

# Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

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PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin




The figure shows a 10-position version of the product

## Your advantages

- Time saving push-in connection, tools not required
- Intuitive use through colour coded actuation lever
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Can be combined with the MSTB 2,5 range



## Key Commercial Data

Packing unit	100 pc
GTIN	 4 017918 142766
GTIN	4017918142766

## Technical data

### Item properties

Brief article description	PCB connector
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	FKIC 2,5/...ST
Pitch	5.08 mm
Number of positions	4
Connection method	Push-in spring connection
Locking	without
Number of levels	1
Number of connections	4
Number of potentials	4

# Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

## Technical data

### Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage	320 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	630 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

### Connection capacity

Connection method	Push-in spring connection
pluggable	Yes
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG / kcmil	24 ... 12
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.0 mm
Stripping length	10 mm

### Flange specifications

Type of locking	without
Mounting flange	without

### 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 terminal point (top layer)	Tin (5 - 7 µm Sn)
Metal surface contact area (top layer)	Tin (5 - 7 µm Sn)

### Material data - housing

Housing color	green (6021)
Insulating material	PA
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

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## Technical data

### Material data – actuating element

Color of the actuating lever	orange (2003)
Insulating material	PBT
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

### Dimensions for the product

Length [ l ]	27 mm
Width [ w ]	22.32 mm
Height [ h ]	15 mm
Pitch	5.08 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	100
Denomination packing units	Pcs.

### 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)

### Termination and connection method

Conductor connection test	The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force.
Test result	Test passed
Test – repeated connection and release	IEC 60999-1:1999-11
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

### Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm <sup>2</sup> / solid / > 10 N
	0.2 mm <sup>2</sup> / flexible / > 10 N
	2.5 mm <sup>2</sup> / solid / > 50 N
	2.5 mm <sup>2</sup> / flexible / > 50 N

### Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02

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## Technical data

### Mechanical tests according to standard

No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	32 N

### 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 mm
Minimum creepage distance value (II/2)	3.2 mm

### Electrical tests - Function

Specification	IEC 60999-1:1999-11
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### Temperature cycles

Specification	IEC 60999-1:1999-11
Temperature cycles	192

### Current carrying capacity / derating curves

Caption	Type: FKIC 2,5/..-ST-5,08 with ICV 2,5/..-G-5,08
Specification	IEC 61984:2008-10
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

### 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>	1.5 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.5 mΩ
Impulse withstand voltage at sea level	4.8 kV

## Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

### Technical data

#### Durability tests (B)

Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 0.3 TΩ

#### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	16
Conductor cross section	2.5 mm <sup>2</sup>
Test current	12 A
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

