

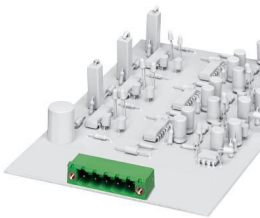
# MSTB 2,5/ 5-GF-5,08 AU - PCB header



1876631

<https://www.phoenixcontact.com/in/products/1876631>

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PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Pin, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTB 2,5/-GF, pitch: 5.08 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, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard, Gold-plated contact surface / color: Green RAL 6021

## Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- 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
- Plug-in direction parallel to the PCB
- Screwable flange for superior mechanical stability

## Commercial Data

Item number	1876631
Packing unit	50 pc
Minimum order quantity	50 pc
Sales Key	AAC
Product Key	AACSHD
Catalog Page	Page 25 (PC-2005)
GTIN	4017918234010
Weight per Piece (including packing)	3.85 g
Weight per Piece (excluding packing)	3.4 g
Customs tariff number	85366930
Country of origin	DE

# MSTB 2,5/ 5-GF-5,08 AU - PCB header



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## Technical Data

### Product properties

Type	Components DeviceNet compatible
Product line	COMBICON Connectors M
Product type	PCB headers
Product family	MSTB 2,5/..-GF
Number of positions	5
Pitch	5.08 mm
Number of connections	5
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	5
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 m $\Omega$
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)	400 V
Rated surge voltage (II/2)	4 kV

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### Flange

Tightening torque	0.3 Nm
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### Attachment on the PCB

Tightening torque	0.3 Nm
Screw	Sheet metal screw ISO 1481-ST 2,2x6,5 C or ISO 7049-ST 2,2x6,5 C

### Material specifications

#### Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
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Contact material	Cu alloy
Surface characteristics	partially gold-plated
Metal surface contact area (top layer)	Gold (0.8 - 1.4 µm Au)
Metal surface contact area (middle layer)	Nickel (2 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1 - 3 µm Ni)

## Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

## Material data – actuating element

Color ( )	( )
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## 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]	35.56 mm
Height [h]	12.1 mm
Length [l]	12 mm
Installed height	9 mm
Solder pin length [P]	3.5 mm

## Mechanical tests

### Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

### Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm <sup>2</sup> / solid / > 10 N
	0.14 mm <sup>2</sup> / flexible / > 10 N
	2.5 mm <sup>2</sup> / solid / > 50 N

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	2.5 mm <sup>2</sup> / flexible / > 50 N
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## Insertion and withdrawal forces

Result	Test passed
No. of cycles	100
Insertion strength per pos. approx.	4 N
Withdraw strength per pos. approx.	3 N

## Torque 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

## Polarization and coding

Specification	IEC 60512-13-5:2006-02
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	20

### Insulation resistance

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

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI 225
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm

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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)	3.2 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	4 mm

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 500 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Sweep speed	5g (60.1 Hz ... 500 Hz)
Test duration per axis	2 h

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance $R_1$	1.7 m $\Omega$
Contact resistance $R_2$	1.5 m $\Omega$
Insertion/withdrawal cycles	100
Insulation resistance, neighboring positions	> 5 M $\Omega$

### Climatic test

Specification	DIN 50018-EN:1997-06
Corrosive stress	1.0 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/3 cycles
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

### Shocks

Specification	IEC 61373:2010-05
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

