

https://www.phoenixcontact.com/in/products/1861060



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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, type of contact: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MSTBO 2,5/..-G1L, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, locking: without, type of packaging: packed in cardboard, Product with pin output on left side

Your advantages

• Plug-in direction orthogonal to the PCB

Commercial Data

Item number	1861060
Packing unit	200 pc
Minimum order quantity	200 pc
Sales Key	ACH
Product Key	ACHADB
Catalog Page	Page 322 (C-1-2013)
GTIN	4017918155636
Weight per Piece (including packing)	2.638 g
Weight per Piece (excluding packing)	2.2 g
Customs tariff number	85366930
Country of origin	IN



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Technical Data

Product properties

Туре	Header perpendicular to the PCB
Product line	COMBICON Connectors M
Product type	PCB headers
Product family	MSTBO 2,5/G1L
Number of positions	4
Pitch	5 mm
Set comprises	2909905 ME 45 OT-MSTBO SET
	2907444 ME 22,5 OT-MSTBO SET
Number of connections	4
Number of rows	1
Mounting flange	without
Number of potentials	4
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I _N	12 A
Nominal voltage U _N	250 V
Degree of pollution	3
Contact resistance	1.5 mΩ
Rated voltage (III/3)	250 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

Material data - housing

Material data - nousing	
Color (Housing)	green (6021)
Insulating material	PA



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Insulating material group	I	
CTI according to IEC 60112	600	
Flammability rating according to UL 94	V0	
Glow wire flammability index GWFI according to EN 60695-2-12	850	
Glow wire ignition temperature GWIT according to EN 60695-2-13	775	
Temperature for the ball pressure test according to EN 60695-10-2	125 °C	
Material data – actuating element		
Color ()	()	

Dimensions

Dimensional drawing	P
Pitch	5 mm
Width [w]	19.95 mm
Height [h]	16.5 mm
Length [I]	14.65 mm
Solder pin length [P]	3.5 mm
Pin dimensions	1 x 1 mm

Mechanical tests

Specification

Test for conductor damage and slackening

Result	Test passed		
Pull-out test			
Specification	IEC 60999-1:1999-11		
Conductor cross section/conductor type/tractive force	0.2 mm² / solid / > 10 N		
setpoint/actual value	0.2 mm² / flexible / > 10 N		
	2.5 mm² / solid / > 50 N		
	2.5 mm² / flexible / > 50 N		
Insertion and withdrawal forces			
Desuit	Test seemed		

IEC 60999-1:1999-11

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	13 N
Withdraw strength per pos. approx.	7 N

l orque test		
Specification	IEC 60999-1:1999-11	



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Contact holder in insert



Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed
Resistance of inscriptions	
Specification	IEC 60068-2-70:1995-12
Result	Test passed

IEC 60512-13-5:2006-02

Polarization and coding Specification

Result Test passed

Visual inspection	
Specification	IEC 60512-1-1:2002-02
Result	Test passed

Dimension check	
Specification	IEC 60512-1-2:2002-02
Result	Test passed

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02	
Tested number of positions	4	

Insulation resistance

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

Air clearances and creepage distances |

Air deditarioes and dreepage distarioes			
Specification	IEC 60664-1:2007-04		
Insulating material group	I		
Comparative tracking index (IEC 60112)	CTI 600		
Rated insulation voltage (III/3)	250 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		
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)	1.6 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		



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Environmental and real-life conditions

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

Durability test

Specification	IEC 60512-9-1:2010-03	
Impulse withstand voltage at sea level	4.8 kV	
Contact resistance R ₁	1.5 mΩ	
Contact resistance R ₂	1.5 mΩ	
Insertion/withdrawal cycles	25	
Insulation resistance, neighboring positions	> 5 MΩ	

Climatic test

Specification	ISO 6988:1985-02	
Corrosive stress	$0.2~\mathrm{dm^3SO_2}$ on 300 dm 3 /40 $^\circ$ C/1 cycle	
Thermal stress	100 °C/168 h	
Power-frequency withstand voltage	2.21 kV	

Ambient conditions

Ambient temperature (operation)	-40 °C 105 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C 55 °C
Relative humidity (storage/transport)	30 % 70 %
Ambient temperature (assembly)	-5 °C 100 °C

Packaging specifications

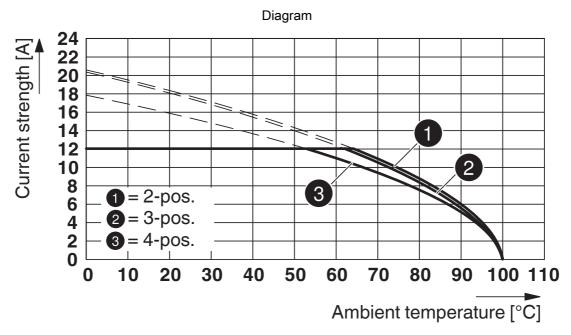
Type of packaging	packed in cardboard
Outer packaging type	Carton

