MSTB 2,5/ 6-STF-5,08 - PCB connector

1778027

https://www.phoenixcontact.com/us/products/1778027

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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: Tin, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

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

Commercial data

Item number	1778027
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AA03
Product key	AACAGD
Catalog page	Page 263 (C-1-2013)
GTIN	4017918039899
Weight per piece (including packing)	11.44 g
Weight per piece (excluding packing)	11 g
Customs tariff number	85366990
Country of origin	DE

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Technical data

Product properties

Type	Standard
Product line	COMBICON Connectors M
Product type	PCB connector
Product family	MSTB 2,5/..-STF
Number of positions	6
Pitch	5.08 mm
Number of connections	6
Number of rows	1
Mounting flange	Screw flange
Number of potentials	6

Electrical properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Degree of pollution	3
Contact resistance	1.3 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	Screw locking mechanism
Mounting flange	Screw flange
Tightening torque	0.3 Nm

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

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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
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

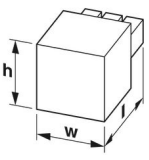
Material data - contact

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	

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Pitch	5.08 mm
Width [w]	40.49 mm
Height [h]	15 mm
Length [l]	18.3 mm

Mounting

Drive form screw head	Slotted (L)
Connection method	Screw connection with tension sleeve
Drive form screw head	Slotted (L)

Flange

Tightening torque	0.3 Nm

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

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

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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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.3 mΩ
Contact resistance R_2	1.4 mΩ
Insertion/withdrawal cycles	25

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

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

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

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Tested number of positions	12

