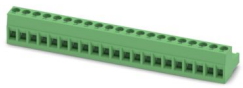
MSTB 2,5/21-ST - PCB connector

1754821

https://www.phoenixcontact.com/pc/products/1754821

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PCB connector, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 21, number of rows: 1, number of positions: 21, number of connections: 21, product range: MSTB 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: without, type of packaging: packed in cardboard

Your advantages

- Well-known connection principle allows worldwide use
- Low temperature rise, thanks to maximum contact force
- Allows connection of two conductors

Commercial data

Item number	1754821
Packing unit	50 pc
Minimum order quantity	50 pc
Product key	AACAFC
GTIN	4017918028992
Weight per piece (including packing)	36.3 g
Weight per piece (excluding packing)	34.333 g
Customs tariff number	85366990
Country of origin	DE

Technical data

Product properties

Product type	PCB connector
Product family	MSTB 2,5/..-ST
Product line	COMBICON Connectors M
Type	Standard
Number of positions	21
Pitch	5 mm
Number of connections	21
Number of rows	1
Number of potentials	21
Mounting type	without

Electrical properties

Properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Contact resistance	1.4 mΩ
Rated voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
Rated voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
Rated voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV

Connection data

Connection technology

Type	Standard
Connector system	COMBICON MSTB 2,5
Nominal cross section	2.5 mm²
Contact connection type	Socket

Interlock

Locking type	without
Mounting type	without

Conductor connection

Connection method	Screw connection with tension sleeve
Conductor/PCB connection direction	0 °
Conductor cross-section rigid	0.2 mm² ... 2.5 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	24 ... 12

Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 2.5 mm²
2 conductors with same cross section, solid	0.2 mm² ... 1 mm²
2 conductors with same cross section, flexible	0.2 mm² ... 1.5 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	0.25 mm² ... 1 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² ... 1.5 mm²
Cylindrical gauge a x b / diameter	2.8 mm x 2.0 mm / 2.4 mm
Stripping length	7 mm
Drive form screw head	Slotted (L)
Tightening torque	0.5 Nm ... 0.6 Nm

Specifications for ferrules without insulating collar

recommended crimping tool	1212034 CRIMPFOX 6

Specifications for ferrules with insulating collar

recommended crimping tool	1212034 CRIMPFOX 6

Material specifications

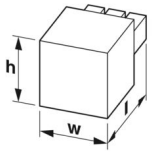
Material data - contact

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

Color (Housing)	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

Dimensions

Dimensional drawing	
Pitch	5 mm
Width [w]	105 mm
Height [h]	15 mm
Length [l]	18.2 mm

Notes

Notes on operation	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.

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross-section/conductor type/tractive force setpoint/actual value	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	2.5 mm² / solid / > 50 N
	2.5 mm² / flexible / > 50 N

Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	8 N
Withdraw strength per pos. approx.	6 N

Torque test

Specification	IEC 60999-1:1999-11

Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

Environmental and real-life conditions

Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.4 mΩ
Contact resistance R_2	1.5 mΩ
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 MΩ

Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm^3 SO_2 on 300 dm^3/40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

Ambient conditions

Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	24

Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

Air clearances and creepage distances |

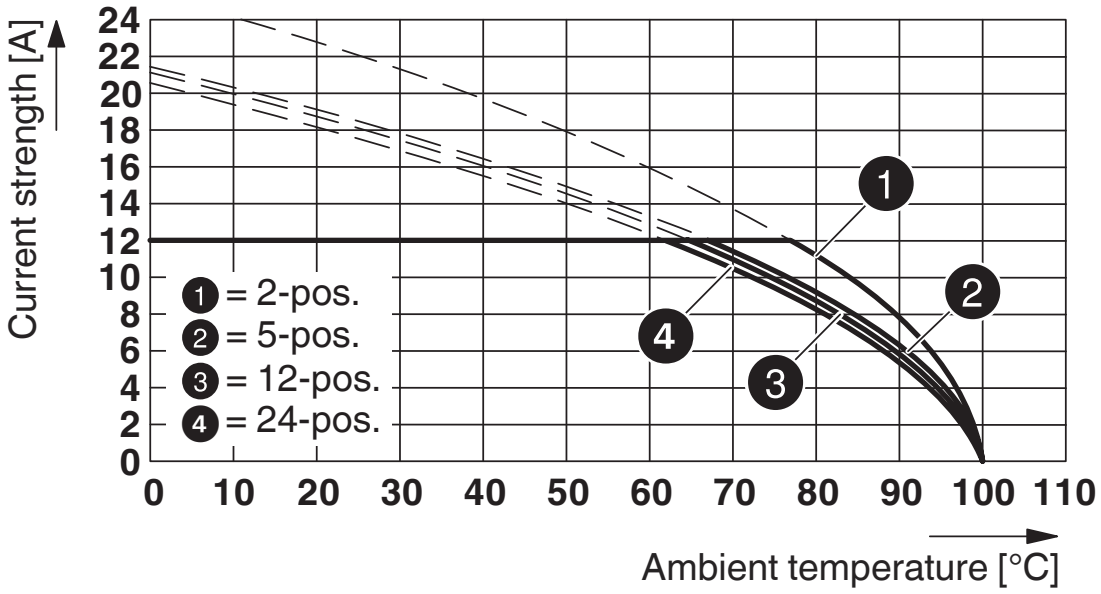
Specification	IEC 60664-1:2007-04
Insulating material group	I
Comparative tracking index (IEC 60112)	CTI 600
Rated insulation voltage (III/3)	250 V
Rated surge voltage (III/3)	4 kV
minimum clearance value - non-homogenous field (III/3)	3 mm
minimum creepage distance (III/3)	3.2 mm
Rated insulation voltage (III/2)	320 V
Rated surge voltage (III/2)	4 kV
minimum clearance value - non-homogenous field (III/2)	3 mm
minimum creepage distance (III/2)	3 mm
Rated insulation voltage (II/2)	630 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	3.2 mm