### 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

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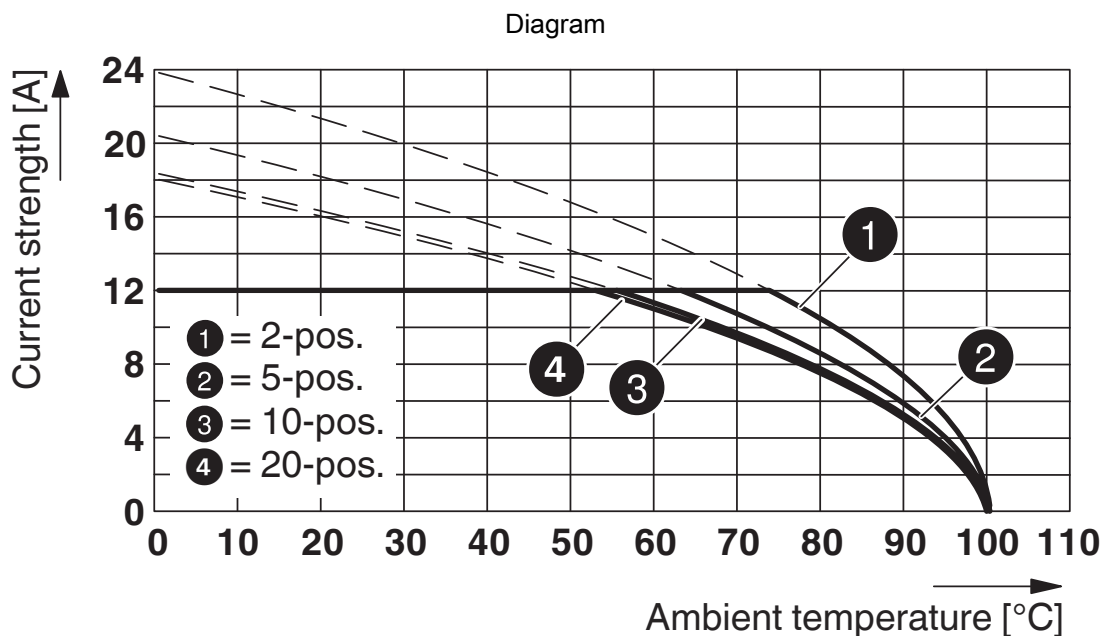
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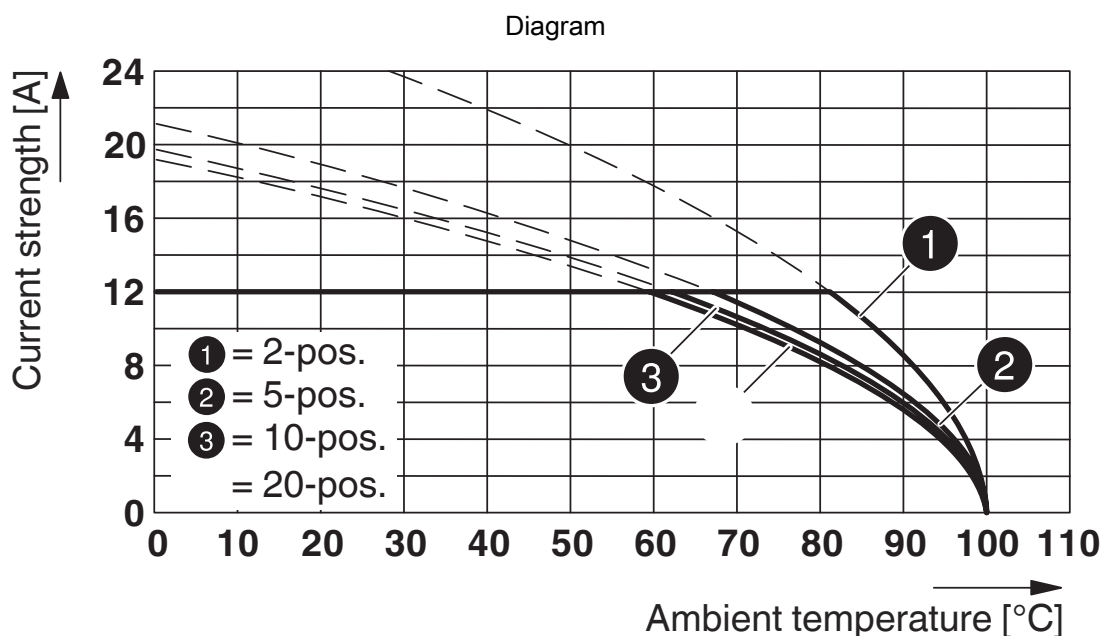
## Packaging specifications

Type of packaging
packed in cardboard

Drawings



Type: FRONT-MSTB 2,5/...-STF-5,08 AU with MSTB 2,5/...-GF-5,08 AU



Type: MSTBP 2,5/...-STF-5,08 AU with MSTB 2,5/...-GF-5,08 AU


# MSTB 2,5/ 5-GF-5,08 AU - PCB header




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## Approvals

 <b>CSA</b> Approval ID: 13631				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B	300 V	10 A	-	-
Use group D	300 V	10 A	-	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-60988-B1B2				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	250 V	12 A	-	-

