

## Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

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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: 3, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: black, contact surface: Tin



The figure shows a 10-position version of the product


### Your advantages

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

RoHS



### Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	 4 017918 903459
GTIN	4017918903459
Weight per Piece (excluding packing)	6.400 g
Custom tariff number	85366990
Country of origin	Germany

### Technical data

#### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	CLASSIC COMBICON
Type of contact	Female connector
Range of articles	MSTBT 2,5/...-STF

## Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

### Technical data

#### Item properties

Pitch	5.08 mm
Number of positions	3
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)
Screw thread	M3
Locking	yes
Number of levels	1
Number of connections	3
Number of potentials	3

#### 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
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## Technical data

### Flange specifications

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

### Material data - housing

Housing color	black (9005)
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

### Dimensions for the product

Length [ l ]	18.2 mm
Width [ w ]	25.04 mm
Height [ h ]	15 mm
Pitch	5.08 mm
Height (without solder pin)	15 mm

### Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

### General product information

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.
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### 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)

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## Technical data

### 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 examination	Test passed IEC 60512-1-1:2002-02
Dimensional test	Test passed IEC 60512-1-2:2002-02
Resistance of marking	Test passed IEC 60068-2-70:1995-12
Result	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N
Polarization and coding	Test passed IEC 60512-13-5:2006-02
Result	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	40 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

Specification	IEC 61984
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### Mechanical tests (A)

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### 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>	1.2 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.2 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 0.2 TΩ

#### Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	18
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

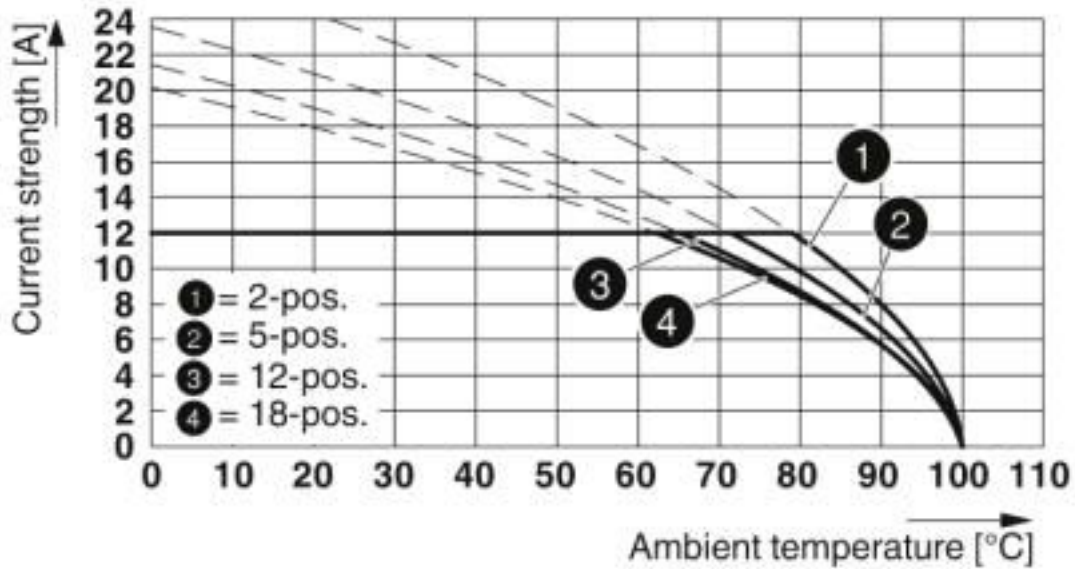
#### Environmental Product Compliance

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"

# Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

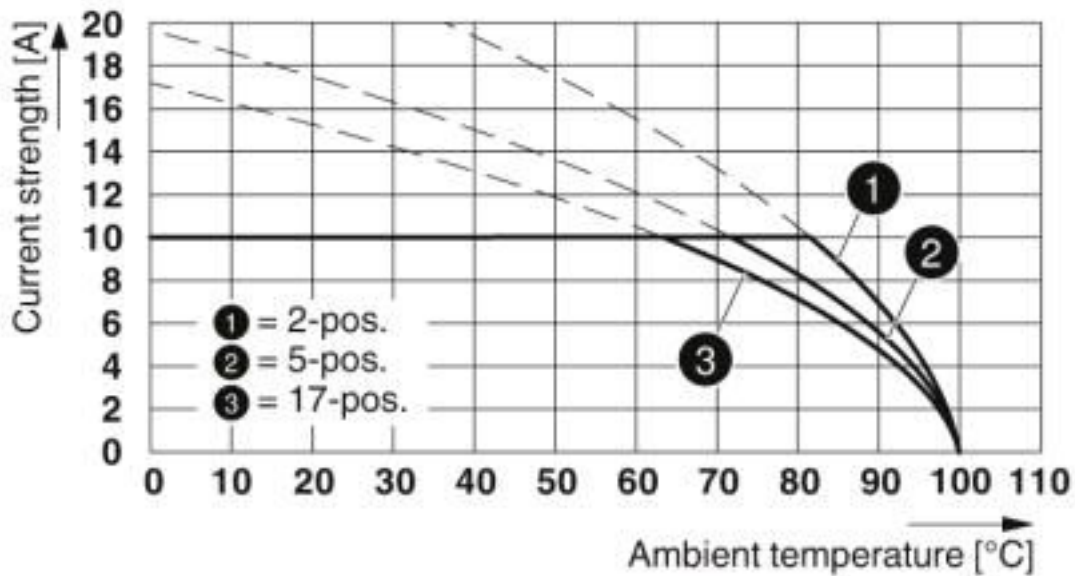
## Drawings

Diagram



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