Packaging specifications

Type of packaging	packed in cardboard

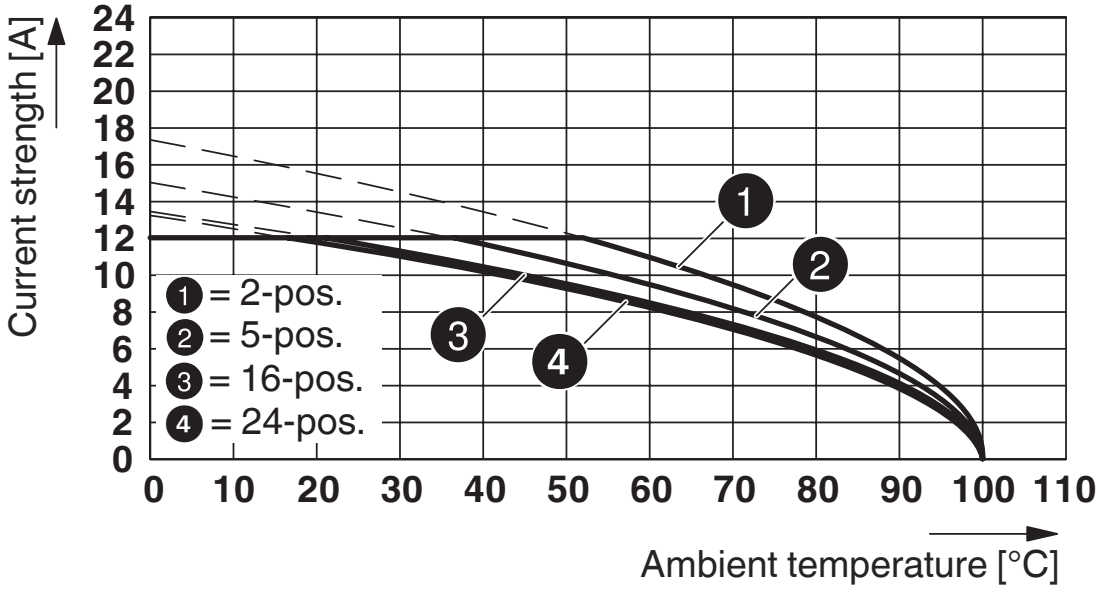
Drawings

Diagram



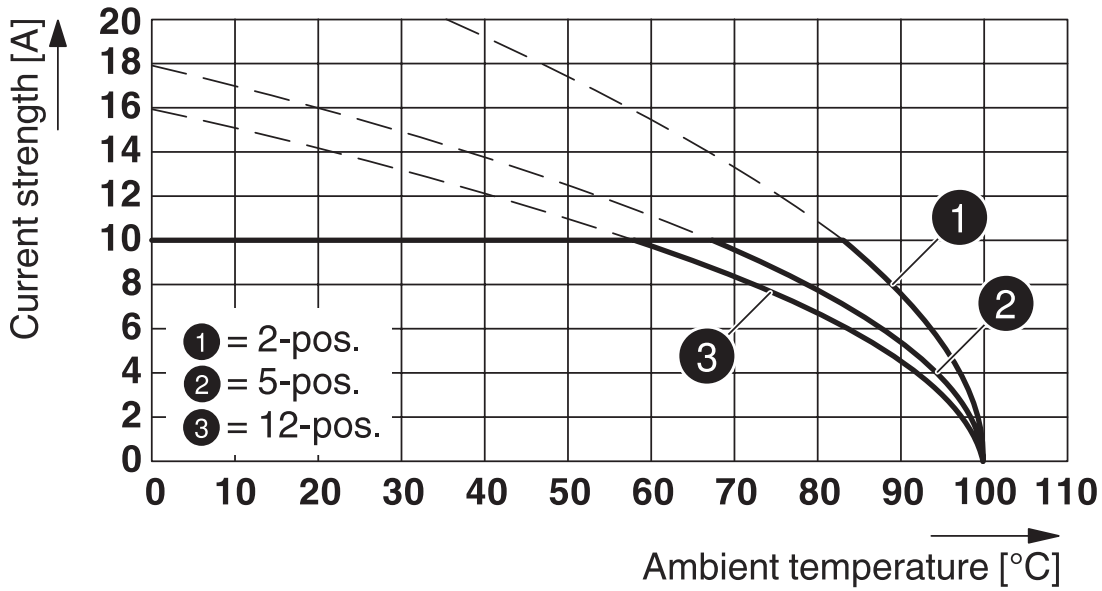
Type: MSTB 2,5/...-ST with MSTBA 2,5/...-G

