

# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

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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: 13, 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
- Allows connection of two conductors



## Key Commercial Data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	
GTIN	4055626259567
Weight per Piece (excluding packing)	21.900 g
Custom tariff number	85366990
Country of origin	Germany
Note	Made to Order (non-returnable)

## Technical data

### Item properties

Brief article description	Printed-circuit board connector
Plug-in system	CLASSIC COMBICON
Type of contact	Female connector
Range of articles	MSTB 2,5/..-ST
Pitch	5.08 mm
Number of positions	13
Connection method	Screw connection with tension sleeve

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## Technical data

### Item properties

Drive form screw head	Slotted (L)
Screw thread	M3
Number of levels	1
Number of connections	13
Number of potentials	13

### Electrical parameters

Nom. voltage	320 V
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### 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, stranded, ferrules without plastic sleeve	0.25 mm <sup>2</sup> ... 1 mm <sup>2</sup>
2 conductors with same cross section, stranded, with TWIN ferrules 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 2.4 mm / 2.5 mm
Stripping length	7 mm
Torque	0.5 Nm ... 0.6 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

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

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## Technical data

### Dimensions for the product

Length [ l ]	18.3 mm
Width [ w ]	66.04 mm
Height [ h ]	15 mm
Pitch	5.08 mm
Height (without solder pin)	15 mm
Dimension a	60.96 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

	Connector with latching hook of double width
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

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.	27 N

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## Technical data

### Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Rated insulation voltage (III/3)	250 V
Rated insulation voltage (III/2)	320 V
Rated insulation 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
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

### Mechanical tests (A)

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>	1.3 mΩ
Insertion/withdrawal cycles	25
Contact resistance R <sub>2</sub>	1.4 mΩ
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV
Insulation resistance, neighboring positions	> 2 TΩ