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

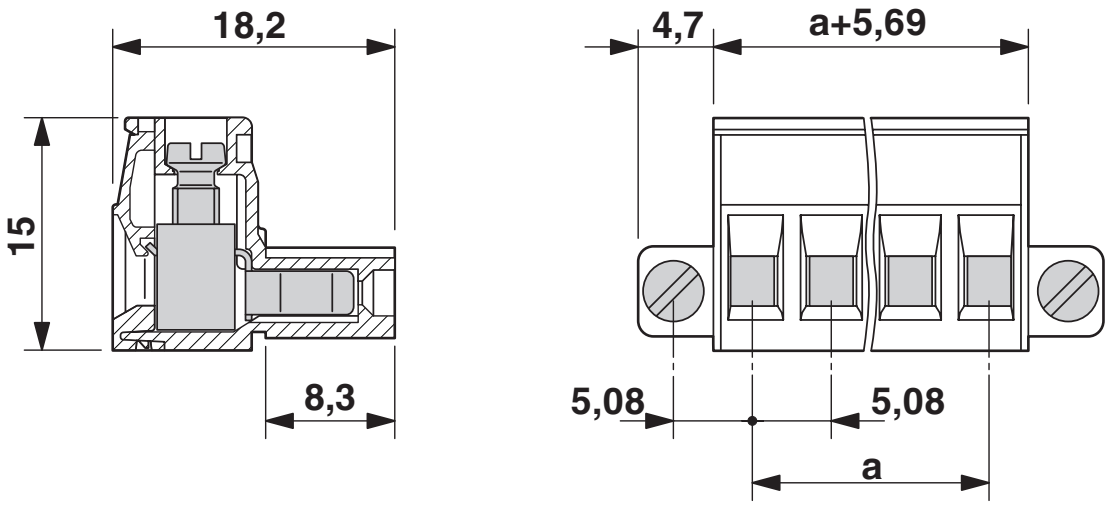
Packaging specifications

Type of packaging	packed in cardboard

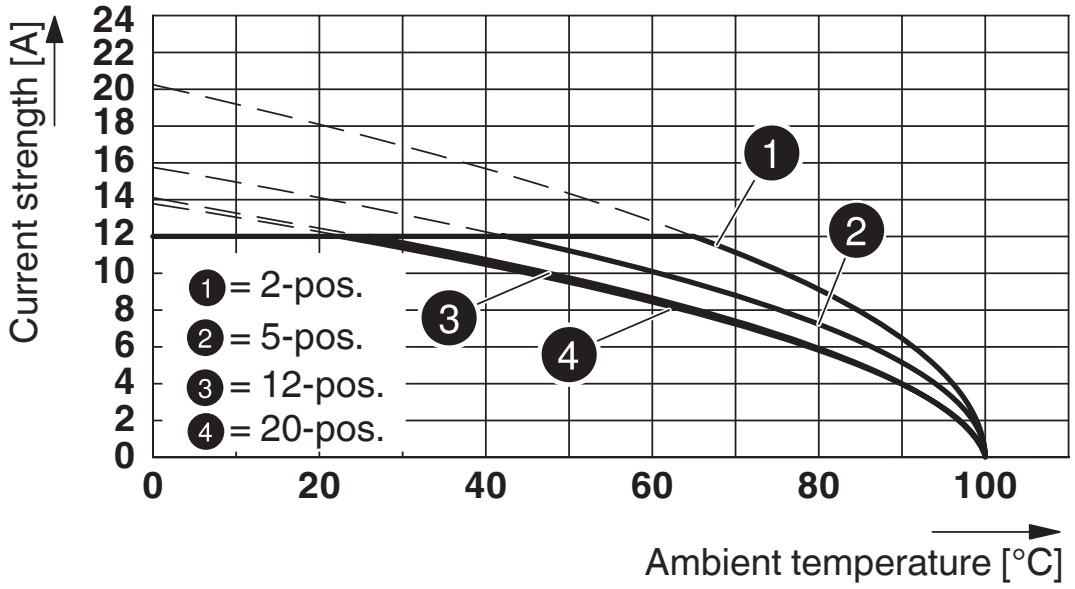
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Drawings

