

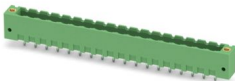
MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, 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

Your advantages

- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Well-known mounting principle allows worldwide use
- Vertical connection enables multi-row arrangement on the PCB
- Screwable flange for superior mechanical stability

Commercial data

Item number	1777235
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA03
Product key	AACSMD
Catalog page	Page 169 (CC-2005)
GTIN	4017918039400
Weight per piece (including packing)	9 g
Weight per piece (excluding packing)	8.183 g
Customs tariff number	85366930
Country of origin	DE

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

Technical data

Product properties

Product type	PCB headers
Product family	MSTBV 2,5/..-GF
Product line	COMBICON Connectors M
Type	Standard
Number of positions	18
Pitch	5.08 mm
Number of connections	18
Number of rows	1
Number of potentials	18
Mounting flange	Threaded flange
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Degree of pollution	3
Contact resistance	2.5 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)	400 V
Rated surge voltage (II/2)	4 kV

Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

Flange

Tightening torque	0.3 Nm
-------------------	--------

Attachment on the PCB

Tightening torque	0.3 Nm
Screw	Sheet metal screw ISO 1481-ST 2,2x6,5 C or ISO 7049-ST 2,2x6,5 C

Material specifications

Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
------	--

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 µm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

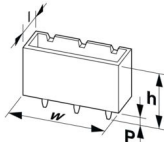
Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	225
Flammability rating according to UL 94	V0

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.
--------------------	--

Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	101.6 mm
Height [h]	15.9 mm
Length [l]	8.6 mm
Installed height	12 mm
Solder pin length [P]	3.9 mm
Pin dimensions	1 x 1 mm

PCB design

Hole diameter	1.4 mm
---------------	--------

Mechanical tests

Visual inspection

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

Dimension check

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

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

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

Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

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

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	20

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	IIIa
Comparative tracking index (IEC 60112)	CTI 225
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)	4 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)	3.2 mm
Rated insulation voltage (II/2)	400 V
Rated surge voltage (II/2)	4 kV
minimum clearance value - non-homogenous field (II/2)	3 mm
minimum creepage distance (II/2)	4 mm

Environmental and real-life conditions

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

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

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R ₁	2.5 mΩ
Contact resistance R ₂	2.6 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

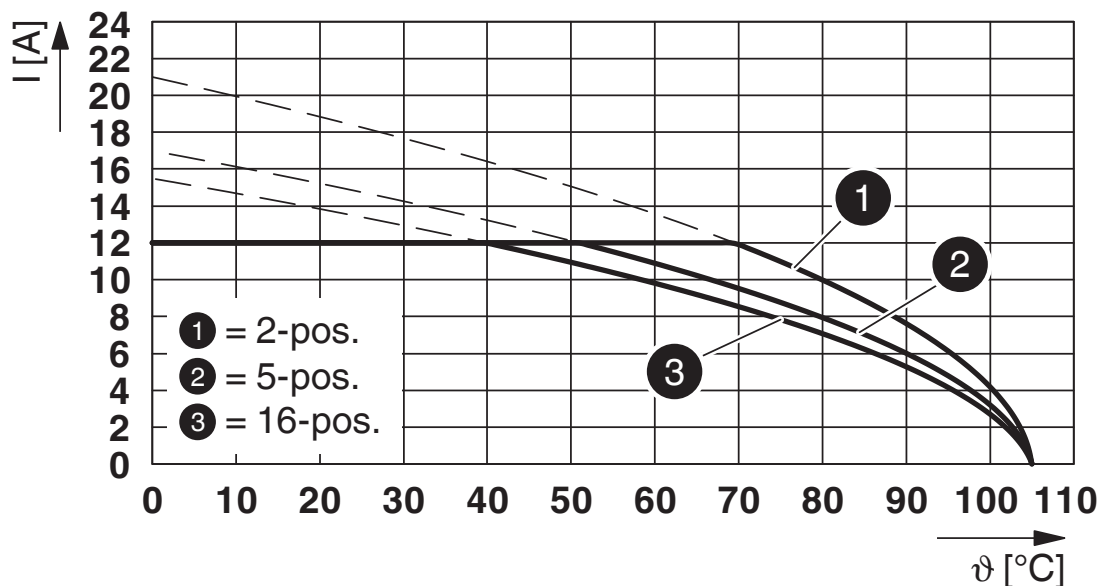
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
-------------------	---------------------