### 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

# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

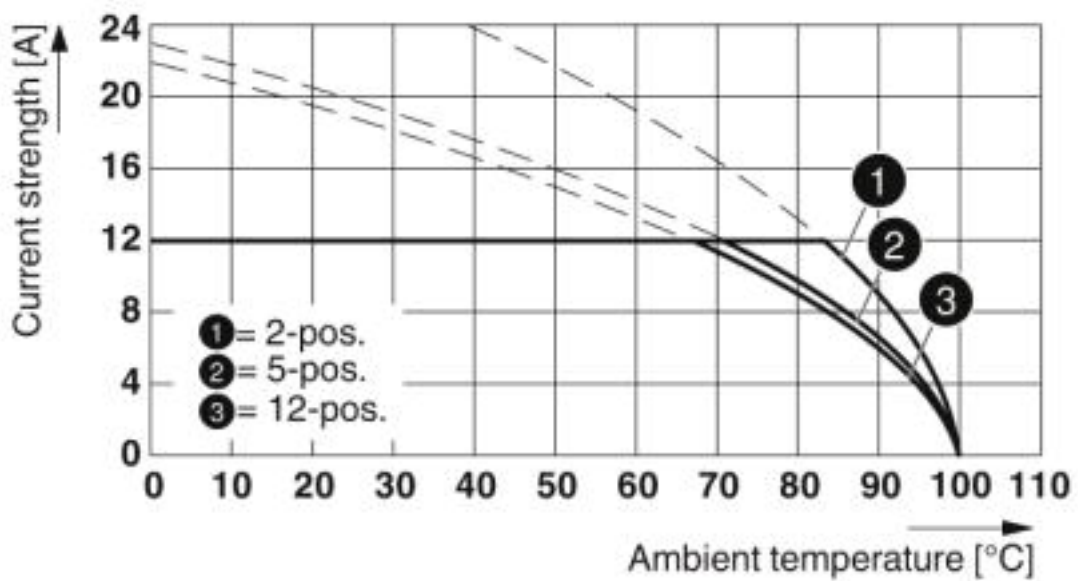
## Technical data

### Environmental Product Compliance

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

## Drawings

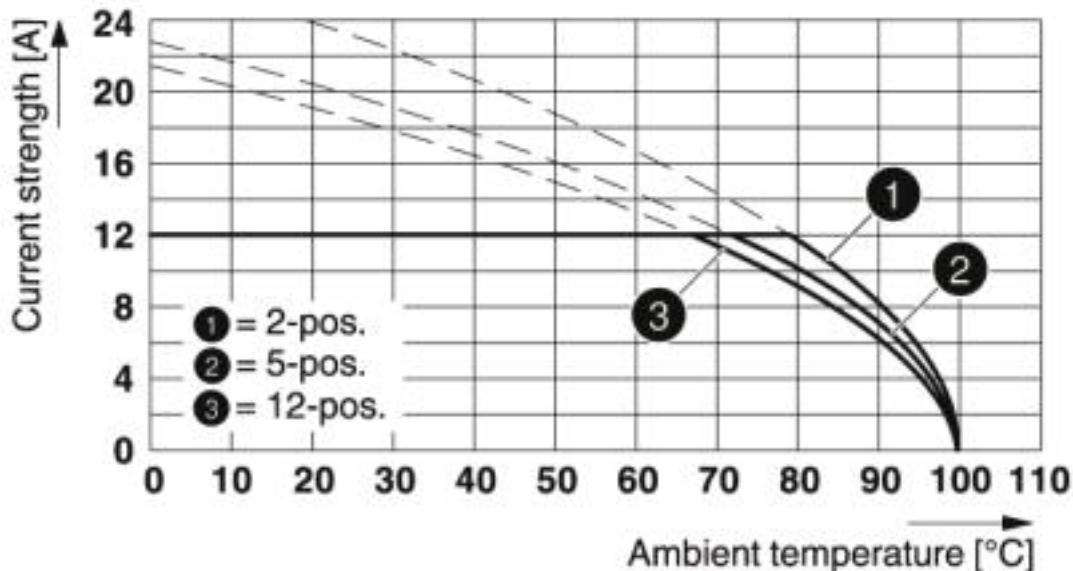
Diagram



Type: MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

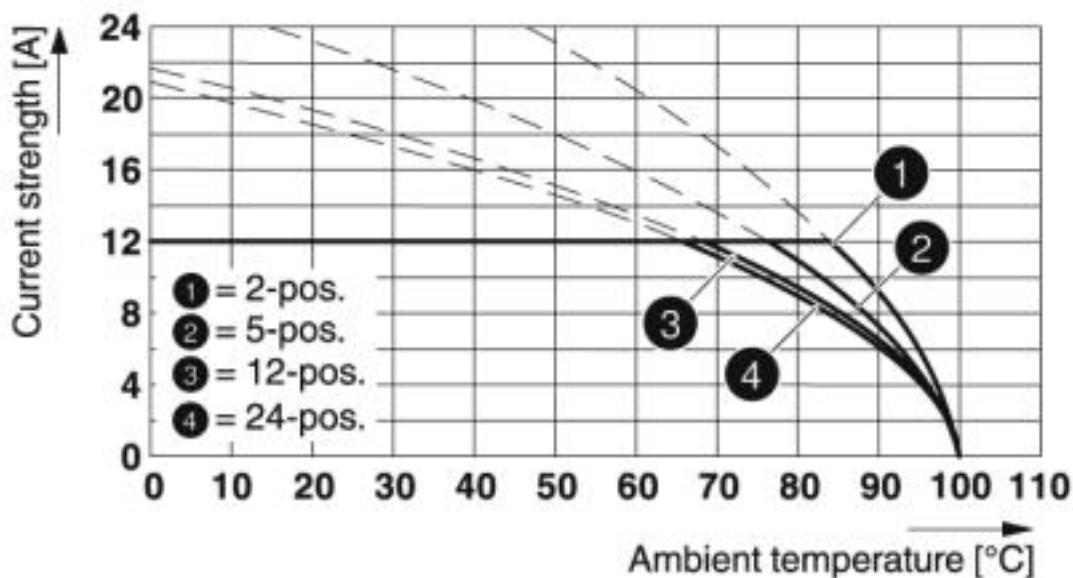
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR

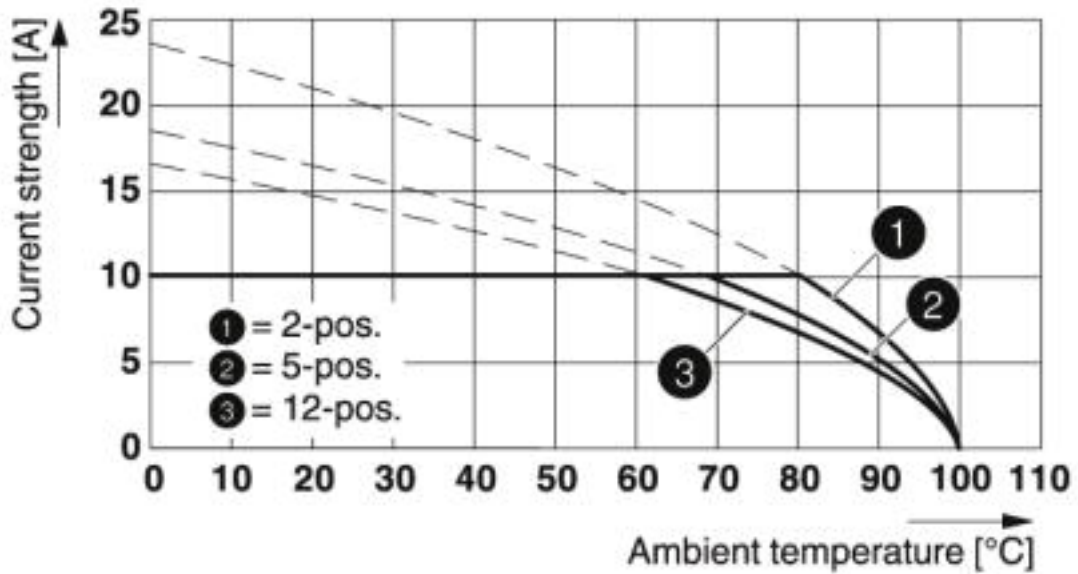
Diagram



Type: MSTB 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR

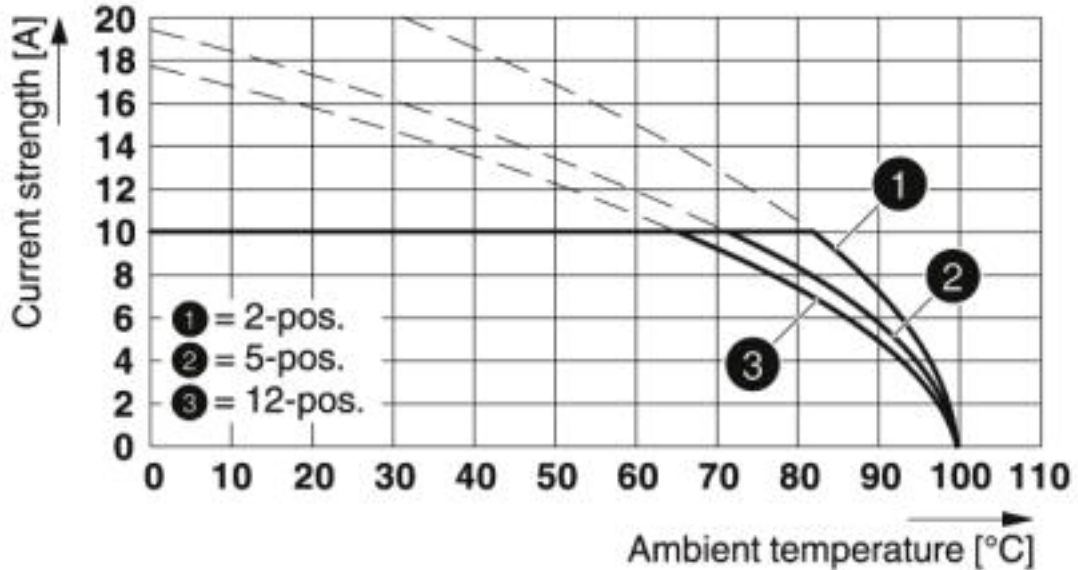
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08

