

# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

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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: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin


The figure shows a 10-position version of the product

## Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Screwable flange for superior mechanical stability
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors



## Key Commercial Data

Packing unit	50 pc
GTIN	 4 017918 103279
GTIN	4017918103279

## Technical data

### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	CLASSIC COMBICON
Type of contact	Female connector
Range of articles	MVSTBR 2,5/...-STF
Pitch	5.08 mm
Number of positions	20
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M3
Locking	Screw flange
Number of levels	1

# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

## Technical data

### Item properties

Number of connections	20
Number of potentials	20

### Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage	250 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	Screw connection with tension sleeve
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 same cross section, solid	0.2 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with same cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 1 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 / 2.4 mm
Stripping length	7 mm
Torque	0.5 Nm ... 0.6 Nm

### Flange specifications

Type of locking	Screw locking
Mounting flange	Screw flange
Torque	0.3 Nm

### 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	hot-dip tin-plated
Metal surface terminal point (top layer)	Tin (4 - 8 µm Sn)
Metal surface contact area (top layer)	Tin (4 - 8 µm Sn)

### Material data - housing

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## Technical data

### 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

### Dimensions for the product

Length [ l ]	12.6 mm
Width [ w ]	111.76 mm
Height [ h ]	26 mm
Pitch	5.08 mm
Height (without solder pin)	26 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
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

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
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

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## Technical data

### Mechanical tests according to standard

Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	38 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)	3.2 mm
Minimum creepage distance value (III/2)	3 mm
Minimum creepage distance value (II/2)	3.2 mm

### Current carrying capacity / derating curves

Caption	Type: MVSTBR 2,5/...-STF-5,08 with MSTB 2,5/...-GF-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>	2.4 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	2.4 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 75 TΩ

### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	24
Conductor cross section	2.5 mm <sup>2</sup>
Test current	12 A DC
Upper limiting temperature requirements <100 °C	Test passed

# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

## Technical data

### 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)

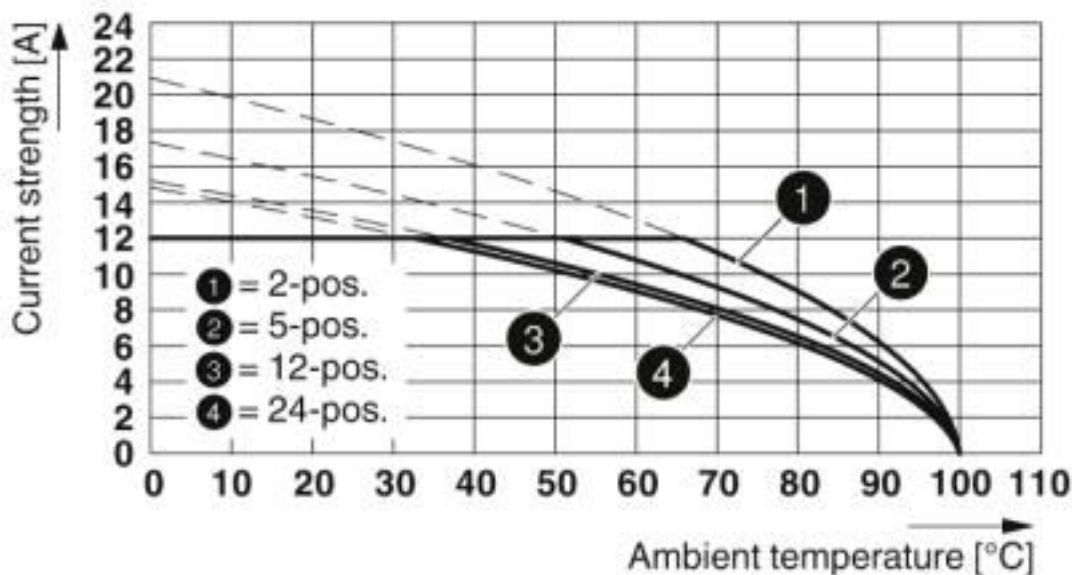
Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