Diagram



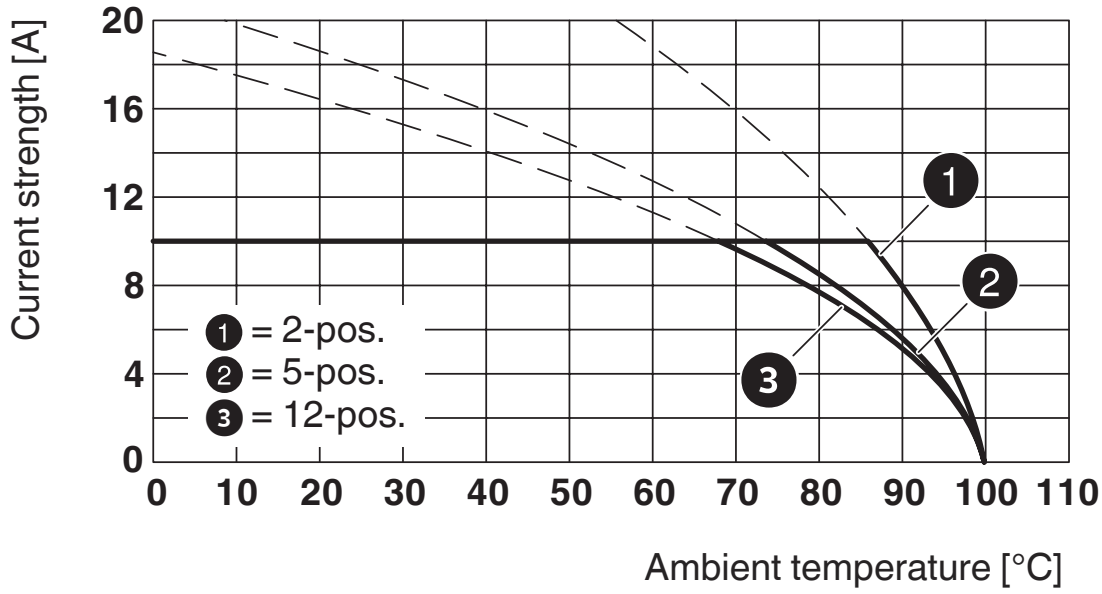
Type: MSTB 2,5/...-ST with MSTBVA 2,5/...-G

Diagram



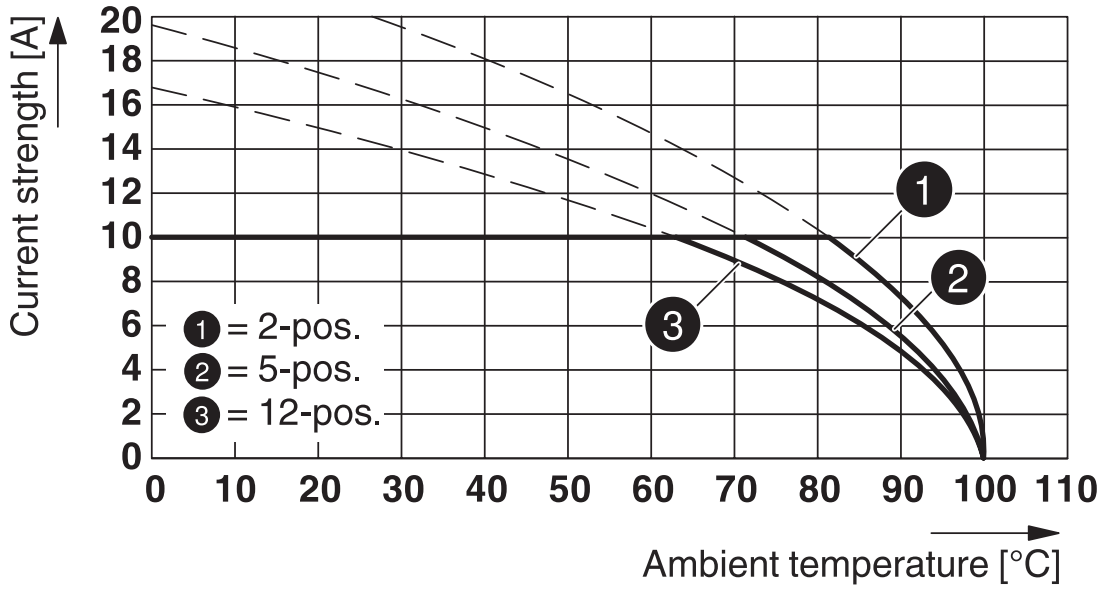
Type: MSTB 2,5/..-ST with MDSTB 2,5/...-G

Diagram



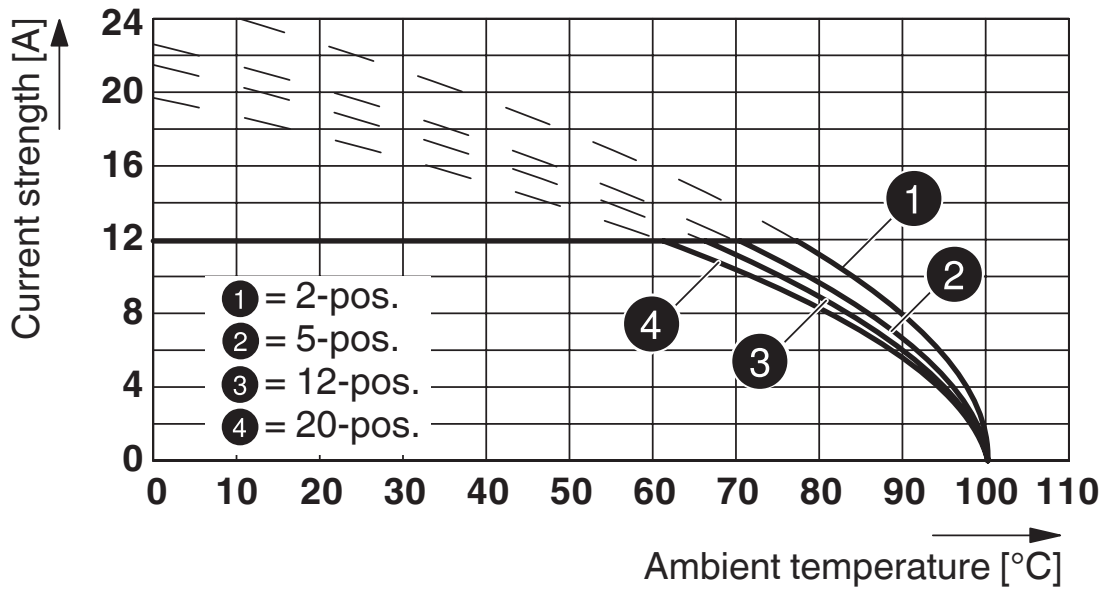
Type: MSTB 2,5/..-ST with MDSTBV 2,5/...-G