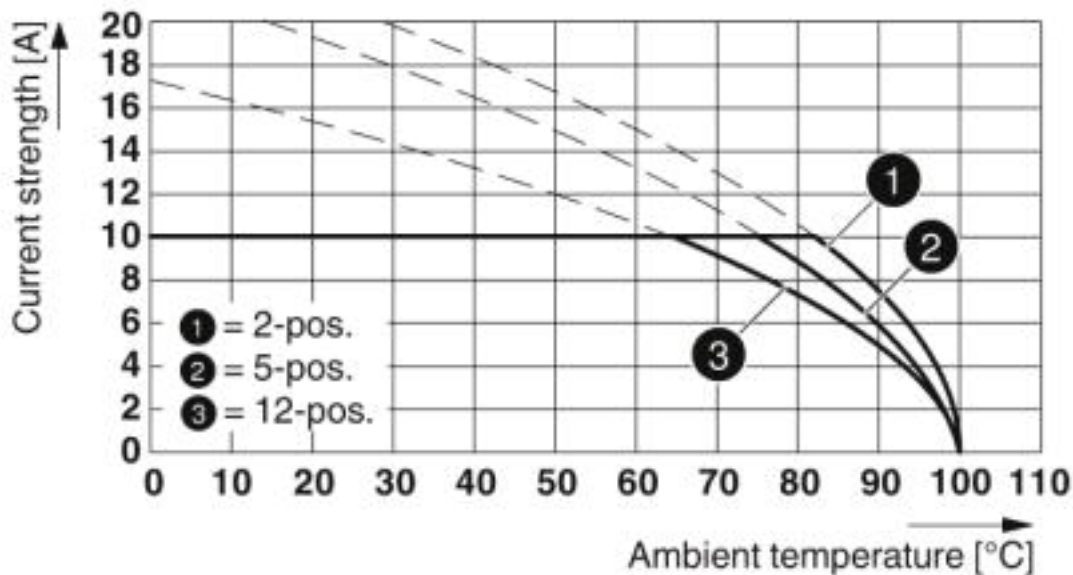
Diagram



Type: MSTB 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08

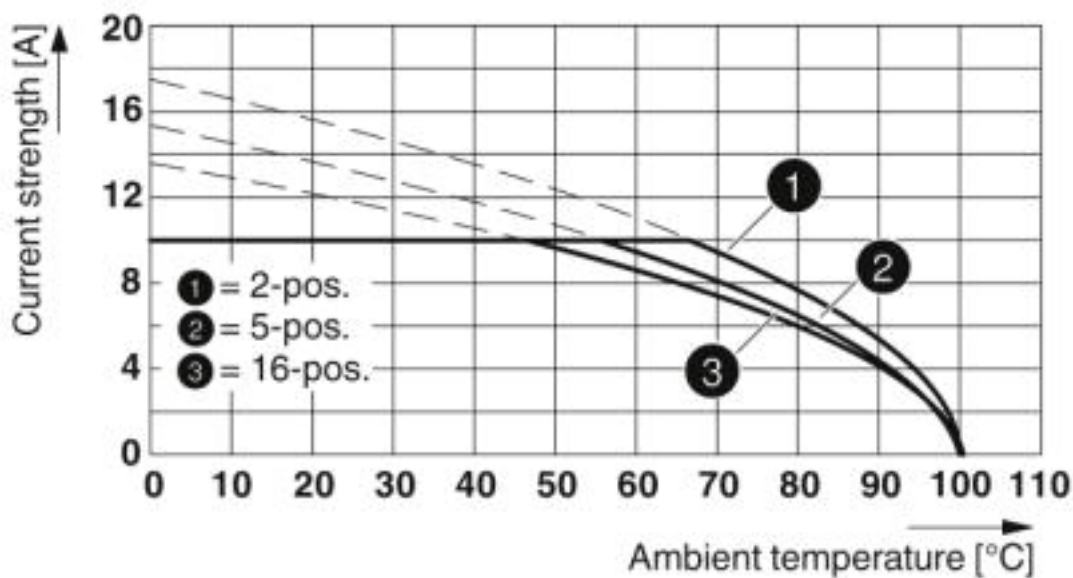
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with MDSTBW 2,5/...-G-5,08