Dimensional drawing



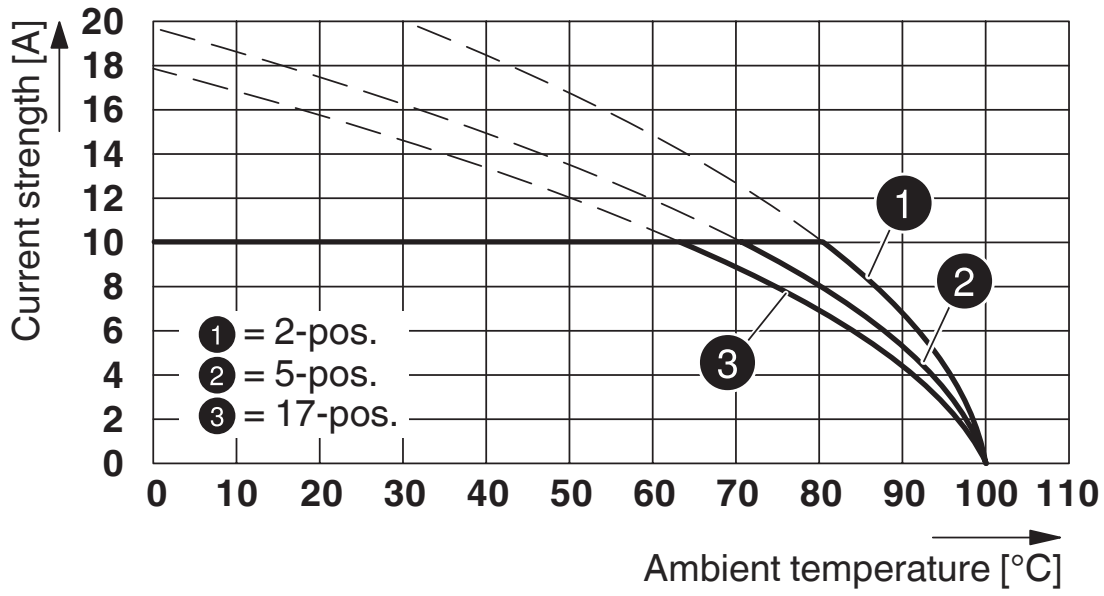
Diagram



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

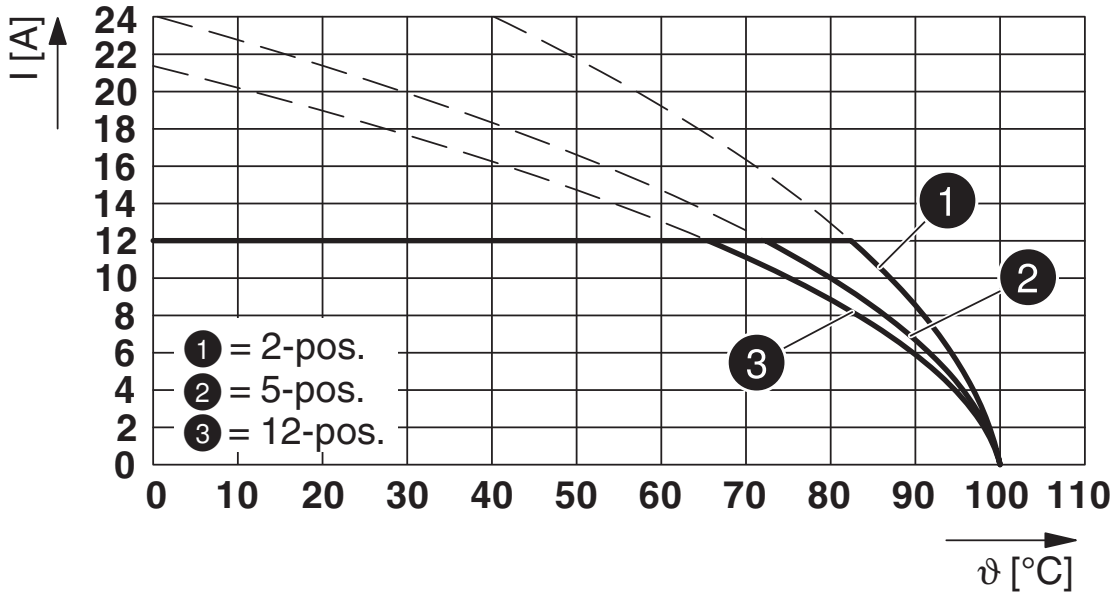
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Diagram