Diagram



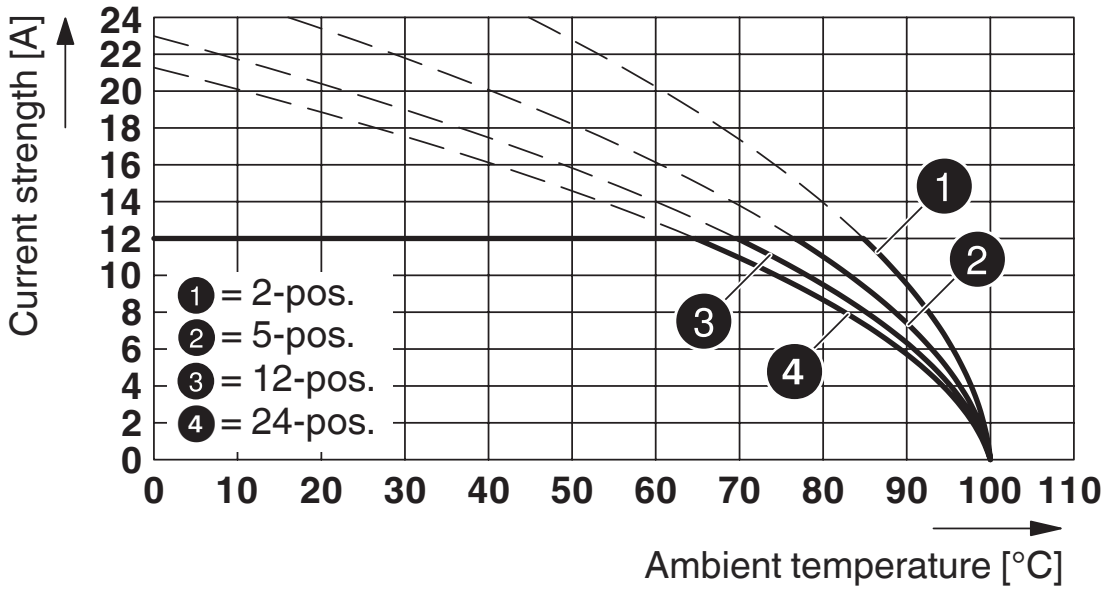
Type: MSTB 2,5/..-ST with MDSTBW 2,5/...-G

Diagram



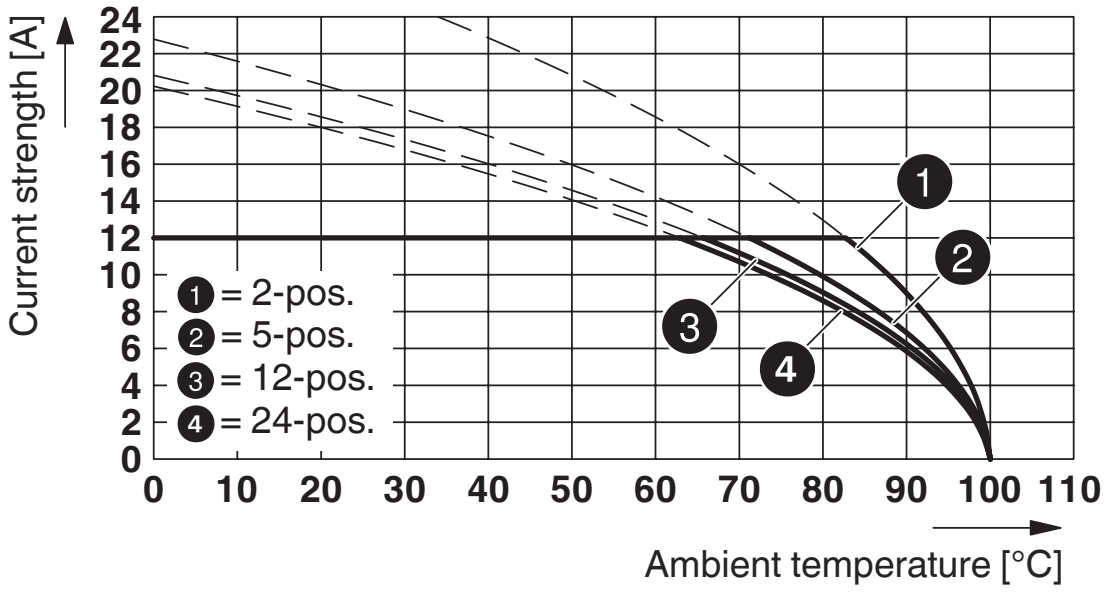
Type: MSTB 2,5/...-ST with MSTBW 2,5/...-G

