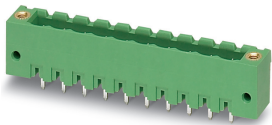


Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)

PCB header, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MSTBV 2,5/...-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, plug-in system: 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
Minimum order quantity	50 pc
GTIN	
GTIN	4017918039349
Weight per Piece (excluding packing)	6.580 g
Custom tariff number	85366930
Country of origin	Germany

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Technical data

Item properties

Range of articles	MSTBV 2,5/...-GF
Pitch	5.08 mm
Number of positions	12
Mounting type	Wave soldering
Pin layout	Linear pinning
Locking	Threaded flange
Number of levels	1
Number of connections	12
Number of potentials	12
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 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

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
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Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Technical data

Flange specifications

Mounting flange	Threaded flange
Torque	0.3 Nm

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	8.6 mm
Width [w]	71.12 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	50
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 2,5/12-GF-5,08 - 1777170

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 ₁	2.5 mΩ
Insertion/withdrawal cycles	25
Contact resistance R ₂	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 ³ SO ₂ on 300 dm ³ /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 2,5/12-GF-5,08 - 1777170

Technical data

Standards and Regulations

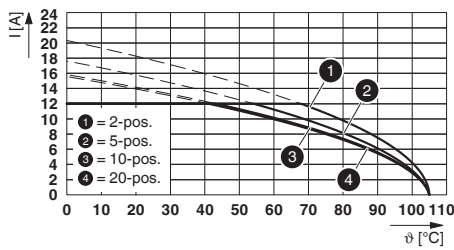
	CSA
Flammability rating according to UL 94	V0

Environmental Product Compliance

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

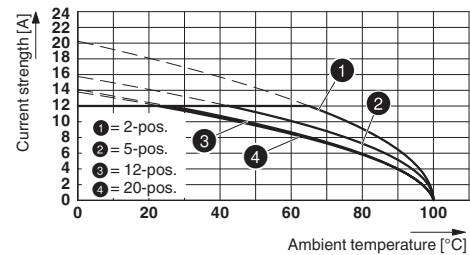
Drawings

Diagram



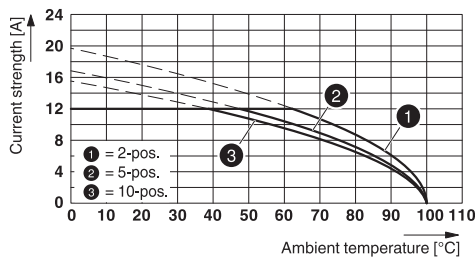
Type: LPC 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



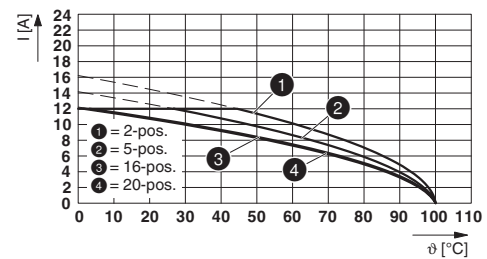
Type: MSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



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

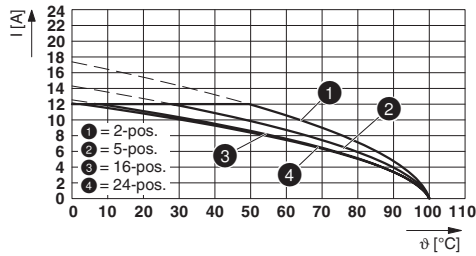
Diagram



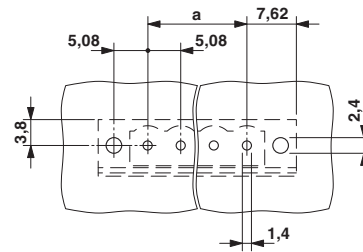
Type: MVSTB(R/W) 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Diagram