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

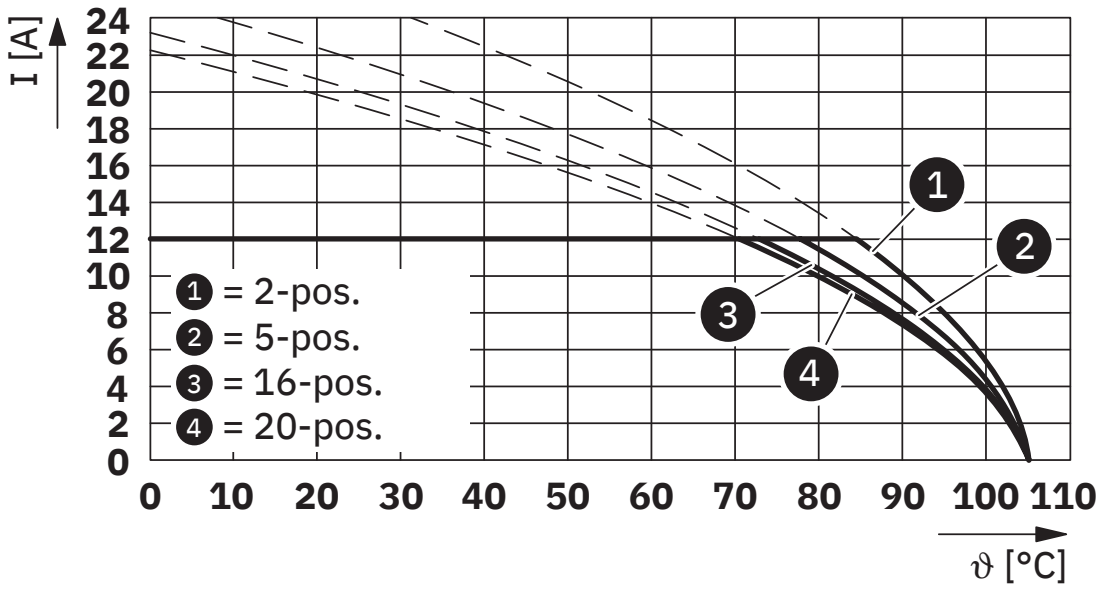
Diagram



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

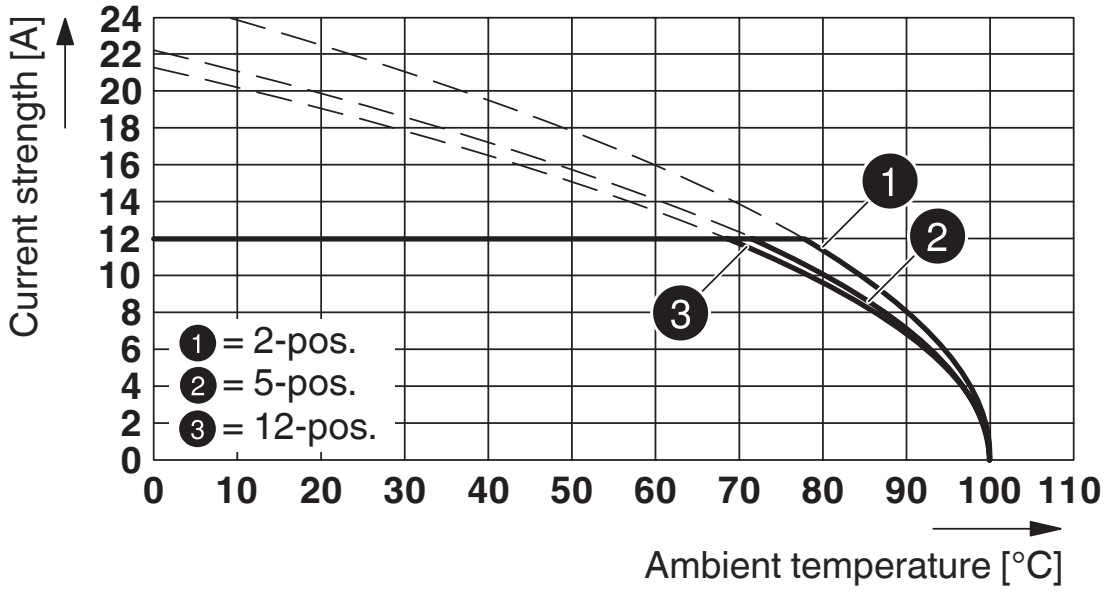
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Diagram