Diagram



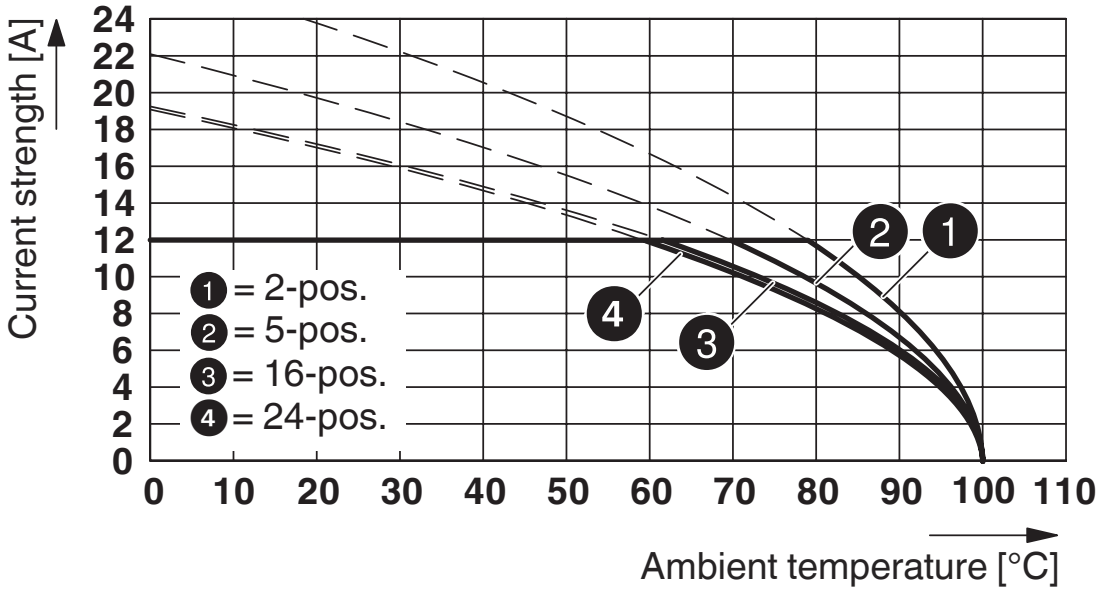
Type: MSTB 2,5/...-ST with CCA 2,5/...-G P20 THR

Diagram



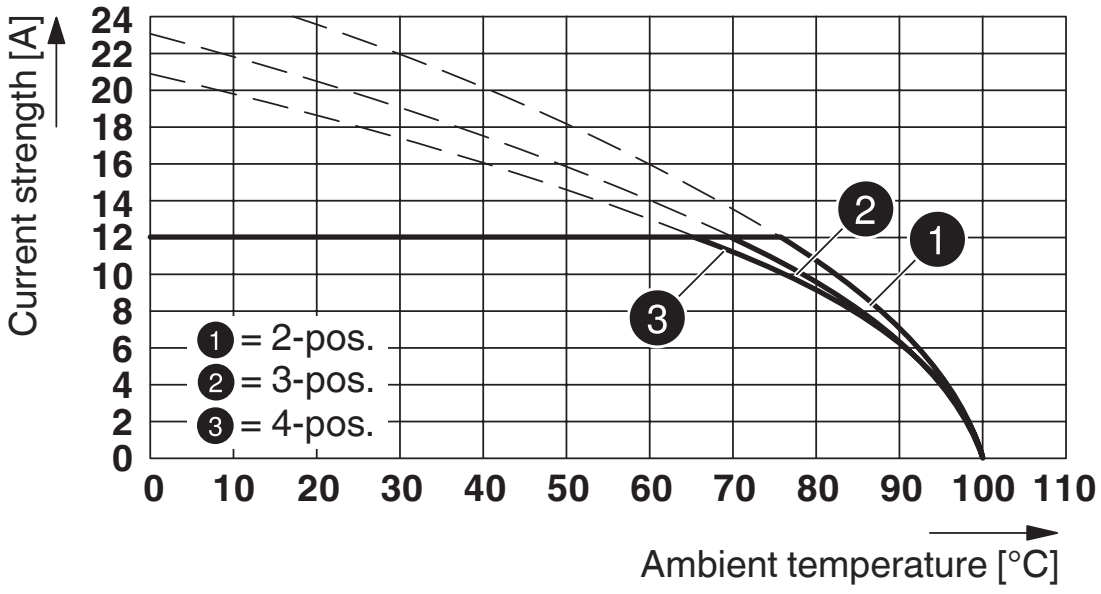
Type: MSTB 2,5/...-ST with CCVA 2,5/...-G P20 THR

Diagram



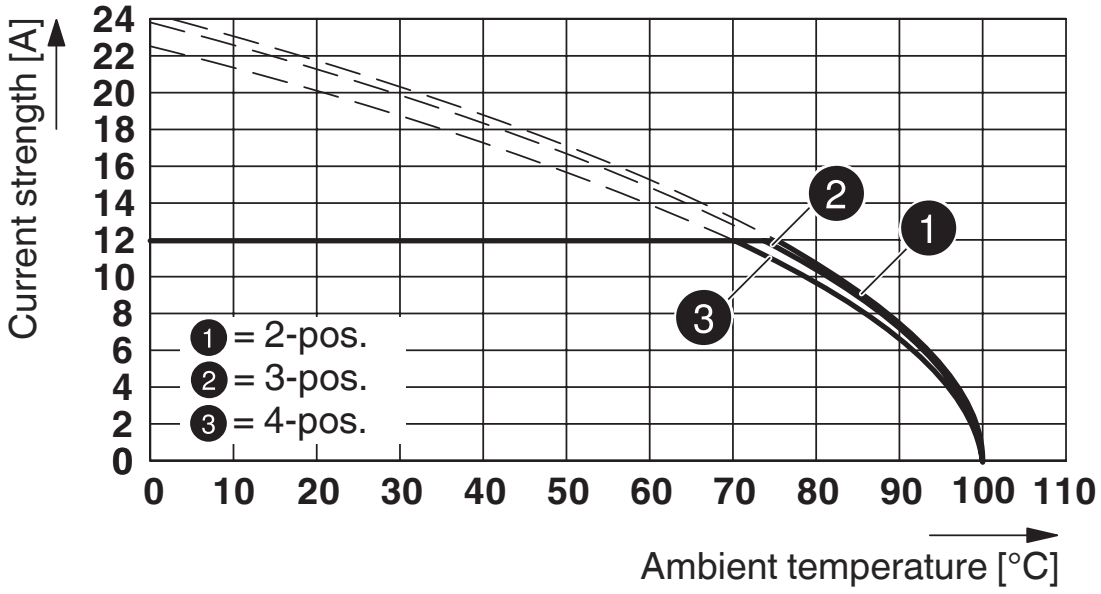
Type: MSTB 2,5/...-ST with SMSTBA 2,5/...-G