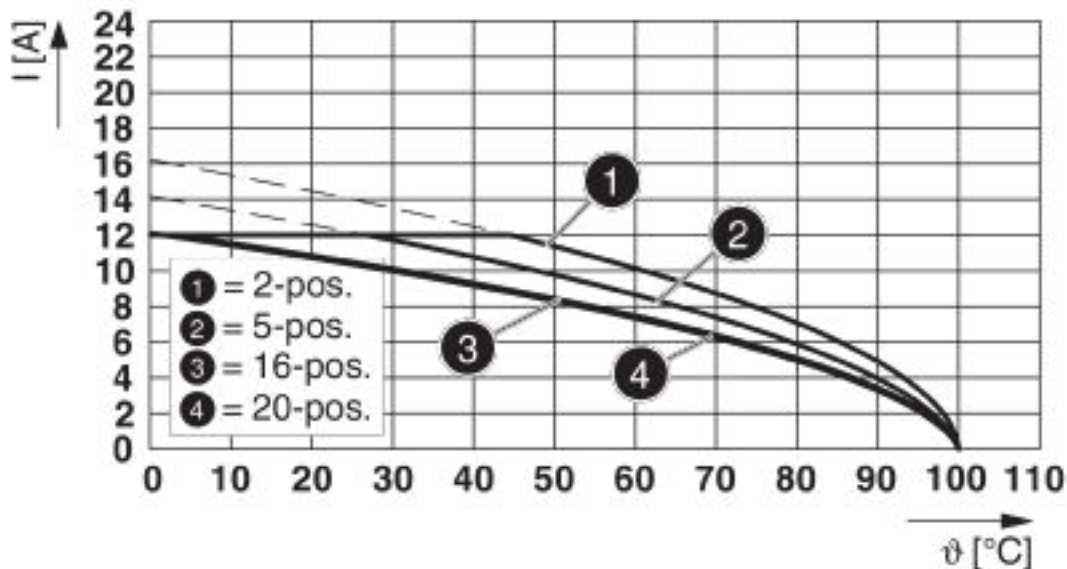
Diagram



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

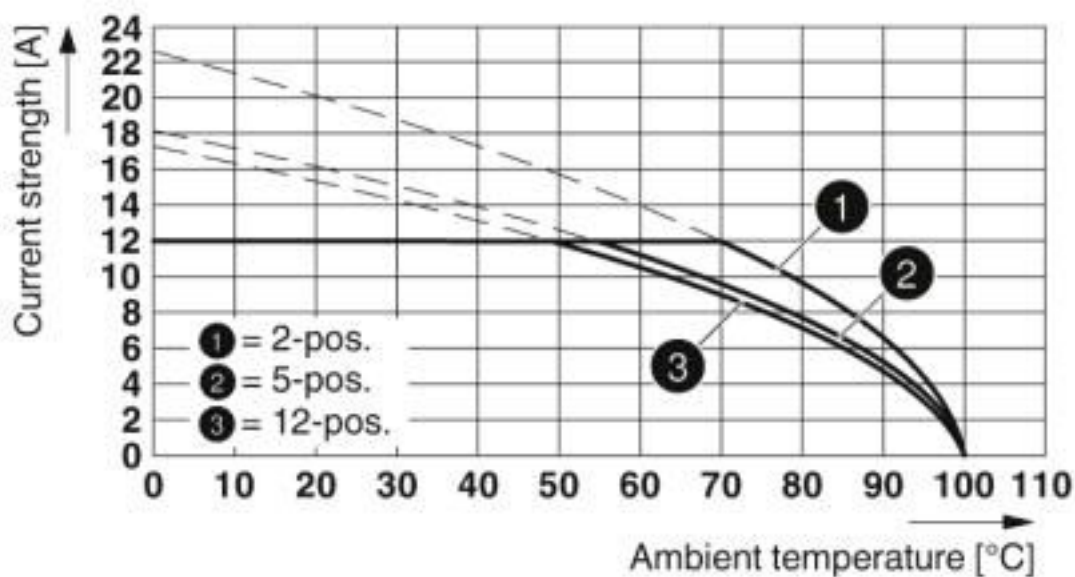
# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

Diagram



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

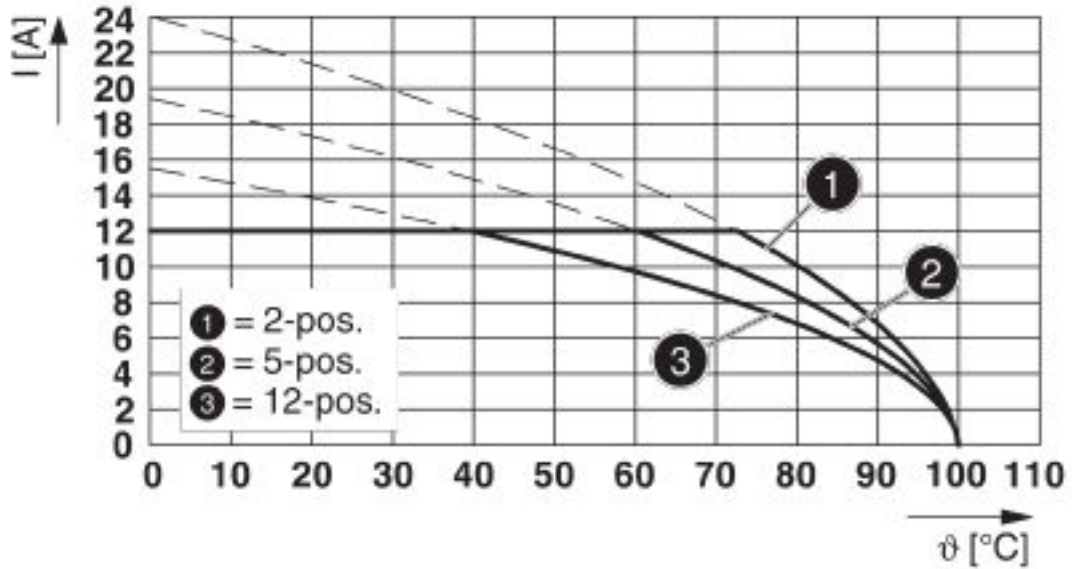
Diagram



Type: MVSTB(R/W) 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08 P26THR

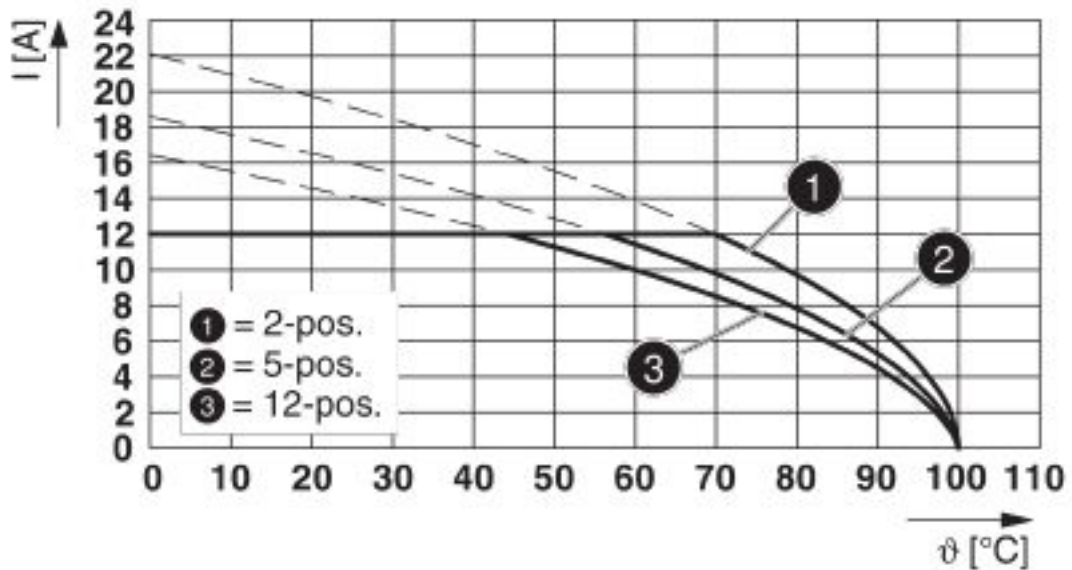
# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

Diagram



Type: MVSTB(R/W) 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08-LR P...THR