Type: MSTB 2,5/...-STF-5,08 with IC 2,5/...-STGF-5,08

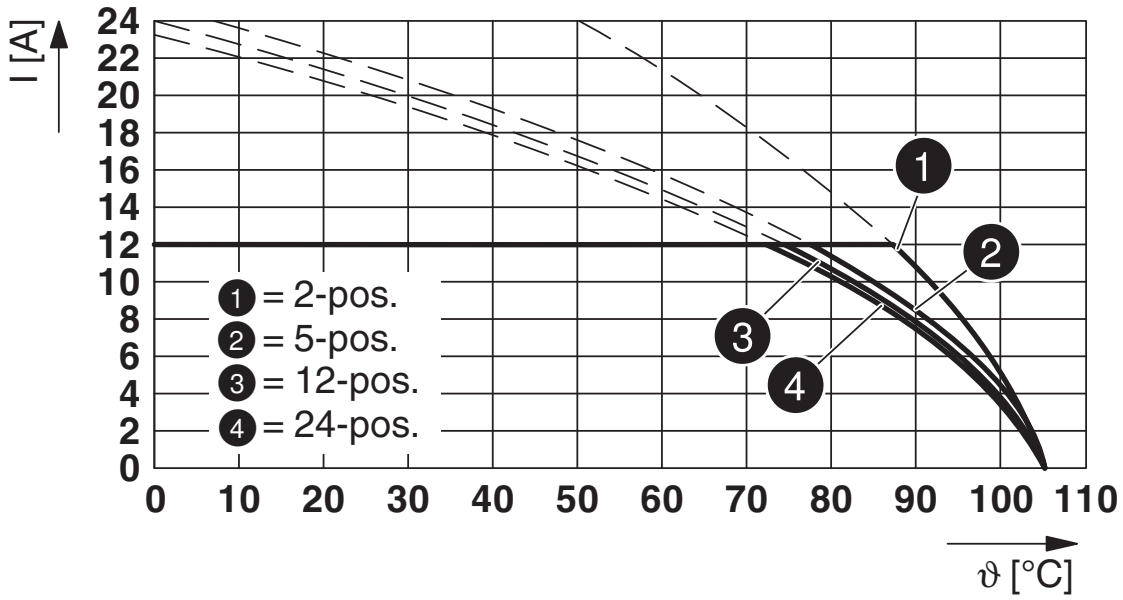
Diagram



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

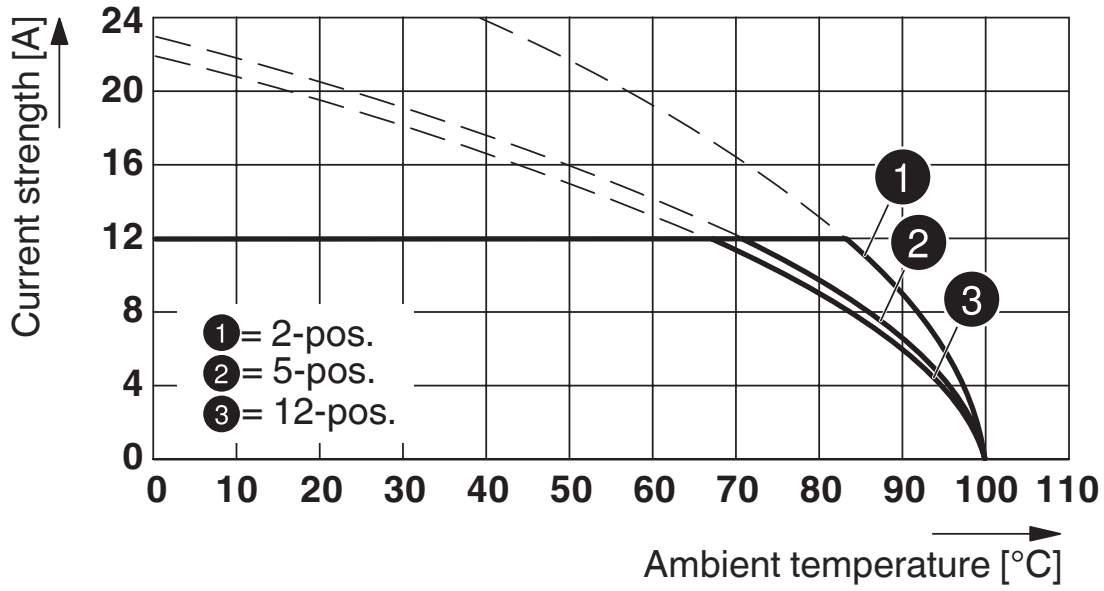
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Diagram