Diagram



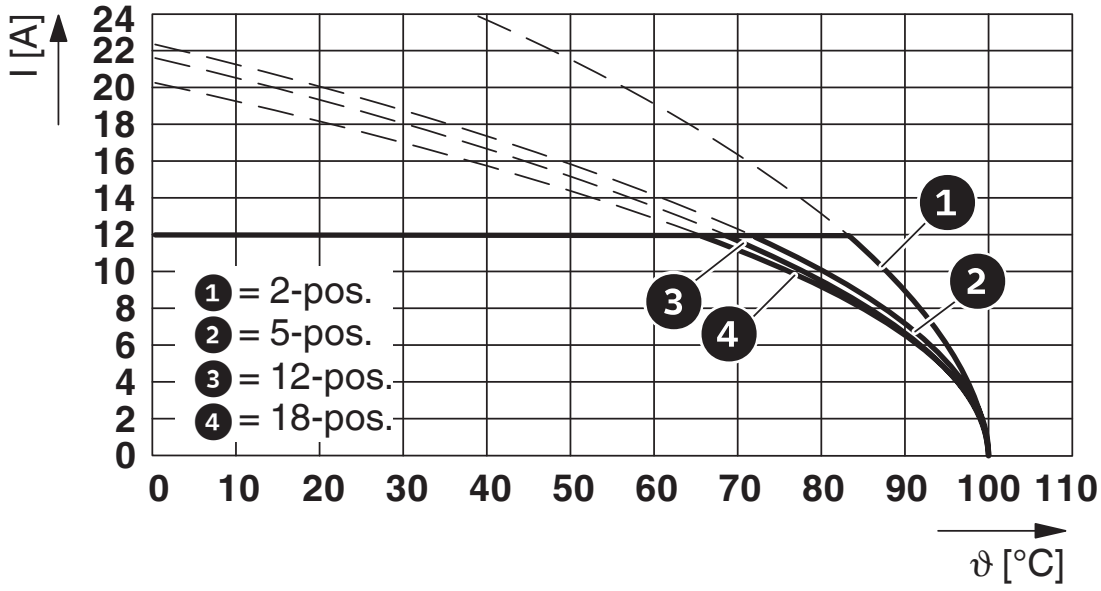
Type: MSTB 2,5/..-ST with MSTBO 2,5/...-G1L

Diagram



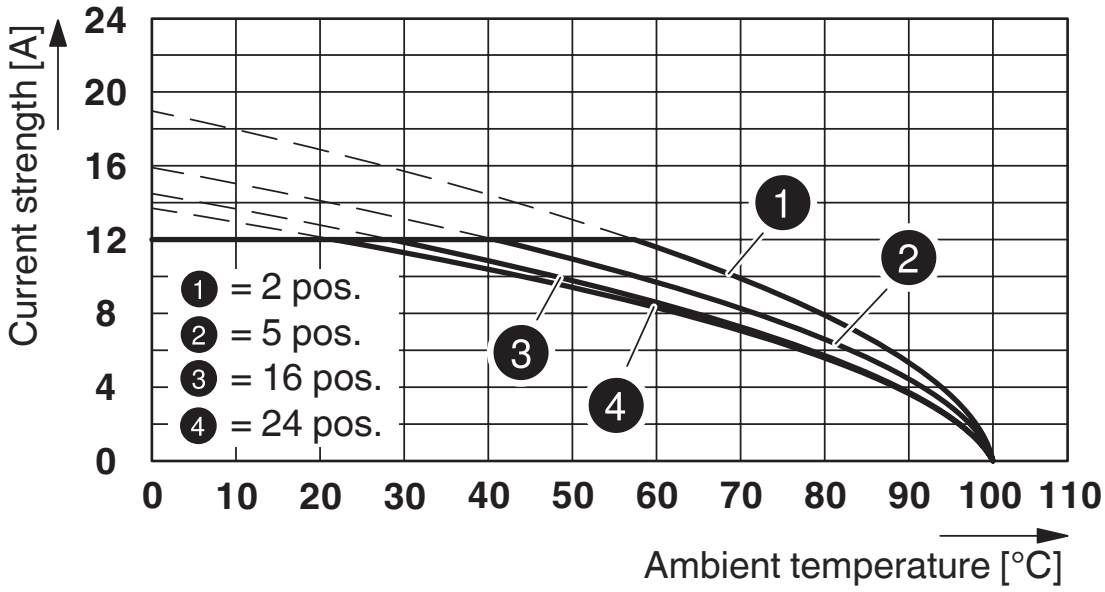
Type: MSTB 2,5/..-ST with MSTBO 2,5/...-G1R