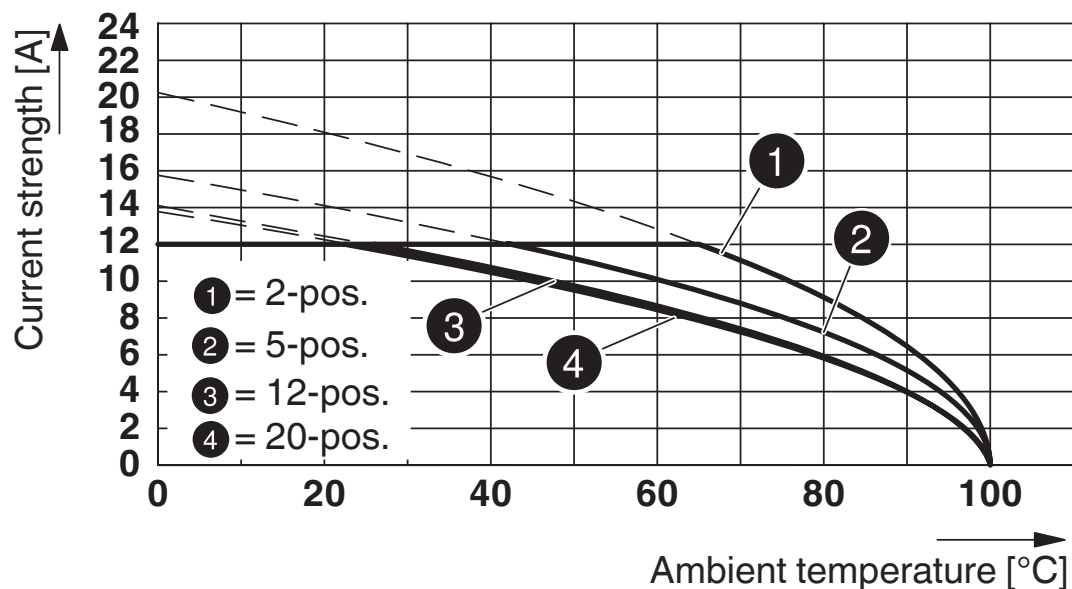
Drawings

Diagram

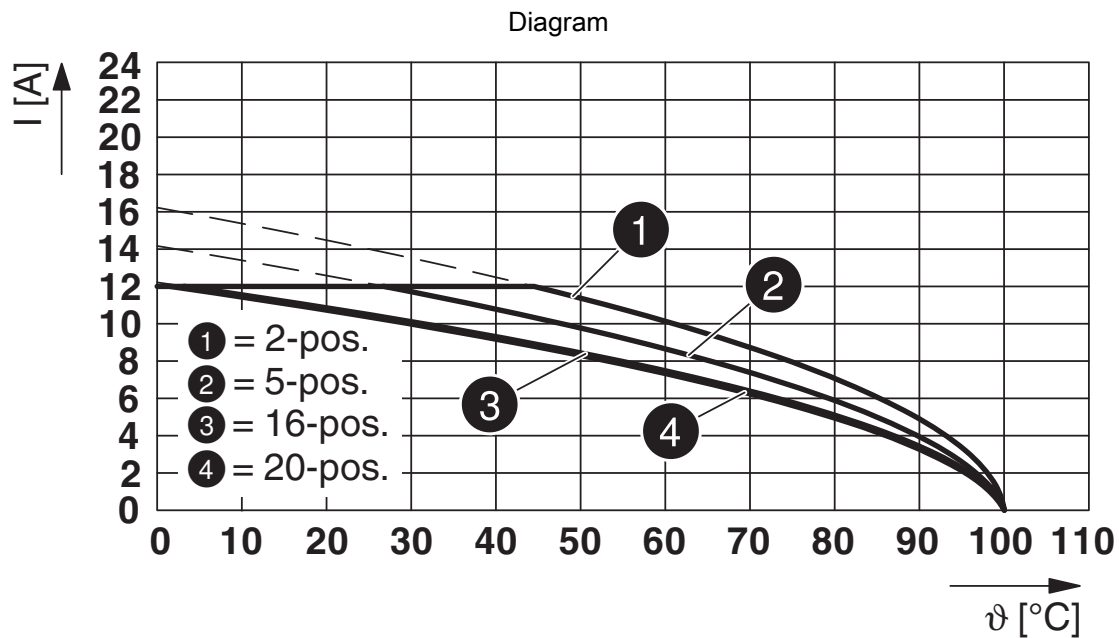


Type: FKCVW 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