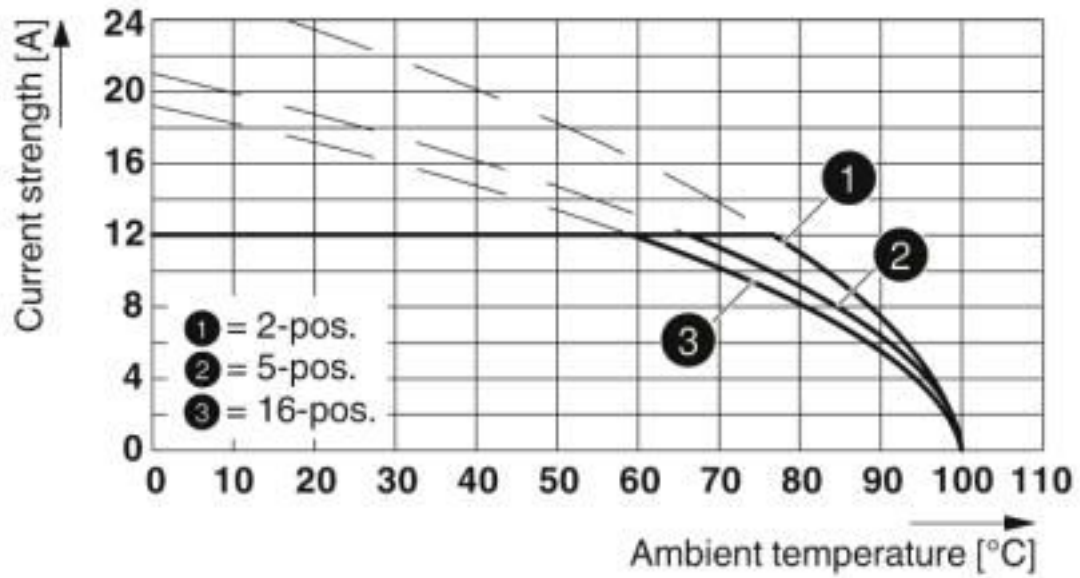
#### Environmental Product Compliance

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

### Drawings

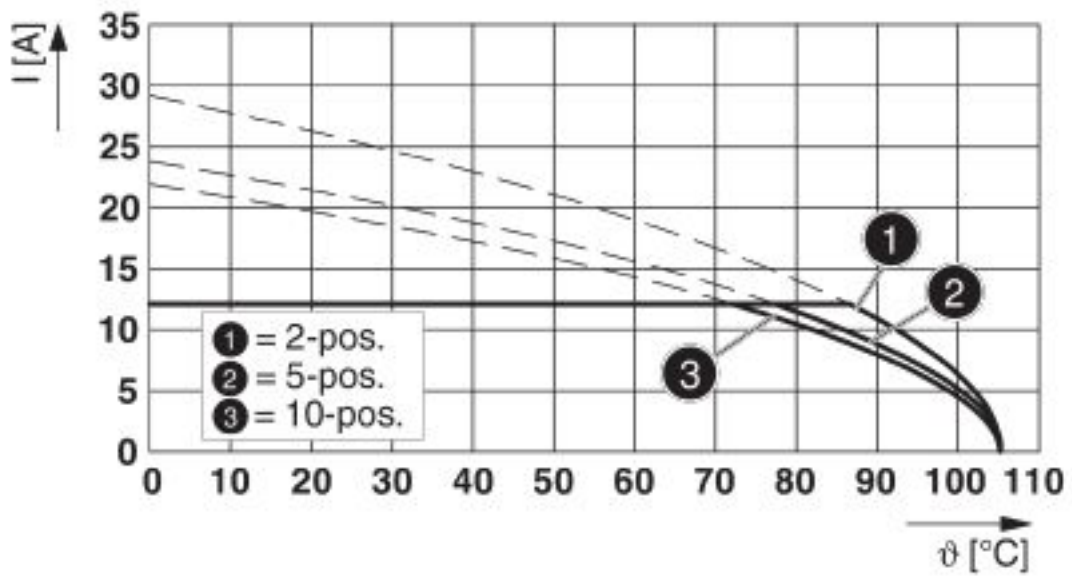
# Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

Diagram



Type: FKIC 2,5/...-ST-5,08 with ICV 2,5/...-G-5,08

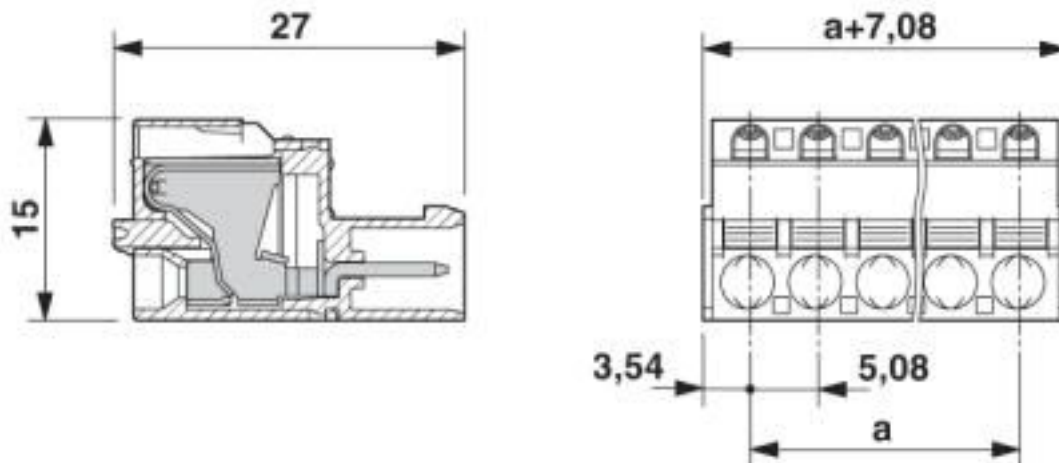
Diagram



Type: TFKC 2,5/...-ST-5,08 with FKIC 2,5/...-ST-5,08

# Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27440309
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	27440309
eCl@ss 8.0	27440309
eCl@ss 9.0	27440309

### ETIM

ETIM 3.0	EC001121
ETIM 4.0	EC002638
ETIM 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

### 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 - FKIC 2,5/ 4-ST-5,08 - 1873375

## Classifications

### UNSPSC

UNSPSC 21.0	39121409
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## Approvals

### Approvals

### Approvals

IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

### Ex Approvals

## Approval details

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		
mm <sup>2</sup> /AWG/kcmil	0.2-2.5		

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	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	26-12	26-12	

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>	40050694
Nominal voltage UN	250 V		
Nominal current IN	12 A		
mm <sup>2</sup> /AWG/kcmil	0.2-2.5		



## Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

### 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



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### 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

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### Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 1205053



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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### Strain relief

Strain relief - STZ 4-FKC-5,08 - 1876877



Strain relief for snapping into the latching chambers of the plugs, 4-pos.

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### Test plug terminal block

## Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

### Accessories

Reducing plug - RPS - 0201647



Reducing plug, color: gray

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Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

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### Additional products

Printed-circuit board connector - MSTBP 2,5/ 4-ST-5,08 - 1769036



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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Printed-circuit board connector - QC 1/ 4-ST-5,08 - 1883271



PCB connector, nominal current: 10 A, rated voltage (III/2): 630 V, nominal cross section: 1 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Displacement connection, color: green, contact surface: Tin

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Printed-circuit board connector - FKCVW 2,5/ 4-ST-5,08 - 1873676



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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## Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

### Accessories

Feed-through terminal block - ZFKK 1,5-ICV-5,08 - 1873029



Feed-through terminal block, connection method: Special and hybrid connection, cross section: 0.2 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, AWG: 24 - 16, width: 5.1 mm, color: gray, mounting: NS 35/15, NS 35/7,5

Printed-circuit board connector - TMSTBP 2,5/ 4-ST-5,08 - 1853036



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, The plug allows conductors to be looped through from module to module.

Printed-circuit board connector - SMSTB 2,5/ 4-ST-5,08 - 1826306



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTBU 2,5/ 4-STD-5,08 - 1824146



Direct plug-in block, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

Printed-circuit board connector - MSTBC 2,5/ 4-STZ-5,08 - 1809527



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Crimp connection, color: green, 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 - FKIC 2,5/ 4-ST-5,08 - 1873375

### Accessories

#### Printed-circuit board connector - MVSTBR 2,5/ 4-ST-5,08 - 1792265



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

#### Feed-through header - IC 2,5/ 4-G-5,08 - 1786420



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

#### Printed-circuit board connector - ICV 2,5/ 4-G-5,08 - 1785968



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

#### Printed-circuit board connector - FRONT-MSTB 2,5/ 4-ST-5,08 - 1777303



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Front screw connection, color: green, contact surface: Tin

#### Printed-circuit board connector - MSTB 2,5/ 4-ST-5,08 - 1757035



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

## Printed-circuit board connector - FKIC 2,5/ 4-ST-5,08 - 1873375

### Accessories

#### Printed-circuit board connector - FKCT 2,5/ 4-ST-5,08 - 1902136



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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#### Printed-circuit board connector - FKCVR 2,5/ 4-ST-5,08 - 1873977



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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#### Printed-circuit board connector - FKC 2,5/ 4-ST-5,08 - 1873074



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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#### Feed-through header - A-ICV 2,5/ 4-G-5,08 - 1872716



Feed-through header, nominal current: 12 A, nom. voltage: 250 V, mounting type: DIN rail mounting, number of positions: 4, pitch: 5.08 mm, color: green

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#### Printed-circuit board connector - MSTBC 2,5/ 4-ST-5,08 - 1808832



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Crimp connection, color: green, 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 - FKIC 2,5/ 4-ST-5,08 - 1873375

### Accessories

#### Printed-circuit board connector - MVSTBW 2,5/ 4-ST-5,08 - 1792773



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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#### Printed-circuit board connector - MSTBT 2,5/ 4-ST-5,08 - 1780002



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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#### Printed-circuit board connector - MSTB 2,5/ 4-STZ-5,08 - 1776155



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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