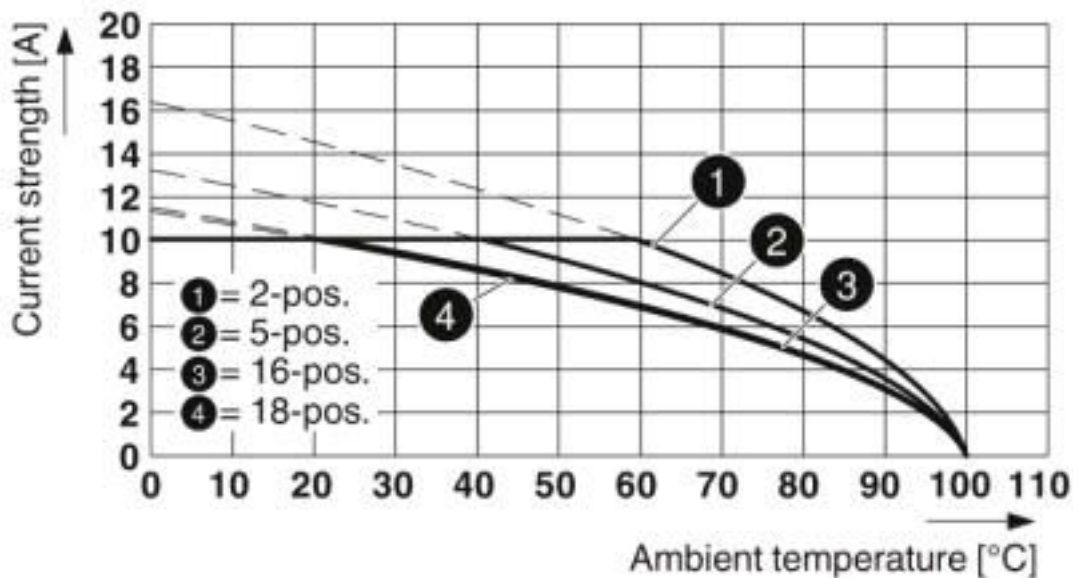
Diagram



Type: MVSTB(R/W) 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR

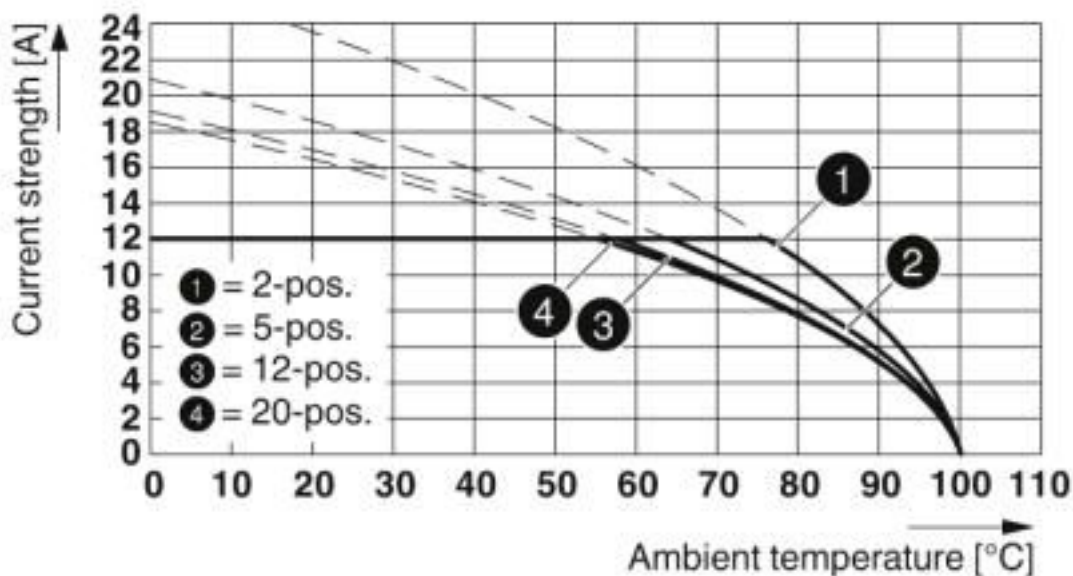
# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

Diagram



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

Diagram



Type: MVSTBR 2,5/...-STF-5,08 with UMSTBVK 2,5/...-GF-5,08

## Classifications

eCl@ss

eCl@ss 10.0.1	27440309
eCl@ss 4.0	27260700



# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

## Classifications

### eCl@ss

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
UNSPSC 21.0	39121409

## Approvals

### Approvals

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Approvals

CSA / IECCEB CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

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Ex Approvals

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### Approval details

# Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

## Approvals

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	LR13631-2585950
	B	D	
Nominal voltage UN	300 V	300 V	
Nominal current IN	10 A	10 A	
mm <sup>2</sup> /AWG/kcmil	28-12	28-12	

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	15 A	10 A	
mm <sup>2</sup> /AWG/kcmil	30-12	30-12	

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		

## Accessories

Accessories

Marker pen

## Printed-circuit board connector - MVSTBR 2,5/20-STF-5,08 - 1835274

### Accessories

Marker pen - B-STIFT - 1051993



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

Feed-through header - MSTB 2,5/20-GF-5,08 - 1776689



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 20, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

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Printed-circuit board connector - MSTBV 2,5/20-GF-5,08 - 1777251



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 20, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

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