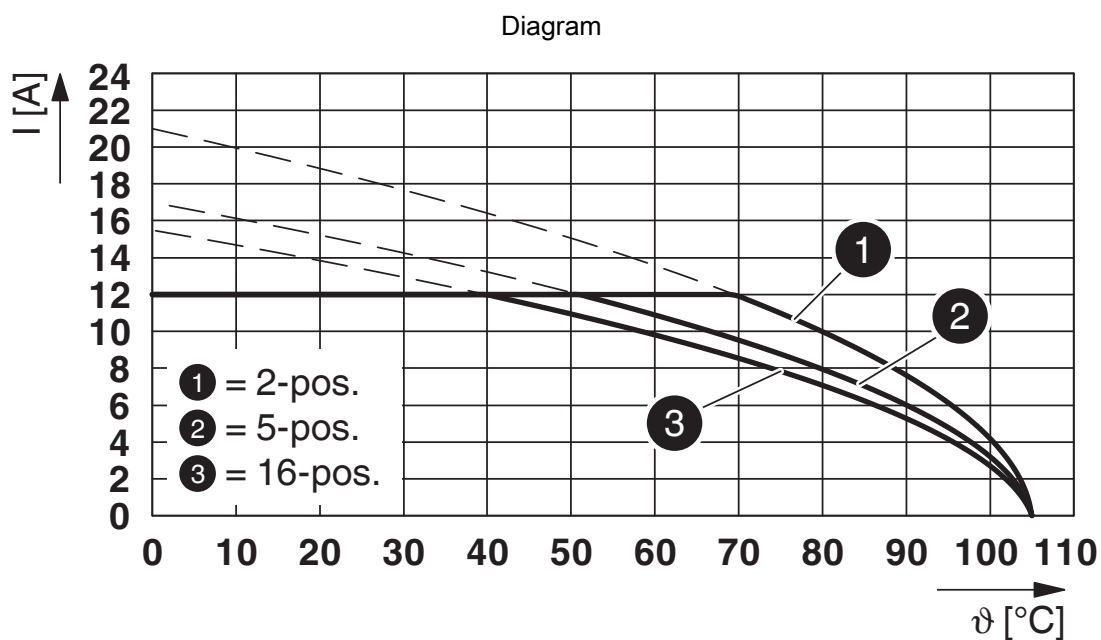
Diagram



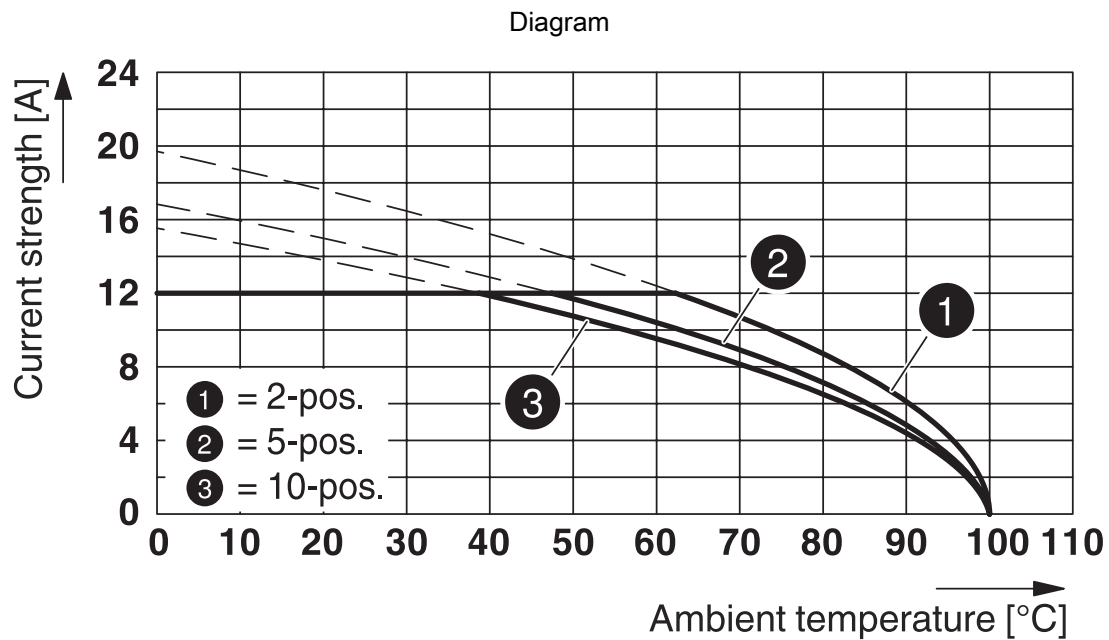
Type: MSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08