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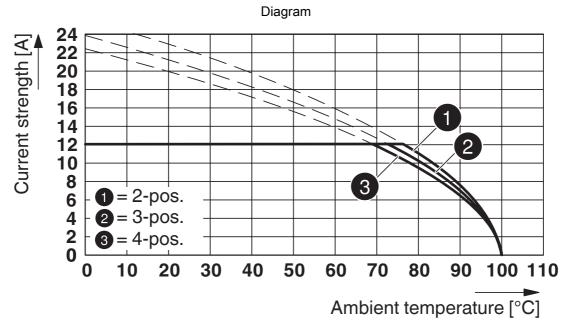
https://www.phoenixcontact.com/in/products/1861060



Drawings



Type: MVSTB(R/W) 2,5/...-ST with MSTBO 2,5/...-G1L

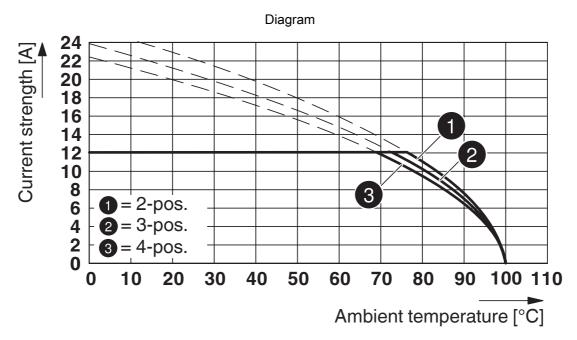


Type: MSTBTP 2,5/...-ST with MSTBO 2,5/...-G1L

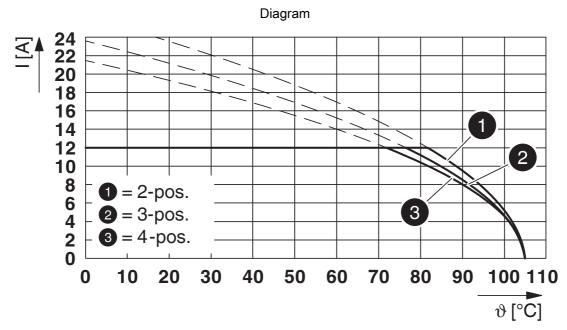


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Type: MSTBT 2,5/...-ST with MSTBO 2,5/...-G1L

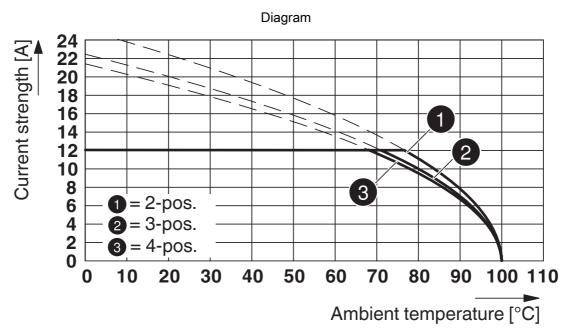


Type: FKCN 2,5/...-ST with MSTBO 2,5/...-G1L

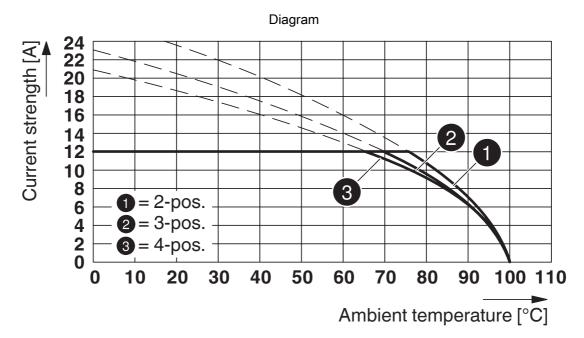


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Type: MSTBP 2,5/...-ST with MSTBO 2,5/...-G1L

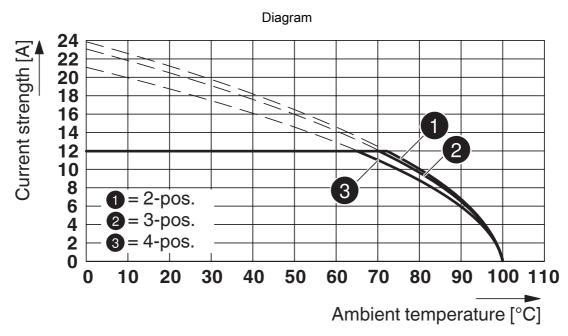


Type: MSTB 2,5/..-ST with MSTBO 2,5/...-G1L

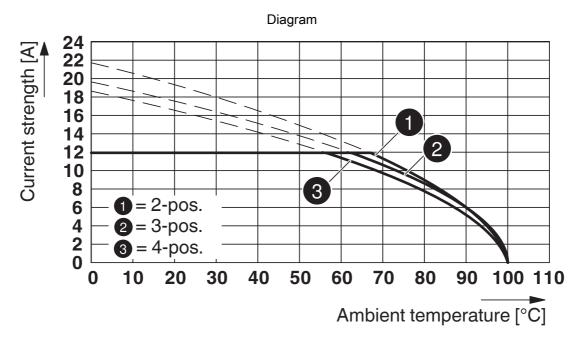


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Type: FRONT-MSTB 2,5/...-ST with MSTBO 2,5/...-G1L