Diagram

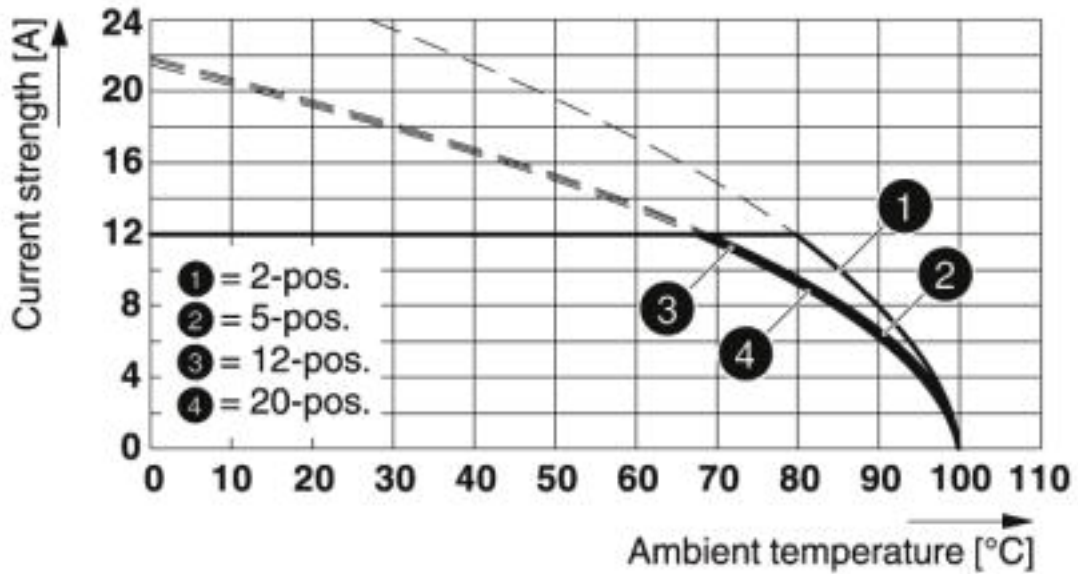


Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G-5,08



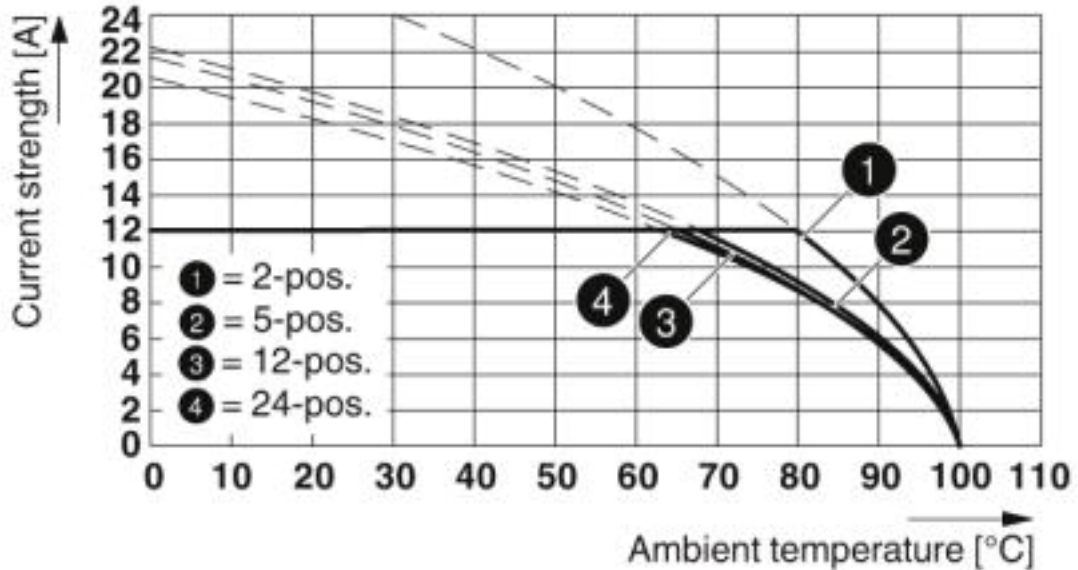
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with MVSTBU 2,5/...-GB-5,08