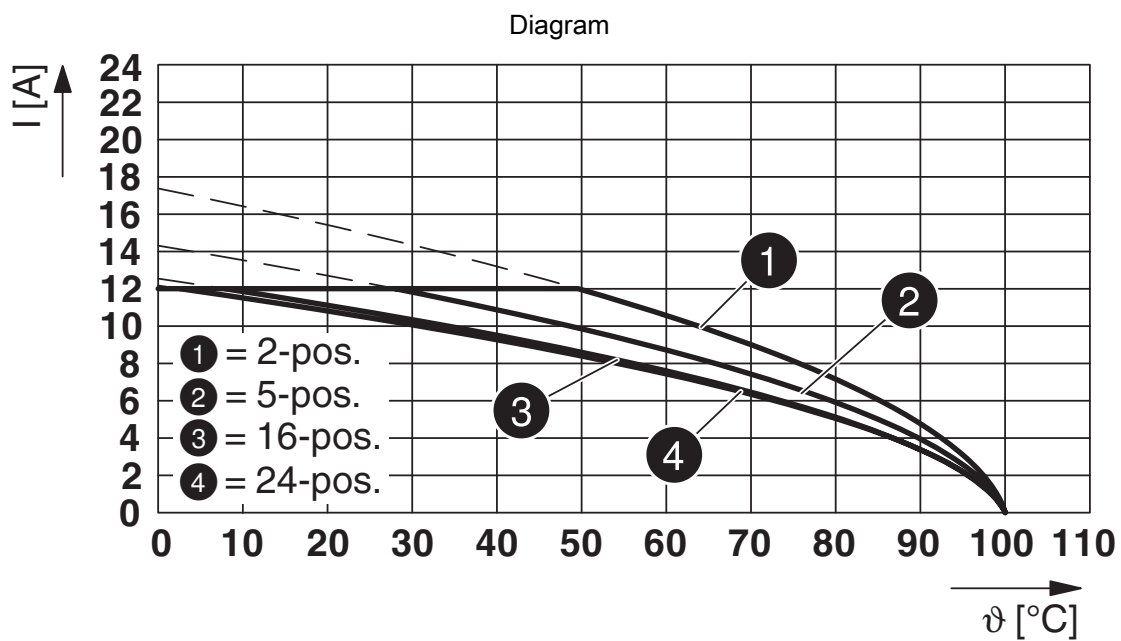
Type: MVSTB(R/W) 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08