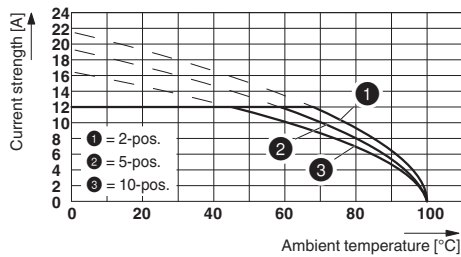


Drilling diagram

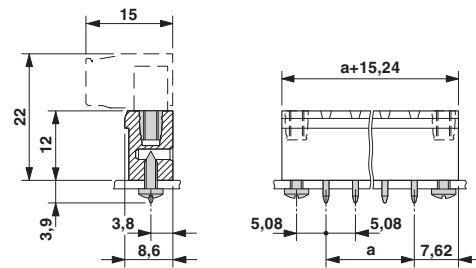


Type: SMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram

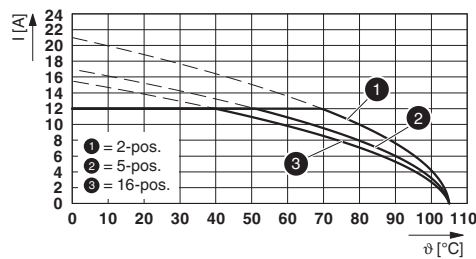


Dimensional drawing

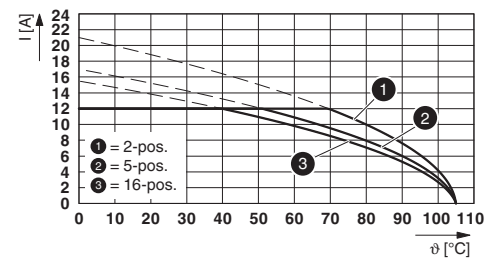


Type: TFKC 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



Diagram

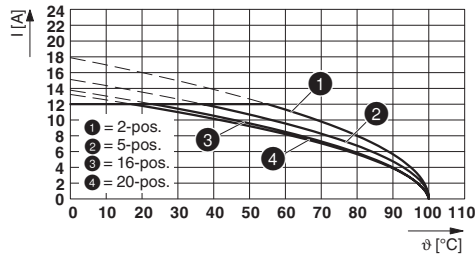


Type: FKCVR 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

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

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Diagram



Type: FRONT-MSTB 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
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

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Classifications

UNSPSC

UNSPSC 21.0	39121409
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Approvals

Approvals

Approvals

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

Ex Approvals

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAE00001EY
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VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40050648
Nominal voltage UN	250 V		
Nominal current IN	12 A		

CSA		http://www.csagroup.org/services-industries/product-listing/	13631
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	12 A	10 A	

RS		http://www.rs-head.spb.ru/en/index.php	17.00014.272
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Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Approvals

IECEE CB Scheme	CB scheme	http://www.iecee.org/	DE1-60988-B1B2
Nominal voltage UN		250 V	
Nominal current IN		12 A	

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

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

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Accessories

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

Additional products

Printed-circuit board connector - FKCN 2,5/12-STF-5,08 - 1754898



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: FKCN 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: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FRONT-MSTB 2,5/12-STF-5,08 - 1777895



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: FRONT-MSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTB 2,5/12-STF-5,08 - 1778085



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTBT 2,5/12-STF-5,08 - 1805398



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MSTBT 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Accessories

Printed-circuit board connector - MSTBC 2,5/12-STZF-5,08 - 1809831



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MSTBC 2,5/..-STZF, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, 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

Printed-circuit board connector - MVSTBW 2,5/12-STF-5,08 - 1835009



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MVSTBW 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MVSTBR 2,5/12-STF-5,08 - 1835193



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: MVSTBR 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKC 2,5/12-STF-5,08 - 1873304



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, 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: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCVW 2,5/12-STF-5,08 - 1873906



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: FKCVW 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTBV 2,5/12-GF-5,08 - 1777170

Accessories

Printed-circuit board connector - FKCVR 2,5/12-STF-5,08 - 1874206



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: FKCVR 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - QC 1/12-STF-5,08 - 1883459



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: QC 1/..-STF, pitch: 5.08 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCT 2,5/12-STF-5,08 - 1902408



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: FKCT 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - SMSTB 2,5/12-STF-5,08 - 1971167



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: SMSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -45 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCS 2,5/12-STF-5,08 - 1975367



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: Female connector, Number of potentials: 12, Number of rows: 1, Number of positions per row: 12, number of connections: 12, product range: FKCS 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: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard