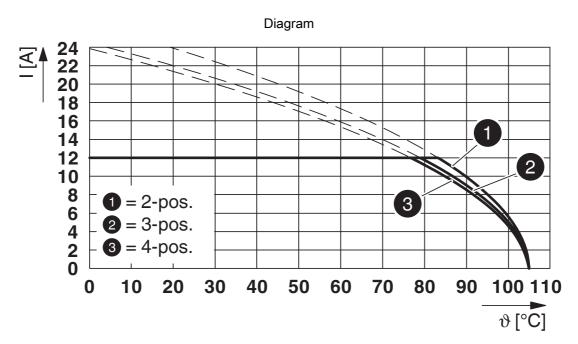


Type: SMSTB 2,5/...-ST with MSTBO 2,5/...-G1L



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Type: FKCT 2,5/...-ST with MSTBO 2,5/...-G1L



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Approvals

•	CSA Approval ID: 13631				
		Nominal Voltage U_N	Nominal Current I _N	Cross Section AWG	Cross Section mm ²
		300 V	10 A	-	-
		300 V	10 A	-	-

CB scheme	IECEE CB Scheme Approval ID: DE1-60988-B1B2				
		Nominal Voltage U _N	Nominal Current I _N	Cross Section AWG	Cross Section mm ²
		250 V	8 A	-	-

ERC	EAC
LIIL	Approval ID: B.01687

e 911 us	cULus Recognized Approval ID: E60425-20050718				
		Nominal Voltage U _N	Nominal Current I _N	Cross Section AWG	Cross Section mm ²
		300 V	16 A	-	-
		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	8 A	-	-



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Classifications

UNSPSC 21.0

ECLASS

27460201				
27460201				
27460201				
ETIM				
EC002637				
UNSPSC				

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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Mandatory Accessories

MSTBT 2,5/4-ST - PCB connector

1779851

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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

MSTBT 2,5 HC/ 4-ST - PCB connector

1926251

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MSTBT 2,5 HC/..-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 HC, locking: without, mounting: without, type of packaging: packed in cardboard, The T-shape of the MSTBT plug distributes the height uniformly over the upper and lower sides of the printed circuit board

Accessories



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CR MSTBO-G1 - Coding section

2199618

https://www.phoenixcontact.com/in/products/2199618

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 2×14 screws and nuts.



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MSTB-BL - Accessories

1755477

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

TVFKC 1,5/4-ST - PCB connector

1713855

https://www.phoenixcontact.com/in/products/1713855



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 8, 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

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TVFKCL 1,5/4-ST - PCB connector

1715947

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 8, 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

QC 1,5/4-ST - PCB connector

1717987

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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



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FKCN 2,5/4-ST - PCB connector

1732768

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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

MSTB 2,5/ 4-ST - PCB connector

1754481

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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



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MSTBP 2,5/ 4-ST - PCB connector

1765797

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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

SMSTB 2,5/ 4-ST - PCB connector

1768781

https://www.phoenixcontact.com/in/products/1768781



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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



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FRONT-MSTB 2,5/4-ST - PCB connector

1779437

https://www.phoenixcontact.com/in/products/1779437



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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

MSTBT 2,5/4-ST - PCB connector

1779851

https://www.phoenixcontact.com/in/products/1779851



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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



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MVSTBW 2,5/ 4-STEH - PCB connector

1784299

https://www.phoenixcontact.com/in/products/1784299



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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

MVSTBR 2,5/4-ST - PCB connector

1792032

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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

1861060

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MVSTBW 2,5/4-ST - PCB connector

1792540

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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 2,5/4-ST - PCB connector

1909236

https://www.phoenixcontact.com/in/products/1909236



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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 2,5/4-ST - PCB connector

1909731

https://www.phoenixcontact.com/in/products/1909731



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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 2,5/4-ST - PCB connector

1910050

https://www.phoenixcontact.com/in/products/1910050



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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 2,5/4-ST - PCB connector

1910377

https://www.phoenixcontact.com/in/products/1910377



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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 1/4-ST-BUS - PCB connector

1921696

https://www.phoenixcontact.com/in/products/1921696



PCB connector, nominal cross section: 1 mm², color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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



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FKCS 2,5/4-ST - PCB connector

1974753

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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, type of contact: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, 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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