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

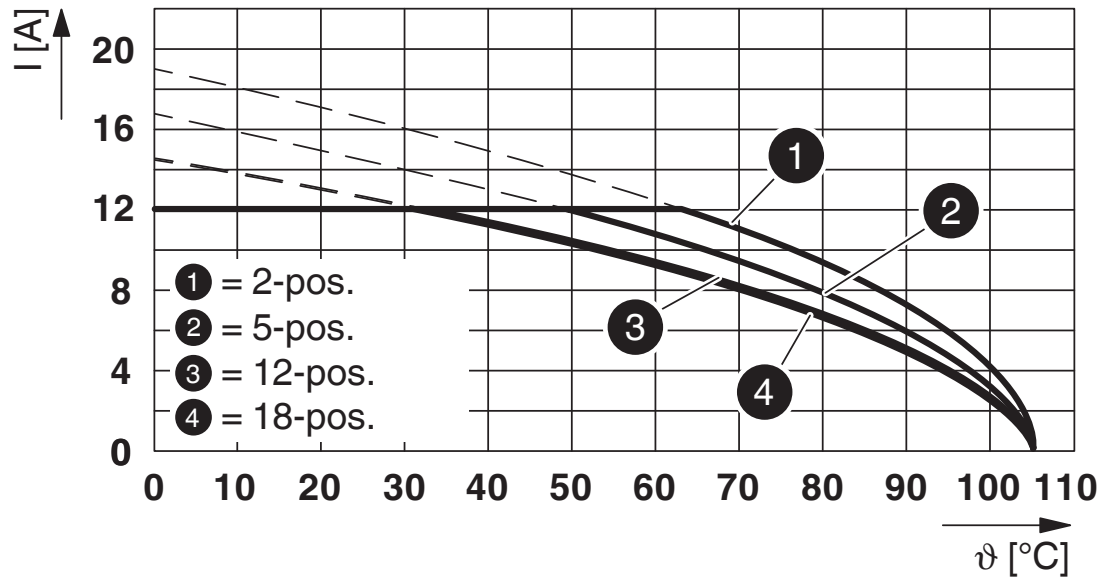


Type: TVMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08



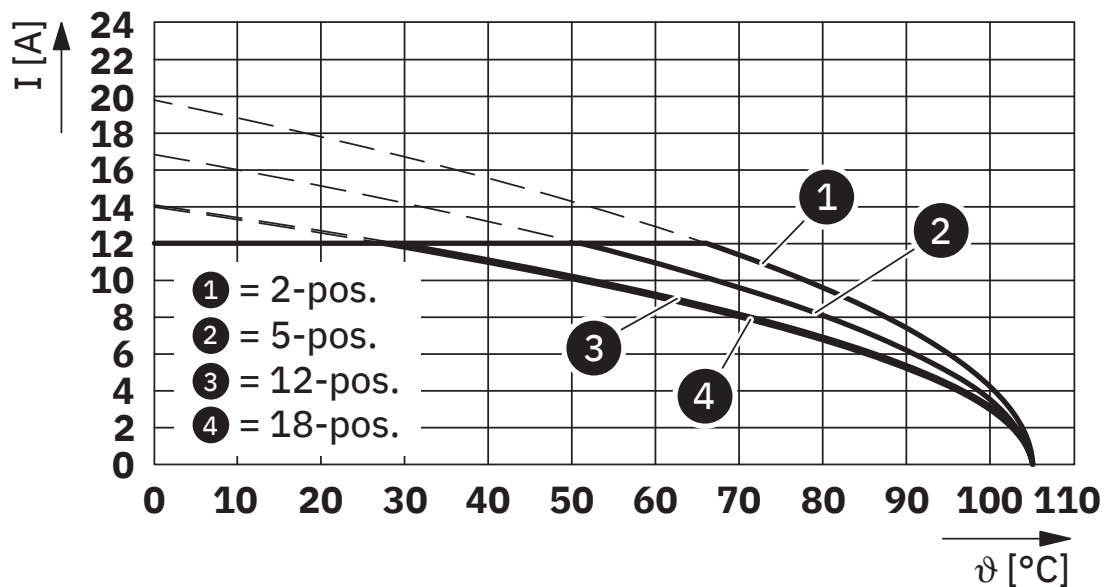
Type: SMSTB 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



