers
Product family	MSTB 2,5/G
Product line	COMBICON Connectors M
Туре	Standard
Number of positions	9
Pitch	5 mm
Number of connections	9
Number of rows	1
Number of potentials	9
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
Degree of pollution	3
Contact resistance	1.7 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

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	P _Y h
Pitch	5 mm
Width [w]	45 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	
Hole diameter	1.4 mm

Mechanical tests

Visual inspection

Result

Vidual Inopcolion	
Specification	IEC 60512-1-1:2002-02
Result	Test passed
Dimension check	
Specification	IEC 60512-1-2:2002-02
Result	Test passed
Resistance of inscriptions	
Specification	IEC 60068-2-70:1995-12

Test passed



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Polarization and coding

· ·	
Specification	IEC 60512-13-5:2006-02
Result	Test passed
Contact holder in insert	
Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed
Insertion and withdrawal forces	
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N

6 N

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	24
Inculation registance	

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

Withdraw strength per pos. approx.

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Specification	IEC 60664-1:2007-04	
Insulating material group	I	
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



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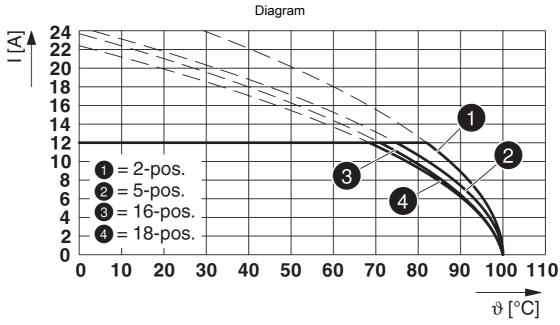
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz 60.1 Hz)
Sweep speed	5g (60.1 Hz 150 Hz)
Test duration per axis	2.5 h
rability test	
Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R ₁	1.7 mΩ
Contact resistance R ₂	1.8 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ
matic test	
Specification	ISO 6988:1985-02
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
nbient 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
aging specifications	
Type of packaging	packed in cardboard
71 - 1 - 33	h - 22 222

1754575

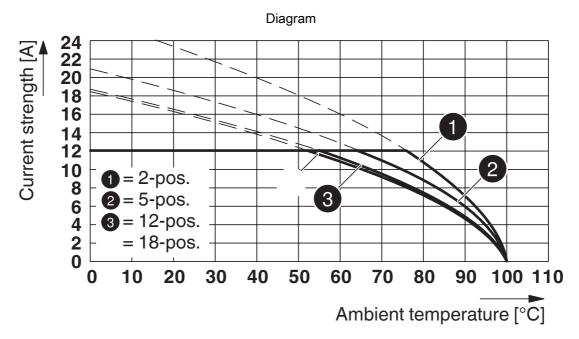
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Drawings



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

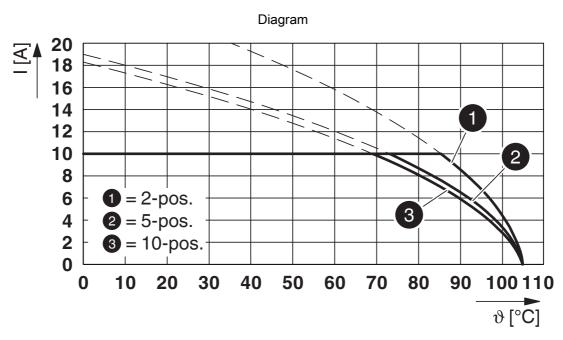


Type: FKCS 2,5/...-ST with MSTB 2,5/...-G

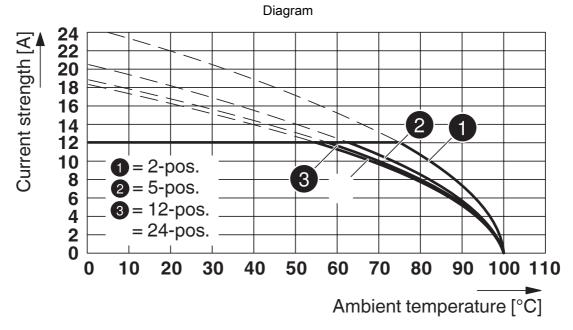


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Type: TVFKC 1,5/...-ST with MSTB 2,5/...-G

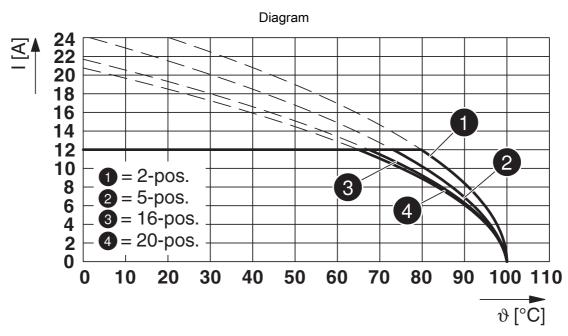


Type: FRONT-MSTB 2,5/..-ST with MSTB 2,5/...-G

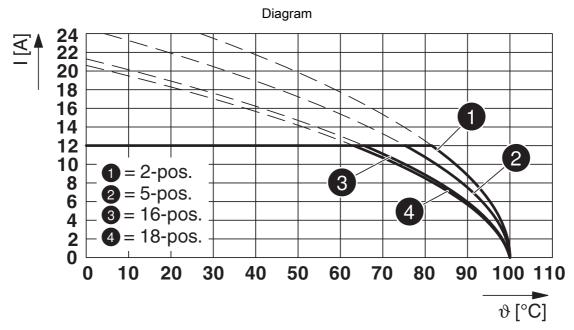


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Type: FKCT 2,5/...-ST with MSTB 2,5/...-G