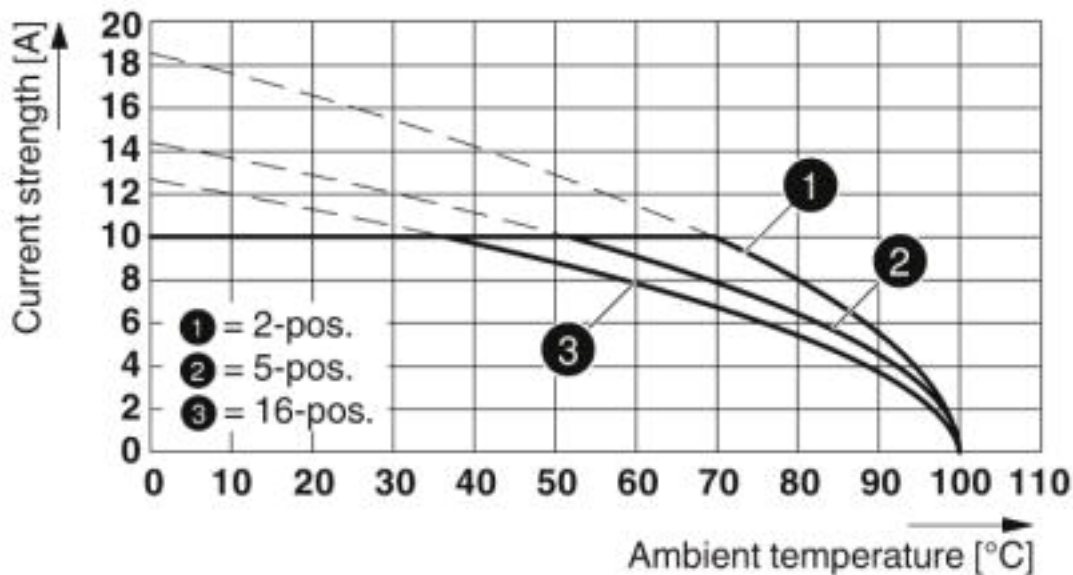
Diagram



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

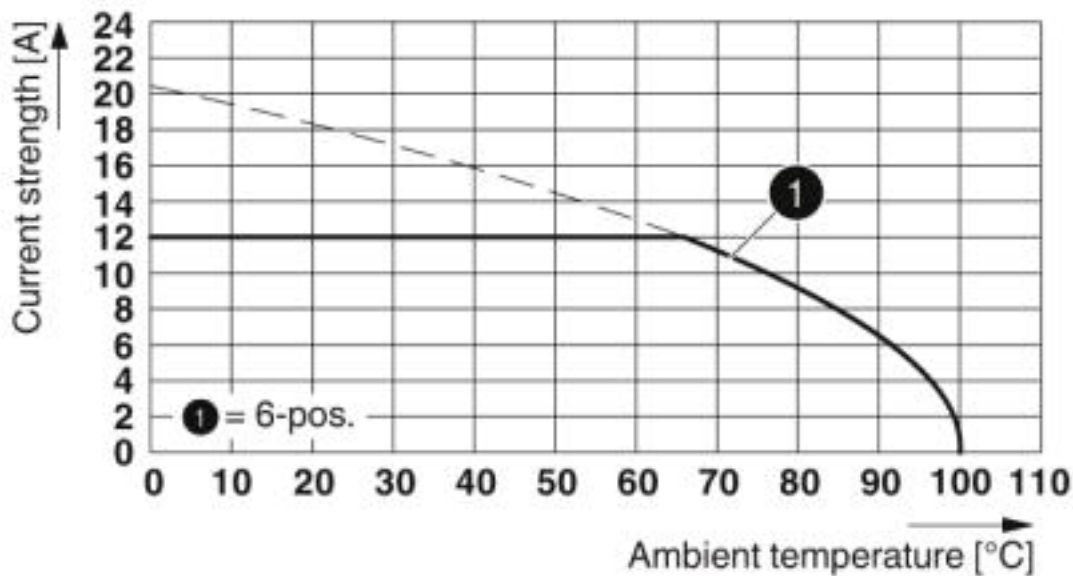
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTBP 2,5/...-ST-5,08 with MDSTBVA 2,5/...-G-5,08

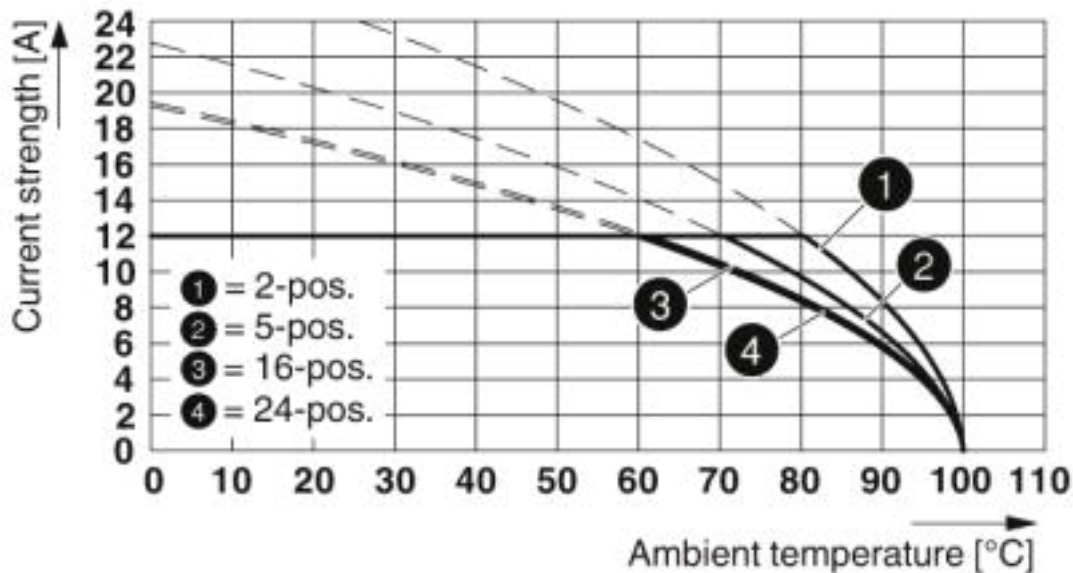
Diagram



Type: MSTB 2,5/...-ST(-5,08) with EMSTBVA 2,5/...-G(-5,08)