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

Diagram



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

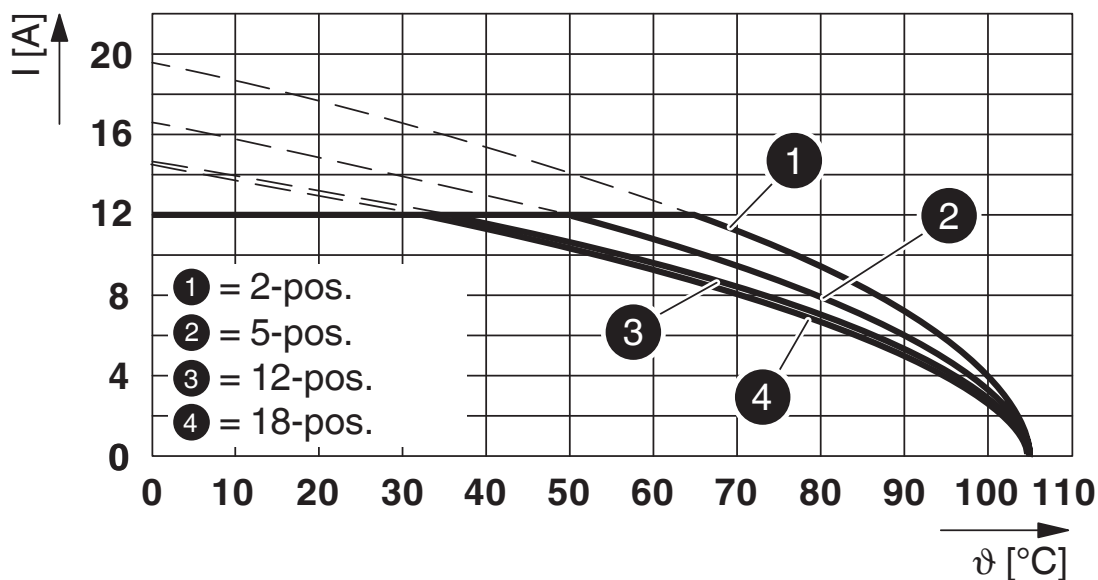
MSTBV 2,5/18-GF-5,08 - PCB header

1777235

<https://www.phoenixcontact.com/us/products/1777235>

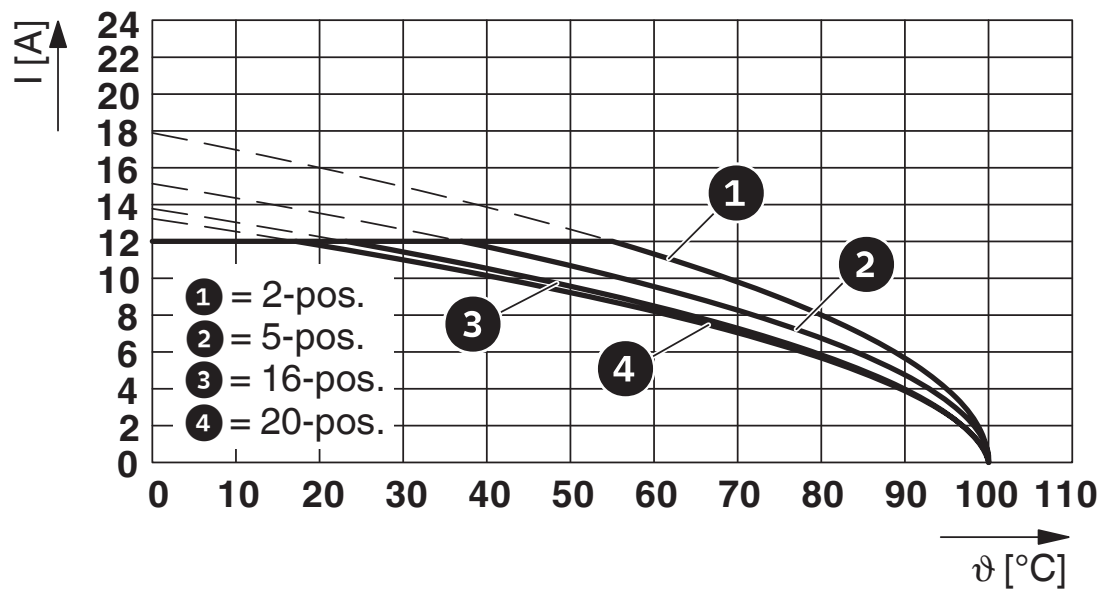


Diagram

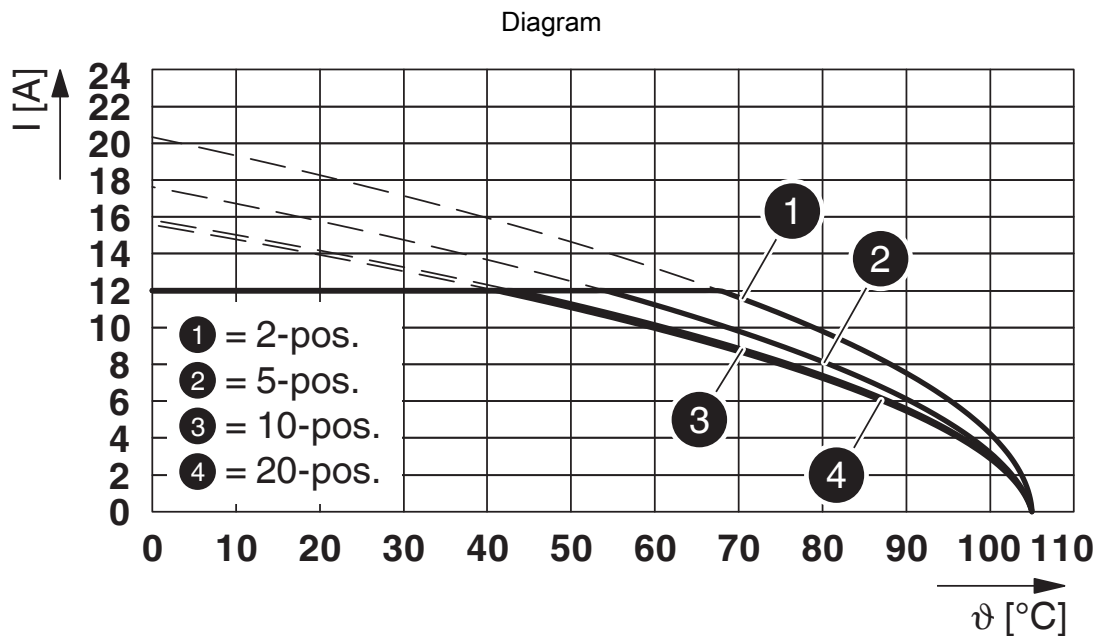


Type: MSTBT 2,5/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