 <b>EAC</b> Approval ID: B.01687				
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 <b>cULus Recognized</b> Approval ID: E60425-19931011				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B	300 V	15 A	-	-
Use group D	300 V	10 A	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40050648				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	250 V	12 A	-	-



# MSTB 2,5/ 5-GF-5,08 AU - PCB header



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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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# MSTB 2,5/ 5-GF-5,08 AU - PCB header



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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

# MSTB 2,5/ 5-GF-5,08 AU - PCB header

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## Accessories

### MSTB-BL - Accessories

1755477

<https://www.phoenixcontact.com/in/products/1755477>



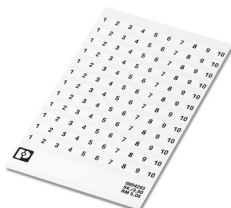
Keying cap, for forming sections, plugs onto header pin, green insulating material

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### SK 5,08/3,8:FORTL.ZAHLEN - Marker card

0804293

<https://www.phoenixcontact.com/in/products/0804293>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

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## CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/in/products/1734401>

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



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## B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/in/products/1051993>

Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm



## MSTB 2,5/ 5-GF-5,08 AU - PCB header

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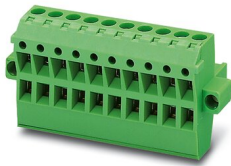
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## TMSTBP 2,5/ 5-STF-5,08 ABGY AU - PCB connector

1853201

<https://www.phoenixcontact.com/in/products/1853201>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: agate gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 10, product range: TMSTBP 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module.

## MSTB 2,5/ 5-STF-5,08 AU - PCB connector

1876628

<https://www.phoenixcontact.com/in/products/1876628>



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

## MSTB 2,5/ 5-GF-5,08 AU - PCB header

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## MSTBP 2,5/ 5-STF-5,08 ABGY AU - PCB connector

1879065

<https://www.phoenixcontact.com/in/products/1879065>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: agate gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTBP 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

## MSTB 2,5/ 5-STF-5,08 ABGY AU - PCB connector

1882832

<https://www.phoenixcontact.com/in/products/1882832>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: agate gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

# MSTB 2,5/ 5-GF-5,08 AU - PCB header

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## MVSTBW 2,5/ 5-STF-5,08 AU - PCB connector

1908253

<https://www.phoenixcontact.com/in/products/1908253>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MVSTBW 2,5/..-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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## MVSTBW 2,5/ 5-STF-5,08 ABGY AU - PCB connector

1908538

<https://www.phoenixcontact.com/in/products/1908538>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: agate gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MVSTBW 2,5/..-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

# MSTB 2,5/ 5-GF-5,08 AU - PCB header

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## TMSTBP 2,5/ 5-STF-5,08 AU - PCB connector

1908732

<https://www.phoenixcontact.com/in/products/1908732>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 10, product range: TMSTBP 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module.

## MVSTBR 2,5/ 5-STF-5,08 AU - PCB connector

1916902

<https://www.phoenixcontact.com/in/products/1916902>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MVSTBR 2,5/..-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard



## MSTB 2,5/ 5-GF-5,08 AU - PCB header

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## MVSTBR 2,5/ 5-STF-5,08 ABGY AU - PCB connector

1919666

<https://www.phoenixcontact.com/in/products/1919666>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: agate gray, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MVSTBR 2,5/...-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

## MSTBP 2,5/ 5-STF-5,08 AU - PCB connector

1944479

<https://www.phoenixcontact.com/in/products/1944479>



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

# MSTB 2,5/ 5-GF-5,08 AU - PCB header

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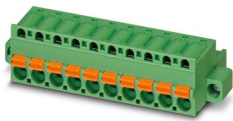
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## FKC 2,5/ 5-STF-5,08 AU - PCB connector

1945672

<https://www.phoenixcontact.com/in/products/1945672>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Gold, type of contact: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKC 2,5/..-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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