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

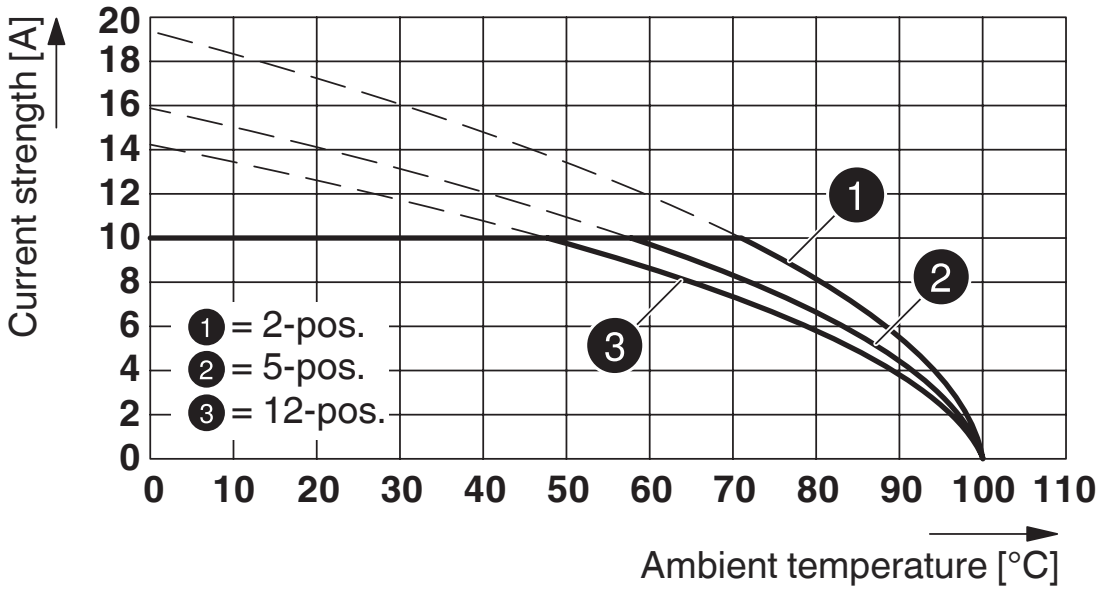
Diagram



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

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Diagram



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

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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1778027

CSA
Approval ID: 13631

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	300 V	15 A	28 - 12	-
Use group 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
Use group B				
	300 V	15 A	30 - 12	-
Use group D				
	300 V	10 A	30 - 12	-

DNV GL
Approval ID: TAE00001EY

VDE Zeichengenehmigung
Approval ID: 40050694

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

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Classifications

ECLASS

ECLASS-11.0	27460202
ECLASS-12.0	27460202
ECLASS-13.0	27460202

ETIM

ETIM 9.0	EC002638

UNSPSC

UNSPSC 21.0	39121400

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Environmental product compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

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Accessories

Note: Applying some accessories below might limit this product.

EBP 2- 5 - Insertion bridge

1733169

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

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch



Max. current carrying capacity: 12 A

EBP 4- 5 - Insertion bridge

1733185

https://www.phoenixcontact.com/us/products/1733185

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch



Max. current carrying capacity: 12 A

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EBP 5- 5 - Insertion bridge

1733198

https://www.phoenixcontact.com/us/products/1733198



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

Max. current carrying capacity: 12 A

EBP 3- 5 - Insertion bridge

1733172

https://www.phoenixcontact.com/us/products/1733172



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

Max. current carrying capacity: 12 A

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EBP 6- 5 - Insertion bridge

1733208

https://www.phoenixcontact.com/us/products/1733208

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch



Max. current carrying capacity: 12 A

SZS 0,6X3,5 - Screwdriver

1205053

https://www.phoenixcontact.com/us/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

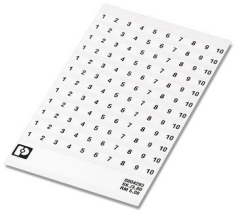


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SK 5,08/3,8:FORTL.ZAHLEN - Marker card

0804293

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



Marker 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

SK U/3,8 WH:UNBEDRUCKT - Marker card

0803906

https://www.phoenixcontact.com/us/products/0803906



Marker card, Din A4, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 3.8 mm, Number of individual labels: 1440