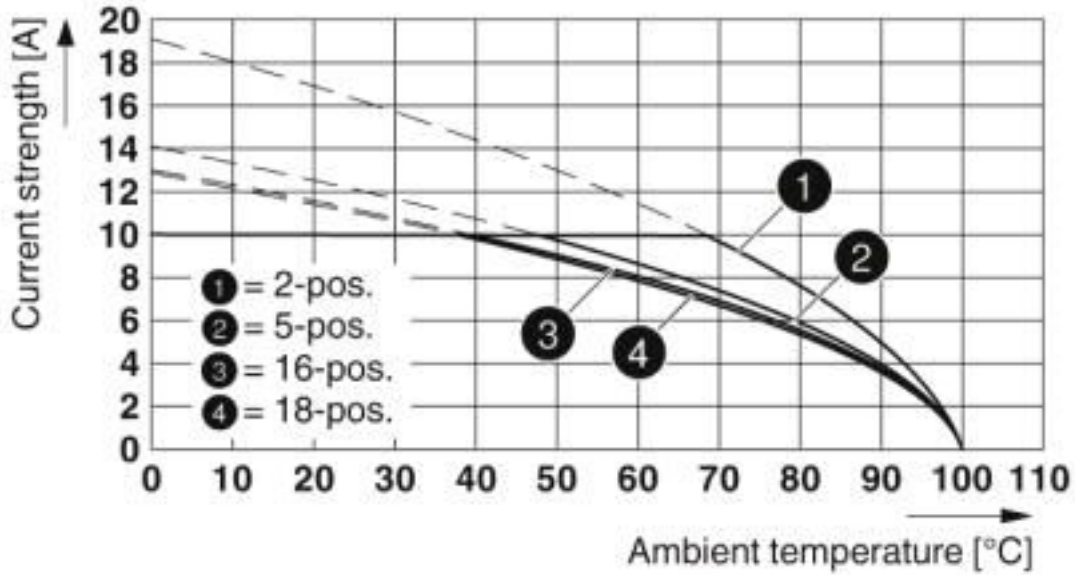
Diagram



Type: MSTBT 2,5/...-STF-5,08 with MDSTB 2,5/...-GF-5,08

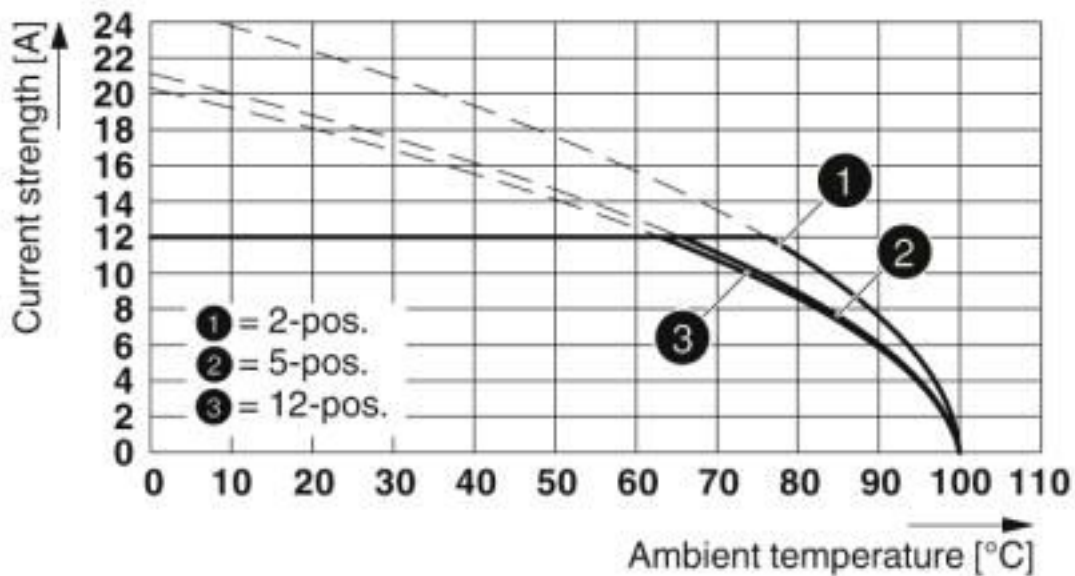
# Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