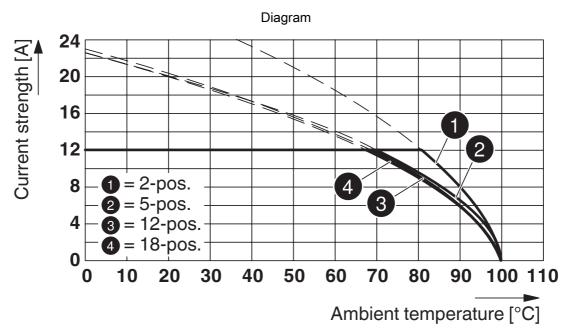


Type: FKCV(W/R) 2,5/...-ST with MSTB 2,5/...-G

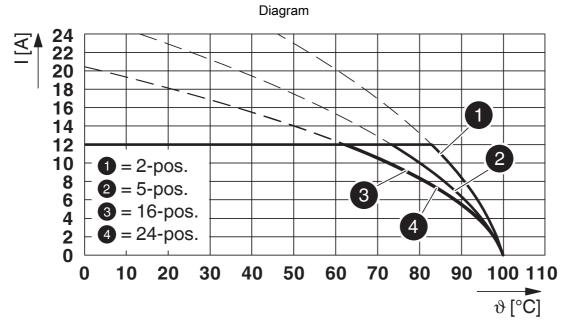


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Type: MSTBTP 2,5/...-ST with MSTB 2,5/...-G

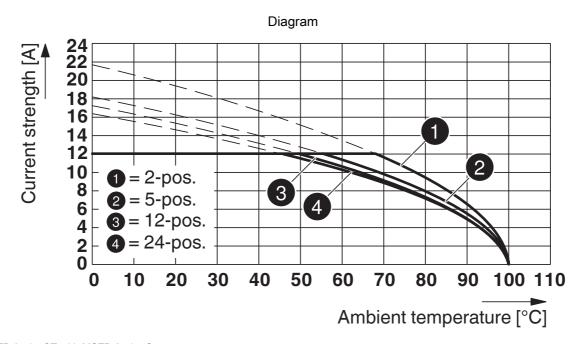


Type: MSTB 2,5/...-ST with MSTB 2,5/...-G



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



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1754575

CSA Approval ID: 13631-2585951				
	Nominal voltage \mathbf{U}_{N}	Nominal current I _N	Cross section AWG	Cross section mm ²
Use group B				
	300 V	10 A	-	-
Use group D				
	300 V	10 A	-	-

CULus Recognized Approval ID: E60425-19931011				
	Nominal voltage U_N	Nominal current I _N	Cross section AWG	Cross section mm ²
Use group B				
	300 V	15 A	-	-
Use group D				
	300 V	10 A	-	-

VDE Zeichengenehmigung Approval ID: 40050648				
	Nominal voltage U_N	Nominal current I _N	Cross section AWG	Cross section mm ²
	250 V	12 A	-	-



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Classifications

UNSPSC 21.0

ECLASS

	ECLASS-11.0	27460201	
	ECLASS-12.0	27460201	
	ECLASS-13.0	27460201	
ETIM			
	ETIM 9.0	EC002637	
UNSPSC			

39121400



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Environmental product compliance

EU R	oHS
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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

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

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



MSTB-BF - Accessories

1759981

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Mounting flange, for fixing both ends of the header onto the PCB, green insulating material, with M 2 x 14 screws and nuts.



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MSTB-BL - Accessories

1755477

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



Keying cap, for forming sections, plugs onto header pin, green insulating material

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

0804183

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



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

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TVFKC 1,5/9-ST - PCB connector

1713907

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PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 18, 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 1,5/9-ST - PCB connector

1715992

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PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 18, 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

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QC 1,5/9-ST - PCB connector

1718038

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PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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 2,5/9-ST - PCB connector

1732810

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

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MSTB 2,5/9-ST - PCB connector

1754588

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

MSTB 2,5/9-STZ - PCB connector

1758995

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, product range: MSTB 2,5/..-STZ, 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

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MVSTBW 2,5/ 9-STEH - PCB connector

1763401

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, product range: MVSTBW 2,5/..-STEH, 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

MSTBP 2,5/ 9-ST - PCB connector

1765849

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

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SMSTB 2,5/ 9-ST - PCB connector

1768820

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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/ 9-ST - PCB connector

1779482

https://www.phoenixcontact.com/us/products/1779482



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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

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MSTBT 2,5/ 9-ST - PCB connector

1779903

https://www.phoenixcontact.com/us/products/1779903



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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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 2,5/9-ST - PCB connector

1792087

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

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MVSTBW 2,5/9-ST - PCB connector

1792595

https://www.phoenixcontact.com/us/products/1792595



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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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 2,5/9-ST - PCB connector

1909281

https://www.phoenixcontact.com/us/products/1909281



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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

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FKCVR 2,5/ 9-ST - PCB connector

1909786

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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/ 9-ST - PCB connector

1910102

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

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FKC 2,5/9-ST - PCB connector

1910429

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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

FKCS 2,5/9-ST - PCB connector

1974805

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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: 9, number of rows: 1, number of positions: 9, number of connections: 9, 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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