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B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/us/products/1051993



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

X-PEN 0,35 - Marker pen

0811228

https://www.phoenixcontact.com/us/products/0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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KGG-MSTB 2,5/ 6 - Cable housing

1803905

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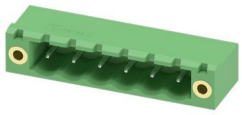


Cable housing, pitch: 0 mm, number of positions: 6, color: green

MSTB 2,5/ 6-GF-5,08 - PCB header

1776540

https://www.phoenixcontact.com/us/products/1776540



PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTB 2,5/..-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.23 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

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MSTB 2,5/ 6-STF-5,08 - PCB connector

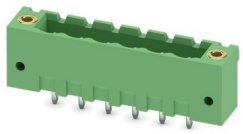
1778027

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MSTBV 2,5/ 6-GF-5,08 - PCB header

1777112

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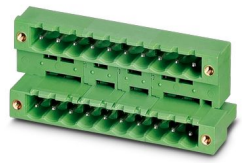


PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: MSTBV 2,5/..-GF, pitch: 5.08 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: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

MDSTB 2,5/ 6-GF-5,08 - PCB header

1842403

https://www.phoenixcontact.com/us/products/1842403



PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 12, number of rows: 2, number of positions: 6, number of connections: 12, product range: MDSTB 2,5/..-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.23 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard, 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!

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MSTB 2,5/ 6-STF-5,08 - PCB connector

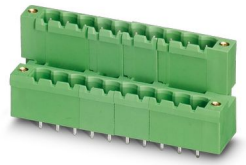
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MDSTBV 2,5/ 6-GF-5,08 - PCB header

1845675

https://www.phoenixcontact.com/us/products/1845675



PCB headers, nominal cross section: 2.5 mm^2, color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 12, number of rows: 2, number of positions: 6, number of connections: 12, product range: MDSTBV 2,5/..-GF, pitch: 5.08 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: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard, 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!

DFK-MSTBA 2,5/ 6-GF-5,08 - Feed-through header

1899029

https://www.phoenixcontact.com/us/products/1899029



Feed-through header, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: DFK-MSTBA 2,5/..-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.23 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

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DFK-MSTBVA 2,5/ 6-GF-5,08 - Feed-through header

1899320

https://www.phoenixcontact.com/us/products/1899320



Feed-through header, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: DFK-MSTBVA 2,5/..-GF, pitch: 5.08 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: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard

CC 2,5/ 6-GF-5,08 P26THR - PCB header

1954731

https://www.phoenixcontact.com/us/products/1954731



PCB headers, nominal cross section: 2.5 mm^2, color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: CC 2,5/..-GF, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard, For user information and design recommendations for through-hole reflow technology, go to: Downloads

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CC 2,5/ 6-GF-5,08 P26THRR56 - PCB header

1954841

https://www.phoenixcontact.com/us/products/1954841



PCB headers, nominal cross section: 2.5 mm^2, color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: CC 2,5/..-GF, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: 56 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

CCV 2,5/ 6-GF-5,08 P26THR - PCB header

1955675

https://www.phoenixcontact.com/us/products/1955675



PCB headers, nominal cross section: 2.5 mm^2, color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: CCV 2,5/..-GF, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: packed in cardboard, For user information and design recommendations for through-hole reflow technology, go to: Downloads

Downloaded from Arrow.com.

MSTB 2,5/ 6-STF-5,08 - PCB connector

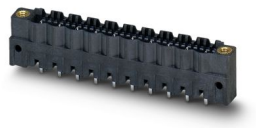
1778027

https://www.phoenixcontact.com/us/products/1778027

CCV 2,5/ 6-GF-5,08 P26THRR56 - PCB header

1955785

https://www.phoenixcontact.com/us/products/1955785



PCB headers, nominal cross section: 2.5 mm^2, color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: CCV 2,5/..-GF, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting: Threaded flange, type of packaging: 56 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

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