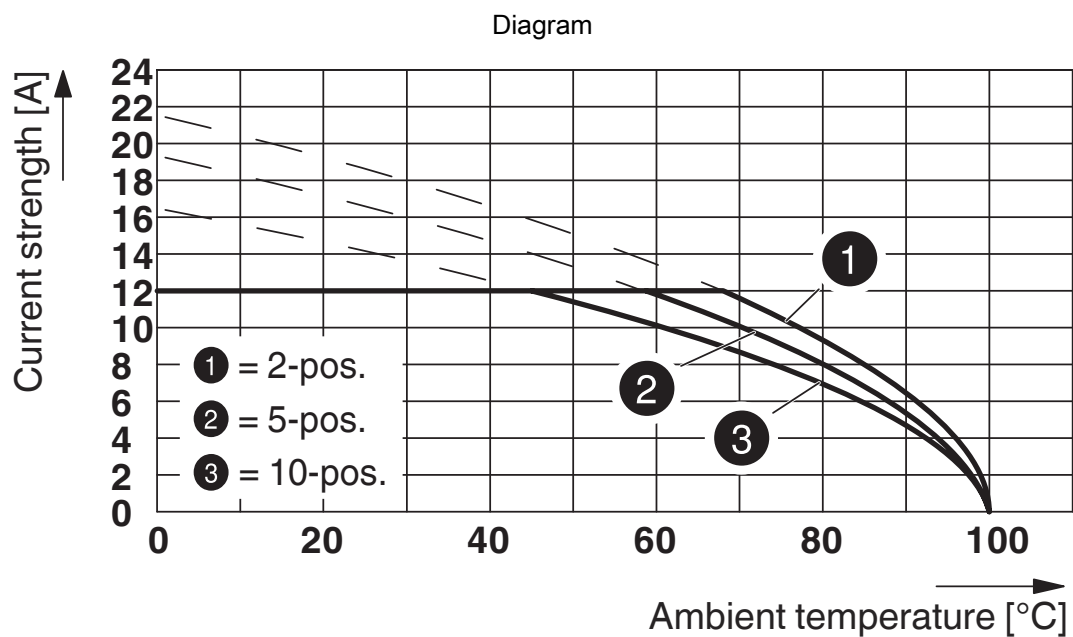
Diagram



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



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



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

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1777235>

 CSA Approval ID: 13631-2585951				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
Use group B				
	300 V	12 A	-	-
Use group D				
	300 V	10 A	-	-