Diagram



Type: MSTBT 2,5/...-STF-5,08 with MDSTBV 2,5/...-GF-5,08

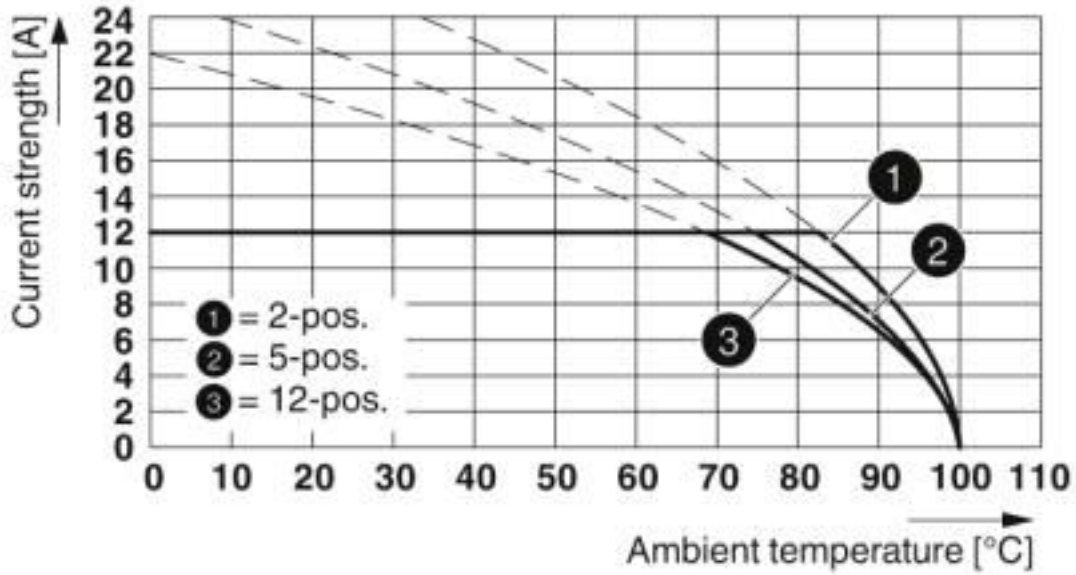
Diagram



Type: MSTBT 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08 P26THR

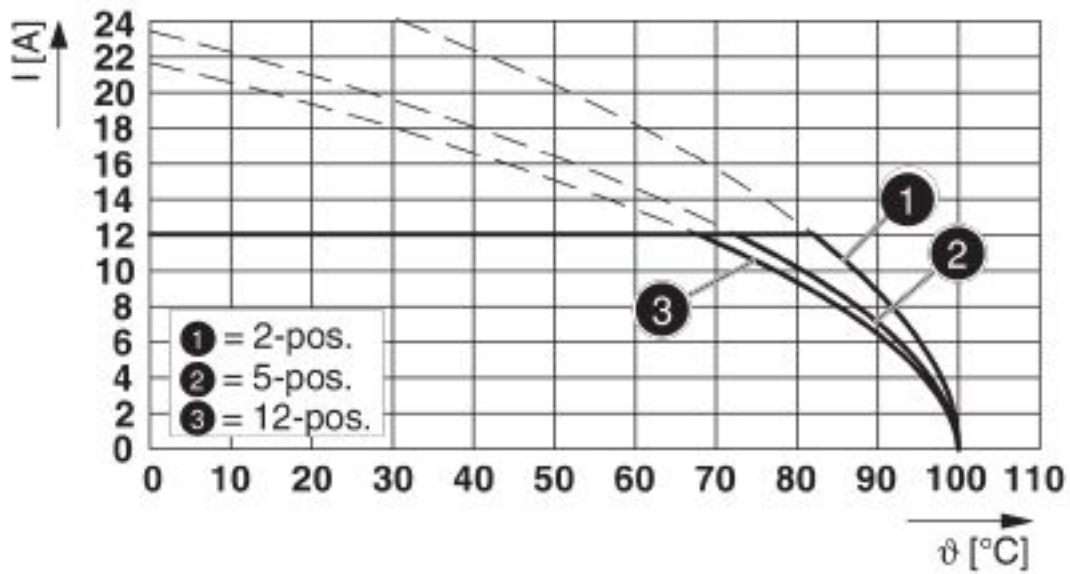
# Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