Diagram



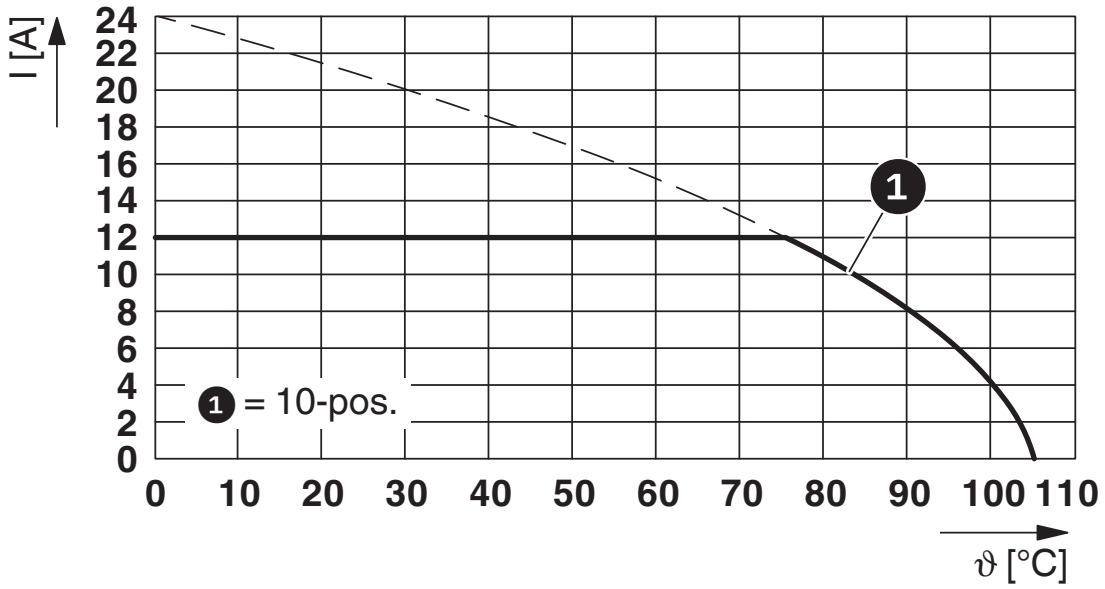
Type: MSTB 2,5/...-ST with FKIC 2,5/...-ST

Diagram



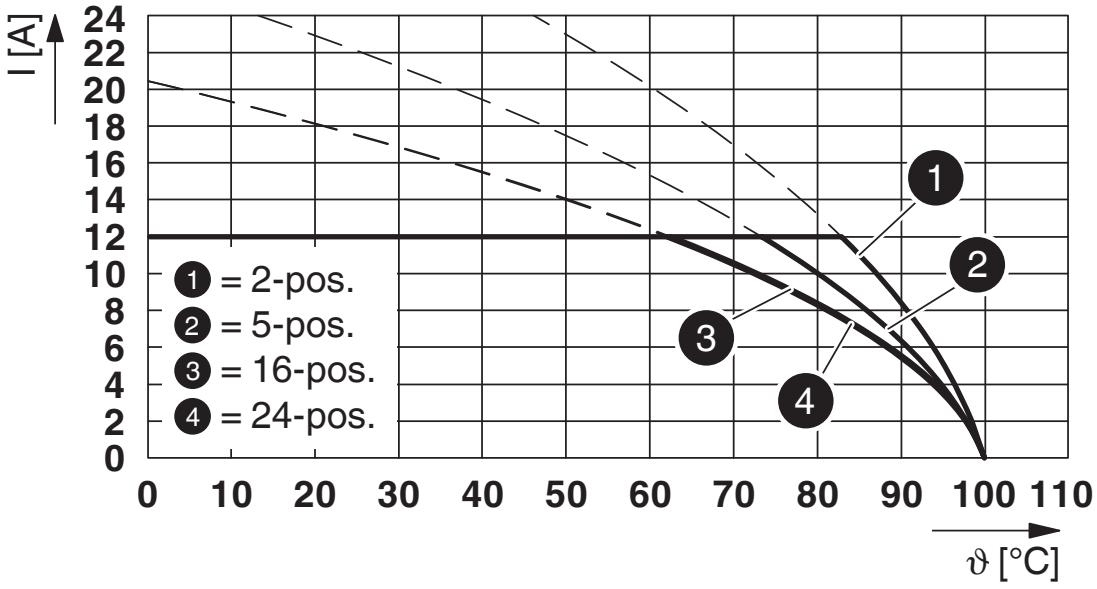
Type: MSTB 2,5/...-ST with MSTBV 2,5/...-G

Diagram



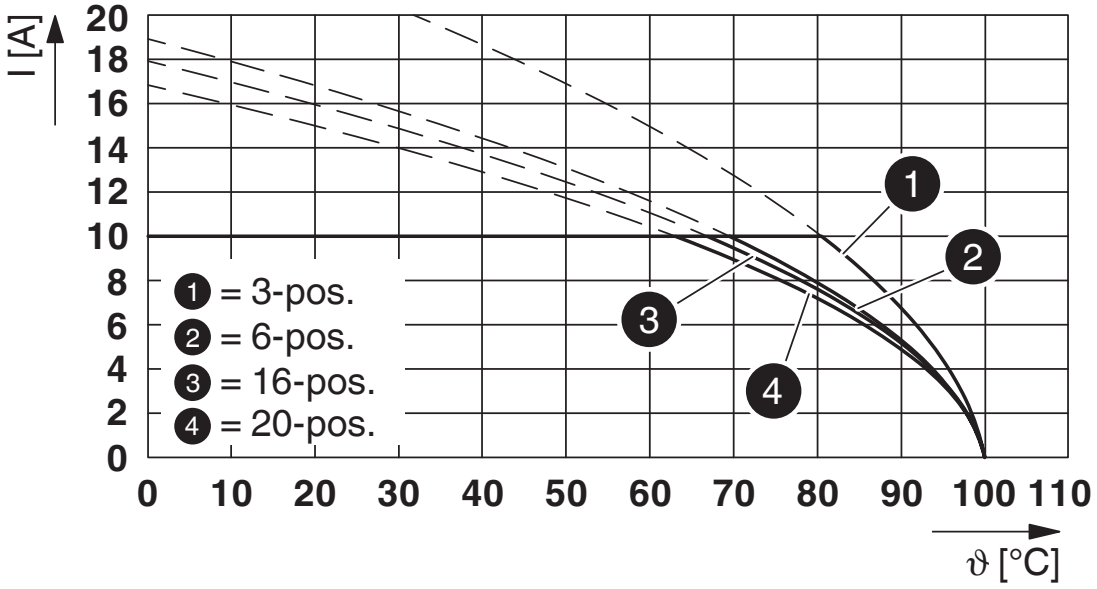
Type: MSTB 2,5/...-ST with MSTBHK 2,5/...-G