 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	12 A	-	-
Use group D				
	300 V	10 A	-	-

 DNV GL Approval ID: TAE00001EY				
--	--	--	--	--

 VDE Zeichengenehmigung Approval ID: 40050648				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	250 V	12 A	-	-

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

Classifications

ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

ETIM

ETIM 9.0	EC002637
----------	----------

UNSPSC

UNSPSC 21.0	39121400
-------------	----------

MSTBV 2,5/18-GF-5,08 - PCB header

1777235

<https://www.phoenixcontact.com/us/products/1777235>



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%

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

Accessories

CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/us/products/1734401>

Coding section, inserted into the recess in the header or the inverted plug, red insulating material



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



MSTBV 2,5/18-GF-5,08 - PCB header

1777235

<https://www.phoenixcontact.com/us/products/1777235>



MSTB-BL - Accessories

1755477

<https://www.phoenixcontact.com/us/products/1755477>

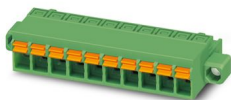


Keying cap, for forming sections, plugs onto header pin, green insulating material

FKCN 2,5/18-STF-5,08 - PCB connector

1754953

<https://www.phoenixcontact.com/us/products/1754953>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: FKCN 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

MSTBV 2,5/18-GF-5,08 - PCB header



1777235

<https://www.phoenixcontact.com/us/products/1777235>

FRONT-MSTB 2,5/18-STF-5,08 - PCB connector

1777950

<https://www.phoenixcontact.com/us/products/1777950>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: FRONT-MSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Front screw connection, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

MSTB 2,5/18-STF-5,08 - PCB connector

1778140

<https://www.phoenixcontact.com/us/products/1778140>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, 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

MSTBV 2,5/18-GF-5,08 - PCB header

1777235

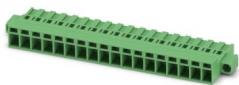
<https://www.phoenixcontact.com/us/products/1777235>



MSTBC 2,5/18-STZF-5,08 - PCB connector

1809899

<https://www.phoenixcontact.com/us/products/1809899>

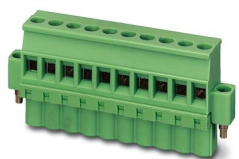


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: MSTBC 2,5/...-STZF, pitch: 5.08 mm, connection method: Crimp connection, 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, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

MVSTBW 2,5/18-STF-5,08 - PCB connector

1835067

<https://www.phoenixcontact.com/us/products/1835067>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: MVSTBW 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

MSTBV 2,5/18-GF-5,08 - PCB header

1777235

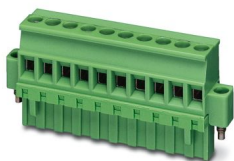
<https://www.phoenixcontact.com/us/products/1777235>



MVSTBR 2,5/18-STF-5,08 - PCB connector

1835258

<https://www.phoenixcontact.com/us/products/1835258>

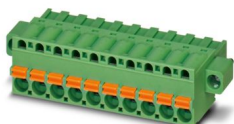


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: MVSTBR 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

FKCT 2,5/18-STF-5,08 - PCB connector

1902466

<https://www.phoenixcontact.com/us/products/1902466>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: FKCT 2,5/...-STF, pitch: 5.08 mm, connection method: Push-in spring connection, 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

MSTBV 2,5/18-GF-5,08 - PCB header

1777235

<https://www.phoenixcontact.com/us/products/1777235>



SMSTB 2,5/18-STF-5,08 - PCB connector

1971222

<https://www.phoenixcontact.com/us/products/1971222>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 18, number of rows: 1, number of positions: 18, number of connections: 18, product range: SMSTB 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -45 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com