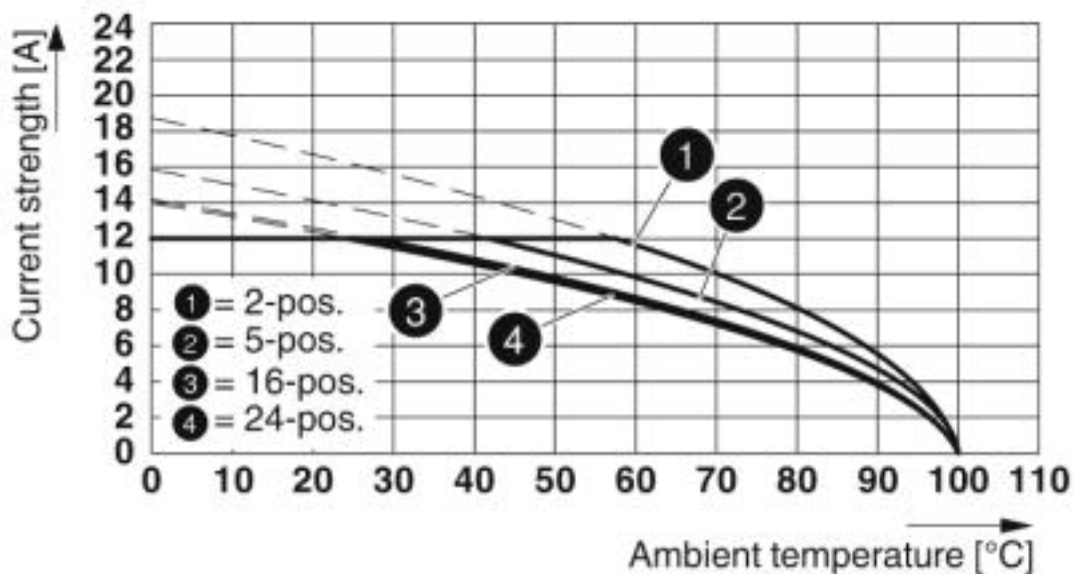
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with MSTBW 2,5/...-G-5,08

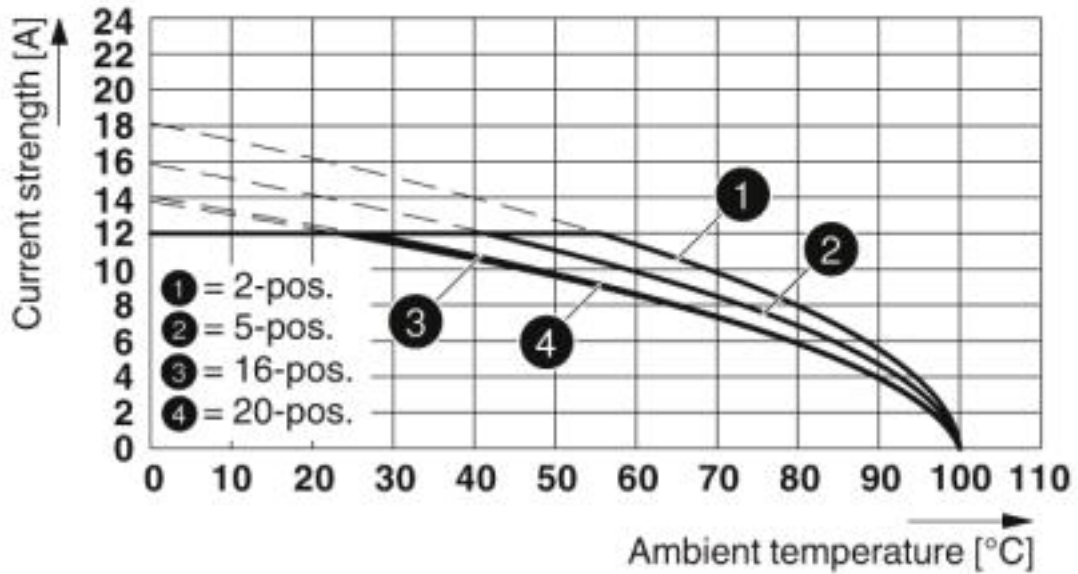
Diagram



Type: MSTB 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08

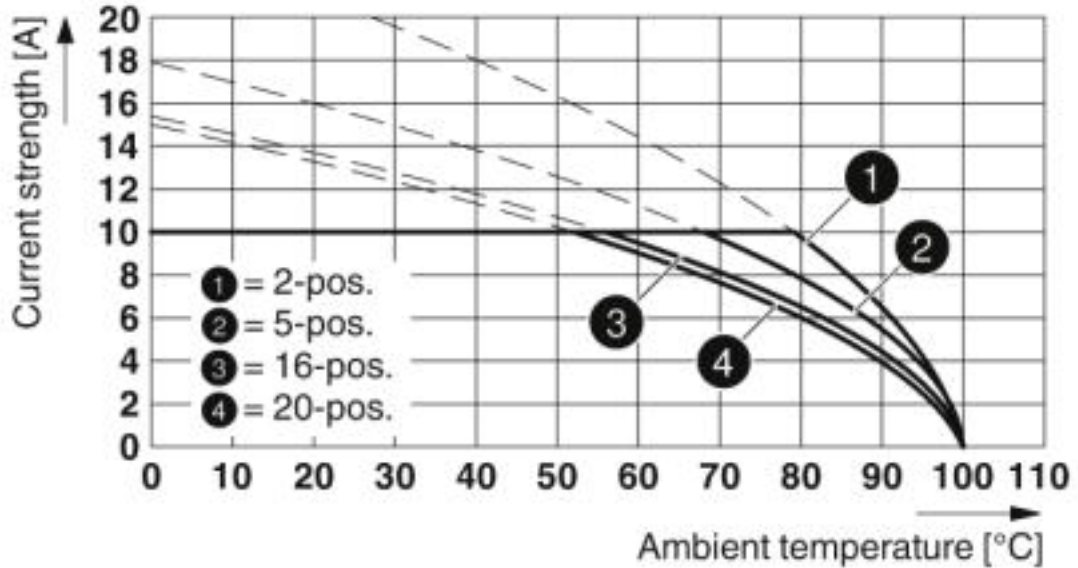
# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with MSTBV 2,5/...-G-5,08

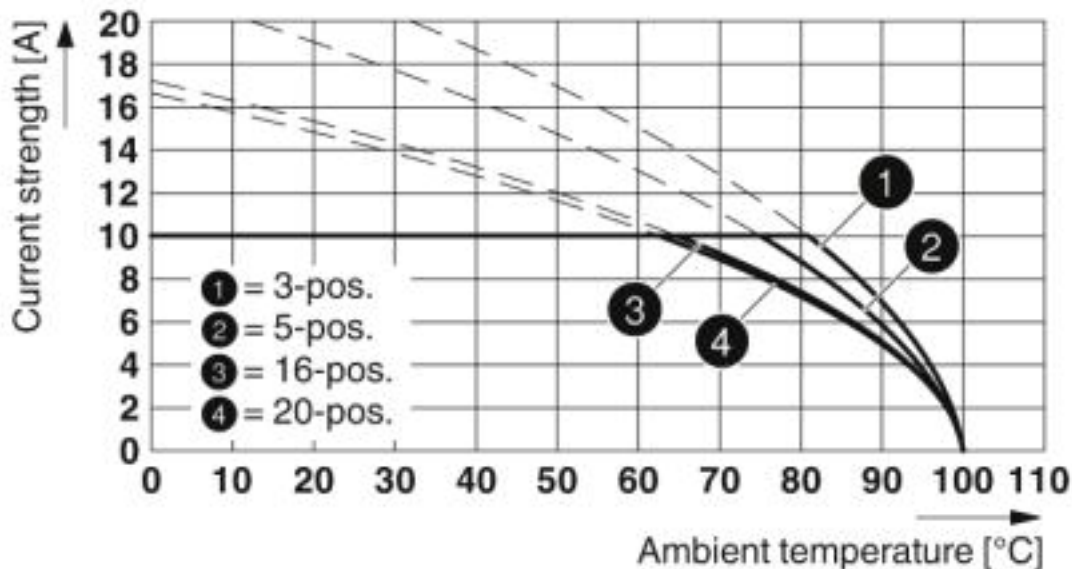
Diagram



Type: MSTB 2,5/...-ST-5,08 with MDSTB 2,5/...-G1-5,08

# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

Diagram



Type: MSTB 2,5/...-ST-5,08 with MDSTBV 2,5/...-G1-5,08

## Classifications

### eCl@ss

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 5.0	EC002638
ETIM 6.0	EC002638
ETIM 7.0	EC002638

### UNSPSC

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

# Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

## Classifications

### UNSPSC

UNSPSC 21.0	39121409
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## Approvals

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### Approvals

CSA / EAC / IECIEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / cULus Recognized

### Ex Approvals

## Approval details

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		15 A	10 A
mm <sup>2</sup> /AWG/kcmil		28-12	28-12


EAC			B.01742
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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	
mm <sup>2</sup> /AWG/kcmil		0.2-2.5	

VDE Gutachten mit Fertigungsüberwachung		<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>	40004701
Nominal voltage UN		250 V	
Nominal current IN		12 A	
mm <sup>2</sup> /AWG/kcmil		0.2-2.5	

## Printed-circuit board connector - MSTB 2,5/13-ST-5,08 BK - 1765661

### Approvals

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	

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