Diagram



Type: MSTBT 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR

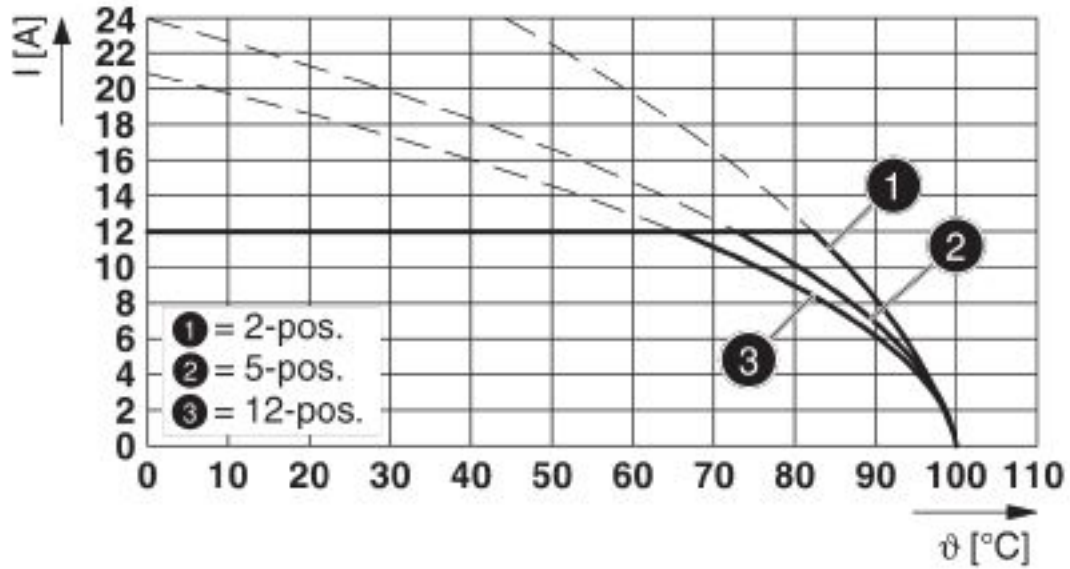
Diagram



Type: MSTBT 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR

# Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

Diagram



Type: MSTBT 2,5/...-STF-5,08 with CC 2,5/...-GF-5,08-LR P...THR

## 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

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## Classifications

### 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


#### Approvals

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

#### Ex Approvals

### Approval details

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	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		

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## Approvals

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

#### Bridge

Insertion bridge - EBP 2- 5 - 1733169



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

Insertion bridge - EBP 3- 5 - 1733172



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

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### Accessories

#### Coding element

Coding profile - CP-MSTB - 1734634



Coding profile, is inserted into the slot on the plug or inverted header, 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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#### Additional products

Double-level terminal block - UKK 3-MSTB-5,08-PE - 1876615



Double-level terminal block, nom. voltage: 1000 V, nominal current: 250 A, connection method: Screw connection, number of connections: 4, number of positions: 1, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 5.08 mm, color: green-yellow, mounting type: NS 35/7,5, NS 35/15, NS 32

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### Accessories

#### Double-level terminal block - UKK 3-MSTB-5,08 - 2770888



Double-level modular terminal block with COMBICON plug-in zone, nominal current: 12 A, nominal voltage: 250 V, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, mounting type: NS 35/7.5, NS 35/15, NS 32, pitch: 5.08 mm, width: 5.08, color: gray

#### Feed-through terminal block - ZFKK 1,5-MSTBV-5,08 - 1873016



Feed-through terminal block, connection method: Spring-cage connection, Plug connection, cross section: 0.2 mm<sup>2</sup> - 2.5 mm<sup>2</sup>, AWG: 24 - 16, width: 5.08 mm, color: gray, mounting: NS 35/7.5, NS 35/15

#### Printed-circuit board connector - ICC 2,5/ 3-STZFD-5,08 - 1823626



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding male crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] data: 10A/ICC-MT 0,5-1,0 (3190577); 10A/ICC-MT 0,5-1,0 BA (3190603); 12A/ICC-MT 1,5-2,5 (3190580); 12A/ICC-MT 1,5-2,5 BA (3190593). BA = Bandkontakte

#### Printed-circuit board connector - IC 2,5/ 3-STGF-5,08 - 1825514



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

#### Printed-circuit board connector - DFK-MSTBVA 2,5/ 3-GF-5,08 - 1899294



Feed-through header, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm

## Printed-circuit board connector - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

### Accessories

#### Printed-circuit board connector - DFK-MSTBA 2,5/ 3-GF-5,08 - 1898994



Feed-through header, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm

#### Feed-through header - EMSTBV 2,5/ 3-GF-5,08 - 1898648



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.9 mm

#### Feed-through header - MDSTB 2,5/ 3-GF-5,08 - 1842377



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

#### Feed-through header - MDSTBV 2,5/ 3-GF-5,08 - 1845646



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, The article can be aligned to create different nos. of positions! In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

#### Feed-through header - MSTB 2,5/ 3-GF-5,08 - 1776511



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, 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 - MSTBT 2,5/ 3-STF-5,08 BK - 1962574

### Accessories

#### Printed-circuit board connector - MDSTBV 2,5/ 3-G-5,08 - 1763087



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Can be aligned! Mounting flange: Order No. 1836477, 1836480. In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

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#### Feed-through header - MDSTB 2,5/ 3-G-5,08 - 1762075



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 3, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, Can be aligned! Mounting flange: Order no. 1736771, 1736768. In combination with MVSTB or FKCV plugs, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plugs is not possible!