Diagram



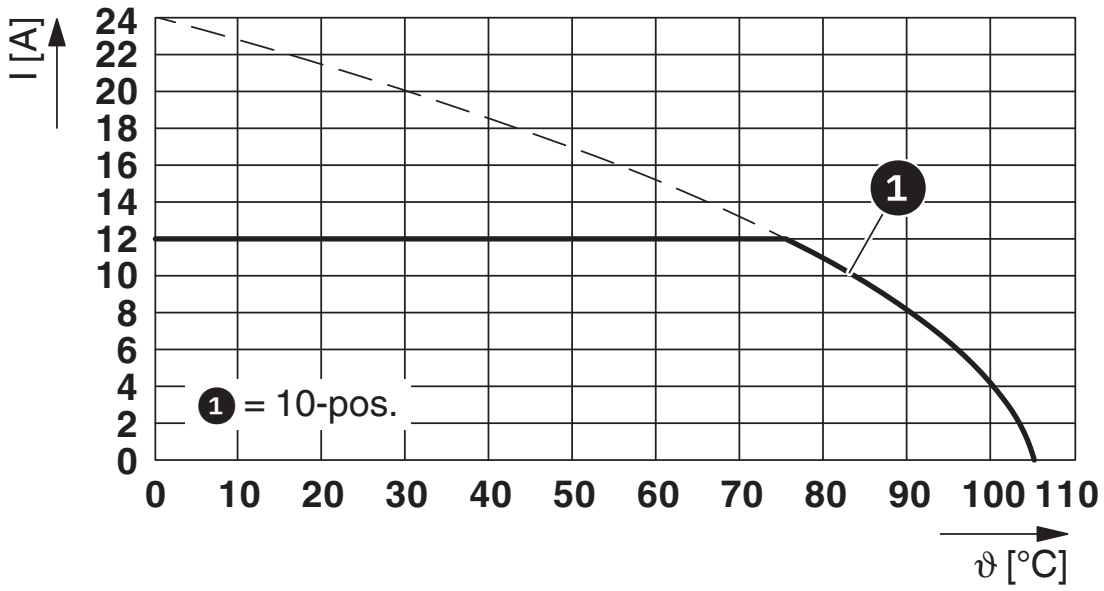
Type: MSTB 2,5/...-ST with MSTB 2,5/...-G

Diagram



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

Diagram



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

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/1754821

CSA
Approval ID: 13631-2585951

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	15 A	28 - 12	-
D				
	300 V	10 A	28 - 12	-

cULus Recognized
Approval ID: E60425-19931011

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
	300 V	15 A	30 - 12	-
D				
	300 V	10 A	30 - 12	-

VDE approval of drawings
Approval ID: 40004701

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	250 V	12 A	-	0.2 - 2.5

Classifications

ECLASS

ECLASS-13.0	27460202
ECLASS-15.0	27460202

ETIM

ETIM 9.0	EC002638

UNSPSC

UNSPSC 21.0	39121400

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

EF3.0 Climate Change

CO2e kg	0.382 kg CO2e

Accessories

SZS 0,6X3,5 - Screwdriver

1205053

https://www.phoenixcontact.com/pc/products/1205053

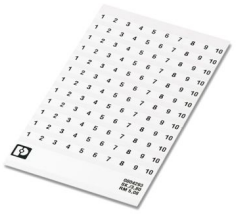


Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

SK 5,08/3,8:FORTL.ZAHLEN - Marker card

0804293

https://www.phoenixcontact.com/pc/products/0804293



Marker card, Sheet, 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, Number of individual labels: 12, text field height: 3.8 mm, text field width: 5.08 mm

KGS-MSTB 2,5/21 - Cable housing

1805628

https://www.phoenixcontact.com/pc/products/1805628



Cable housing, product range: KGS-MSTB 2,5, width: 19.8 mm

CP-MSTB - Coding profile

1734634

https://www.phoenixcontact.com/pc/products/1734634

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



EBP 2- 5 - Insertion bridge

1733169

https://www.phoenixcontact.com/pc/products/1733169

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch



MSTBW 2,5/21-G - PCB header

1735921

https://www.phoenixcontact.com/pc/products/1735921



PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 21, number of rows: 1, number of positions: 21, number of connections: 21, product range: MSTBW 2,5/..-G, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting method: without, type of packaging: packed in cardboard

MSTB 2,5/21-ST - PCB connector

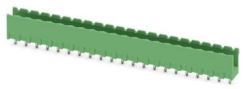
1754821

https://www.phoenixcontact.com/pc/products/1754821

MSTBV 2,5/21-G - PCB header

1753819

https://www.phoenixcontact.com/pc/products/1753819



PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of potentials: 21, number of rows: 1, number of positions: 21, number of connections: 21, product range: MSTBV 2,5/..-G, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting method: without, type of packaging: packed in cardboard

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