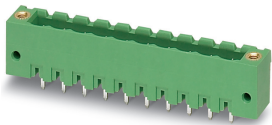


# Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

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PCB header, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: MSTBV 2,5/..-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



The figure shows a 10-position version of the product

## Your advantages

- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- ✓ Well-known mounting principle allows worldwide use
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Screwable flange for superior mechanical stability



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4017918039271
Weight per Piece (excluding packing)	3.920 g
Custom tariff number	85366930
Country of origin	China

## Technical data

### Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	MSTBV 2,5/..-GF

## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Technical data

#### Item properties

Pitch	5.08 mm
Number of positions	5
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	Threaded flange
Number of levels	1
Number of connections	5
Number of potentials	5
Pin connector pattern alignment	Standard

#### Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage (III/3)	250 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	400 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

#### 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 $\mu\text{m}$ Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 $\mu\text{m}$ Ni),
Metal surface soldering area (top layer)	Tin (3 - 5 $\mu\text{m}$ Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 $\mu\text{m}$ Ni)

#### Material data - housing

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

#### Flange specifications

Type of locking	Screw locking
Mounting flange	Threaded flange

# Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

## Technical data

### Flange specifications

Torque	0.3 Nm
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### Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [ l ]	8.6 mm
Width [ w ]	35.56 mm
Height [ h ]	15.9 mm
Pitch	5.08 mm
Height (without solder pin)	12 mm
Solder pin [P]	3.9 mm
Pin dimensions	1 x 1 mm

### Dimensions for PCB design

Hole diameter	1.4 mm
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### Packaging information

Type of packaging	packed in cardboard
Pieces per package	250
Denomination packing units	Pcs.

### General product information

Type of note	Notes on operation
Note	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.

### Ambient conditions

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

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	4 mm
Minimum creepage distance value (III/2)	3.2 mm
Minimum creepage distance value (II/2)	4 mm

## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Technical data

#### Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

#### Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R <sub>1</sub>	2.5 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	2.6 mΩ
Impulse withstand voltage at sea level	4.8 kV

#### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
Upper limiting temperature requirements <100 °C	Test passed

#### Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV

#### Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

#### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h

#### Standards and Regulations

Connection in acc. with standard	EN-VDE
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# Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

## Technical data

### Standards and Regulations

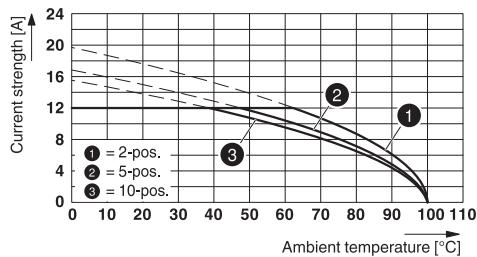
	CSA
Flammability rating according to UL 94	V0

### Environmental Product Compliance

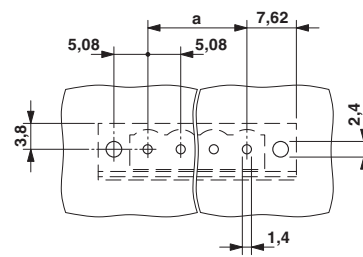
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Diagram

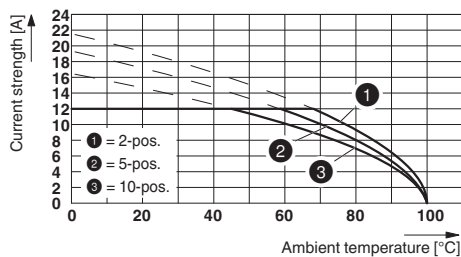


Drilling diagram

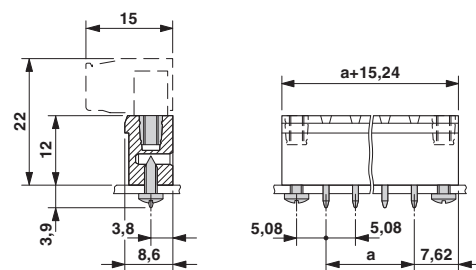


Type: TVMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



Dimensional drawing



Type: TFKC 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

## Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 11.0	27460201
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700

## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Classifications

#### eCl@ss

eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 8.0	27440402
eCl@ss 9.0	27440402

#### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 5.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

#### UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

### Approvals

#### Approvals

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#### Approvals

DNV GL / CSA / RS / IECB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

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#### Ex Approvals

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#### Approval details

# Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

## Approvals

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE00001EY
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CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	13631
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	12 A	10 A	

RS		<a href="http://www.rs-head.spb.ru/en/index.php">http://www.rs-head.spb.ru/en/index.php</a>	17.00014.272
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IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DE1-60988-B1B2
Nominal voltage UN	250 V		
Nominal current IN	12 A		

EAC			B.01687
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cULus Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	E60425-19931011
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	12 A	10 A	

VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40050648
Nominal voltage UN	250 V		

## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Approvals

Nominal current IN	12 A
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### Accessories

#### Accessories

#### Coding element

Coding section - CR-MSTB - 1734401



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

#### Filler plug

Accessories - MSTB-BL - 1755477



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

#### Labeled terminal marker

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293



Marker card, 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

#### Marker pen

Marker pen - B-STIFT - 1051993



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



## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Accessories

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#### Terminal marking

Marker card - SK 5,08/3,8:UNBEDRUCKT - 0805412



Marker card, Card, white, unlabeled, can be labeled with: Marker pen, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

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#### Additional products

Printed-circuit board connector - TVMSTB 2,5/ 5-STF-5,08 - 1719121



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 400 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 10, product range: TVMSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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Printed-circuit board connector - FKCN 2,5/ 5-STF-5,08 - 1754827



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: FKCN 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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Printed-circuit board connector - FRONT-MSTB 2,5/ 5-STF-5,08 - 1777837



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: FRONT-MSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Accessories

#### Printed-circuit board connector - MSTB 2,5/ 5-STF-5,08 - 1778014



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: MSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - MSTBT 2,5/ 5-STF-5,08 - 1805330



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: MSTBT 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - MSTBC 2,5/ 5-STZF-5,08 - 1809763



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: MSTBC 2,5/..-STZF, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] 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

#### Printed-circuit board connector - MVSTBW 2,5/ 5-STF-5,08 - 1834932



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: MVSTBW 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -90 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - MVSTBR 2,5/ 5-STF-5,08 - 1835122



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: MVSTBR 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Accessories

#### Printed-circuit board connector - TMSTBP 2,5/ 5-STF-5,08 - 1853133



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 10, product range: TMSTBP 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module.

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#### Printed-circuit board connector - FKC 2,5/ 5-STF-5,08 - 1873236



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 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 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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#### Printed-circuit board connector - FKCVW 2,5/ 5-STF-5,08 - 1873838



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: FKCVW 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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#### Printed-circuit board connector - FKCVR 2,5/ 5-STF-5,08 - 1874138



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: FKCVR 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

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#### Printed-circuit board connector - QC 1/ 5-STF-5,08 - 1883381



PCB connector, nominal cross section: 1 mm<sup>2</sup>, color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: QC 1/...-STF, pitch: 5.08 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

## Printed-circuit board connector - MSTBV 2,5/ 5-GF-5,08 - 1777109

### Accessories

#### Printed-circuit board connector - FKCT 2,5/ 5-STF-5,08 - 1902330



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: FKCT 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - TFKC 2,5/ 5-STF-5,08 - 1962723



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 10, product range: TFKC 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - SMSTB 2,5/ 5-STF-5,08 - 1971099



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: SMSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -45 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

#### Printed-circuit board connector - FKCS 2,5/ 5-STF-5,08 - 1975299



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: Tin, type of contact: Female connector, Number of potentials: 5, Number of rows: 1, Number of positions per row: 5, number of connections: 5, product range: FKCS 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Stecksystem: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard