

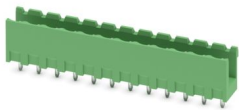
# MSTBV 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

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 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 12, number of rows: 1, number of positions: 12, number of connections: 12, 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: without, 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
- Items that can be aligned in various pitches support flexible and space-saving PCB assembly
- Easy PCB replacement thanks to plug-in modules

## Commercial data

Item number	1753631
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA03
Product key	AACSLB
Catalog page	Page 315 (C-1-2013)
GTIN	4017918028473
Weight per piece (including packing)	4.341 g
Weight per piece (excluding packing)	4.341 g
Customs tariff number	85366930
Country of origin	DE

# MSTBV 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

## Technical data

### Product properties

Product type	PCB headers
Product family	MSTBV 2,5/..-G
Product line	COMBICON Connectors M
Type	Standard
Number of positions	12
Pitch	5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Mounting flange	without
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	2.1 m $\Omega$
Rated voltage (III/3)	320 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

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

### 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	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 $\mu\text{m}$ Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 $\mu\text{m}$ Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 $\mu\text{m}$ Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 $\mu\text{m}$ Ni)

#### Material data - housing

# MSTBV 2,5/12-G - PCB header

1753631

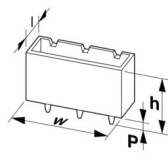
<https://www.phoenixcontact.com/ca/products/1753631>

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

## 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 mm
Width [w]	60 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

### Resistance of inscriptions

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

# MSTBV 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

## 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	18

### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 M $\Omega$

### 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)	320 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 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

## Environmental and real-life conditions

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz

# MSTBV 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

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 $R_1$	2.1 m $\Omega$
Contact resistance $R_2$	2.3 m $\Omega$
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 M $\Omega$

## Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /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

## Packaging specifications

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

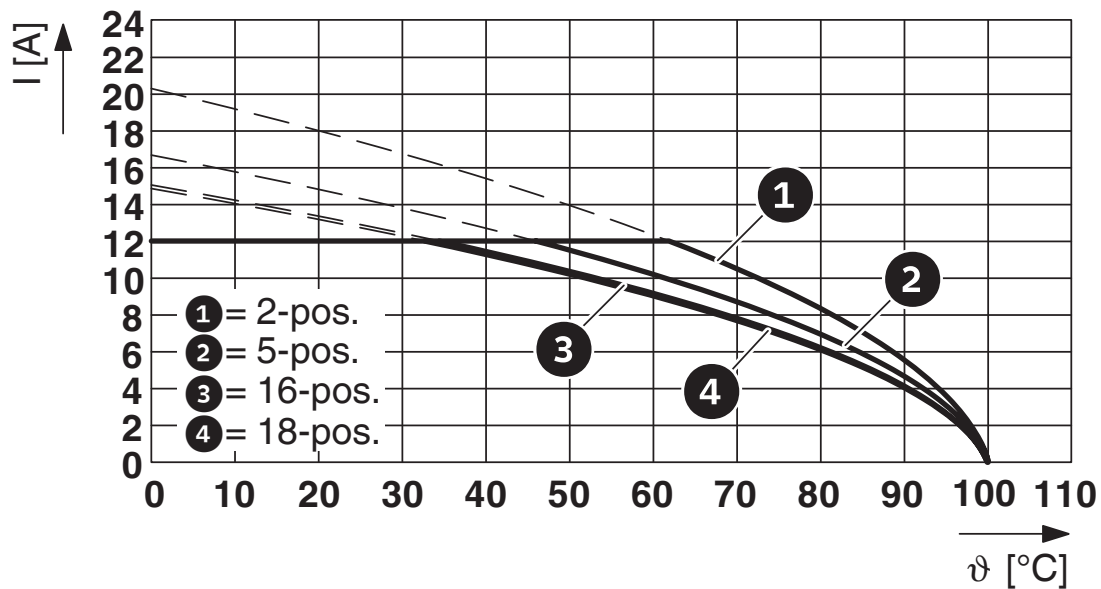
# MSTBV 2,5/12-G - PCB header

1753631

<https://www.phoenixcontact.com/ca/products/1753631>

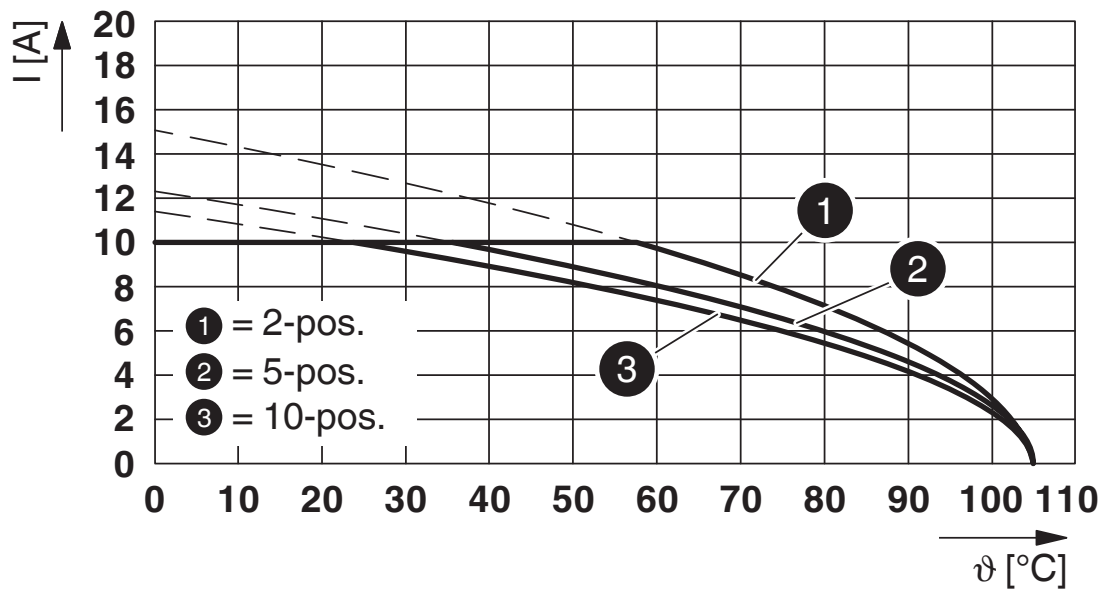
## Drawings

Diagram



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

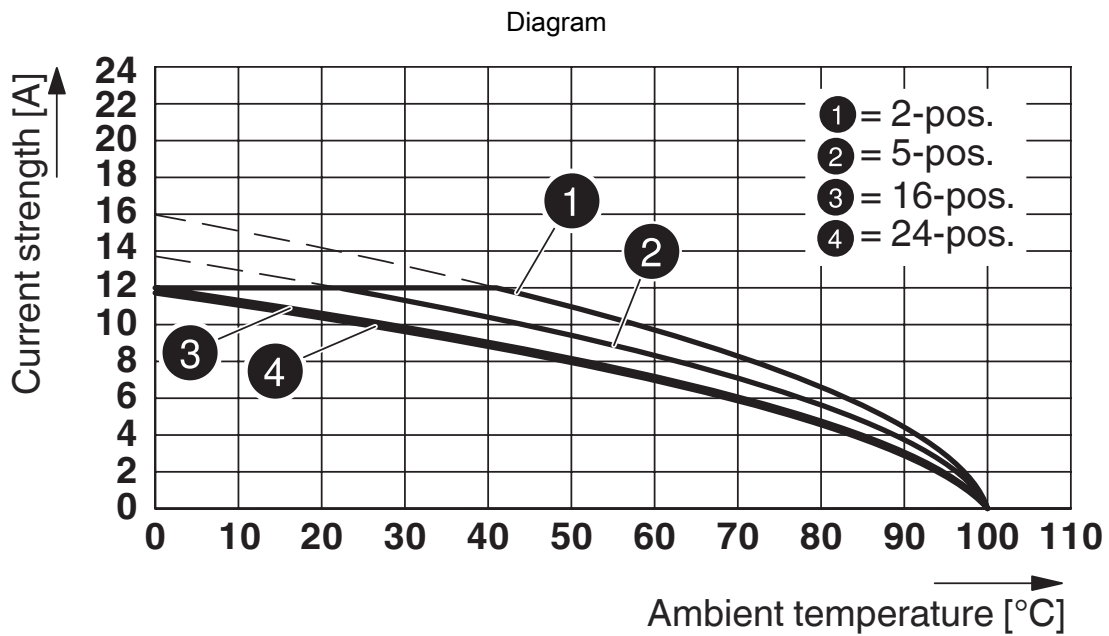
Diagram



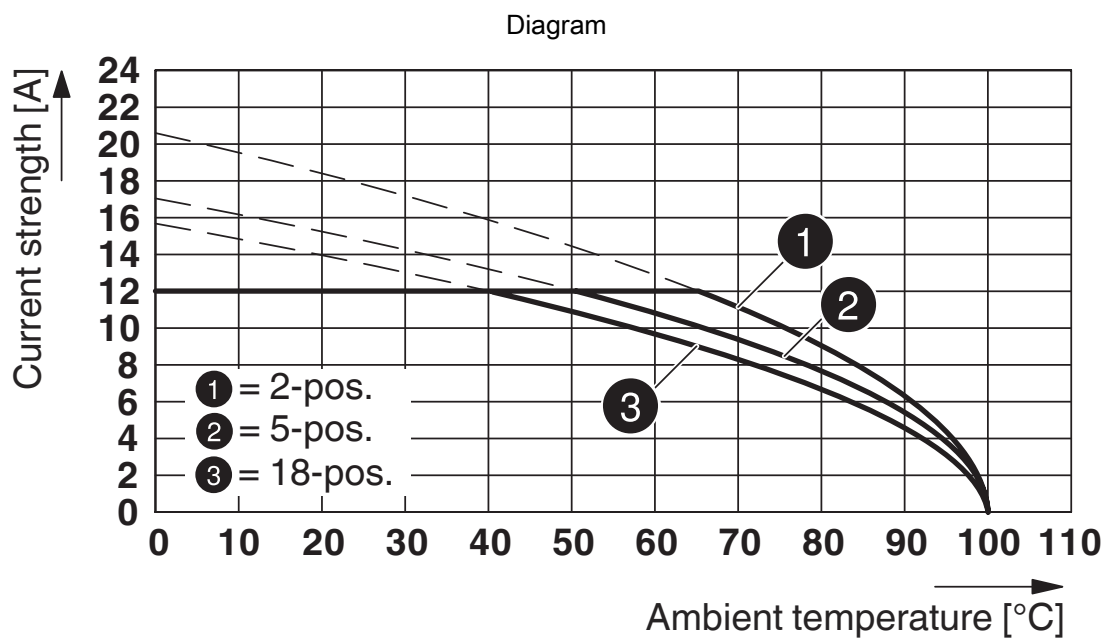
Type: TVFKC 1,5/...-ST with MSTBV 2,5/...-G

1753631

<https://www.phoenixcontact.com/ca/products/1753631>



Type: MVSTB(RW) 2,5/...-ST with MSTBV 2,5 2,5/...-G



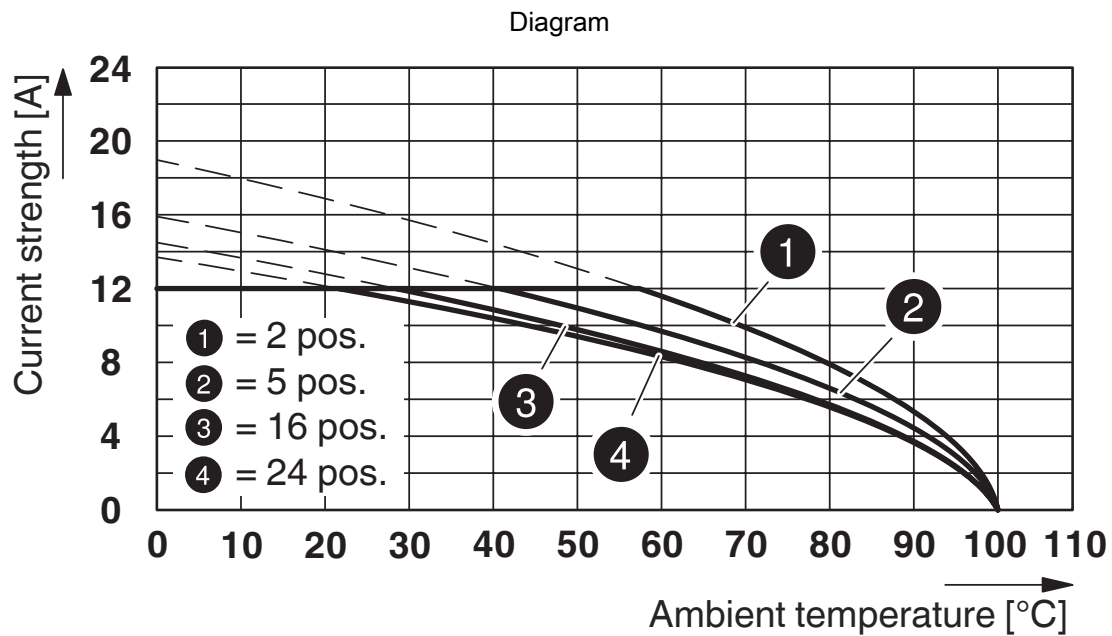
Type: FKCS 2,5/...-ST with MSTBV 2,5/...-G

# MSTBV 2,5/12-G - PCB header

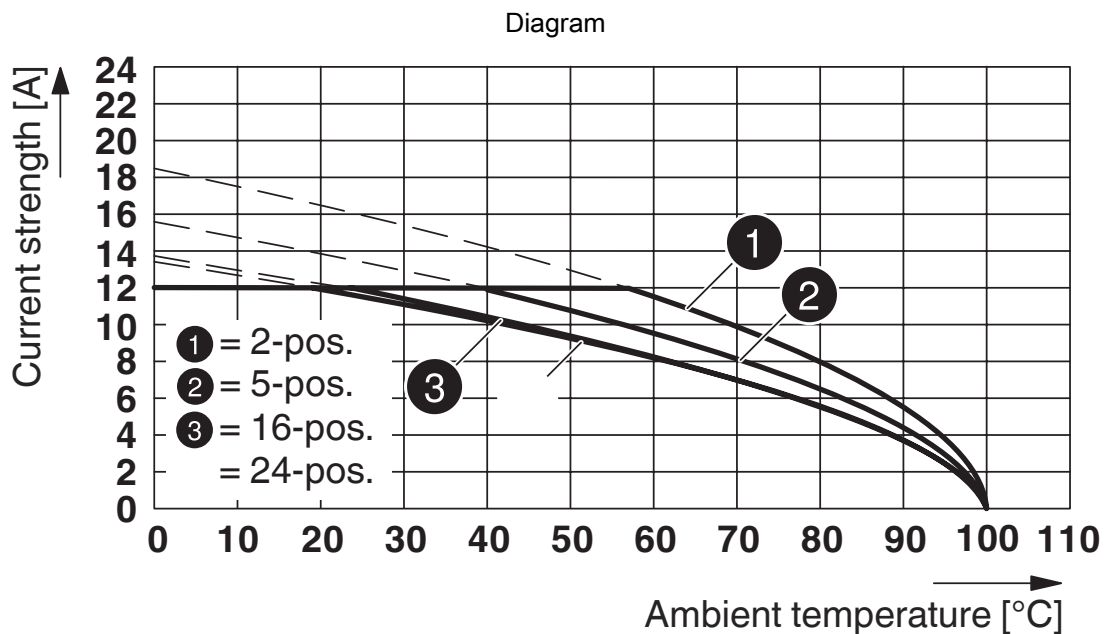


1753631

<https://www.phoenixcontact.com/ca/products/1753631>



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

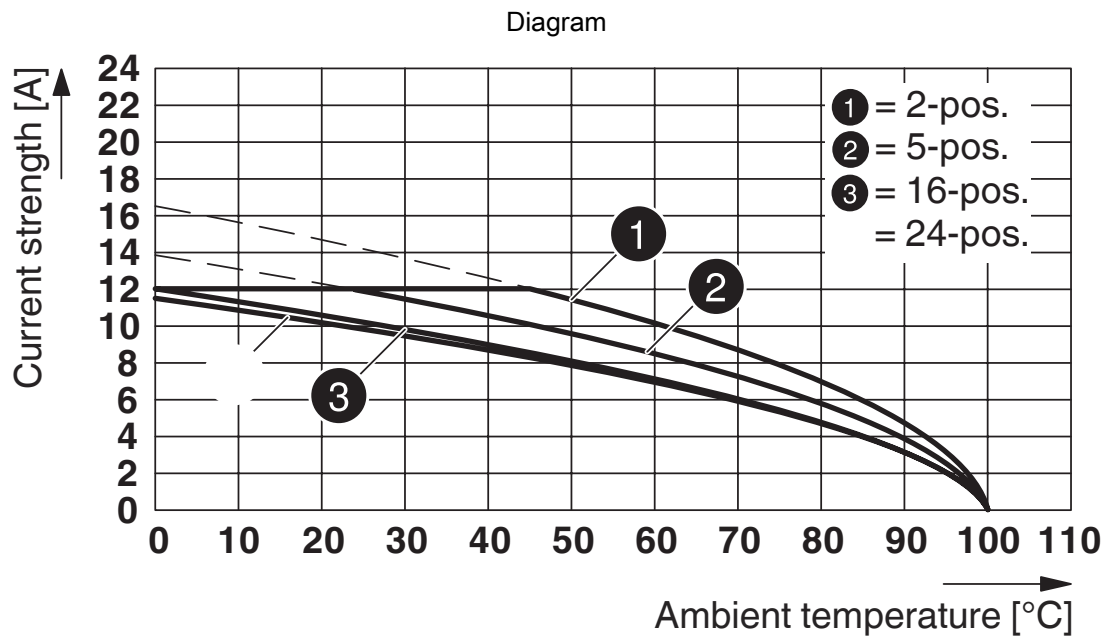


Type: FRONT-MSTB 2,5/...-ST with MSTBV 2,5/...-G

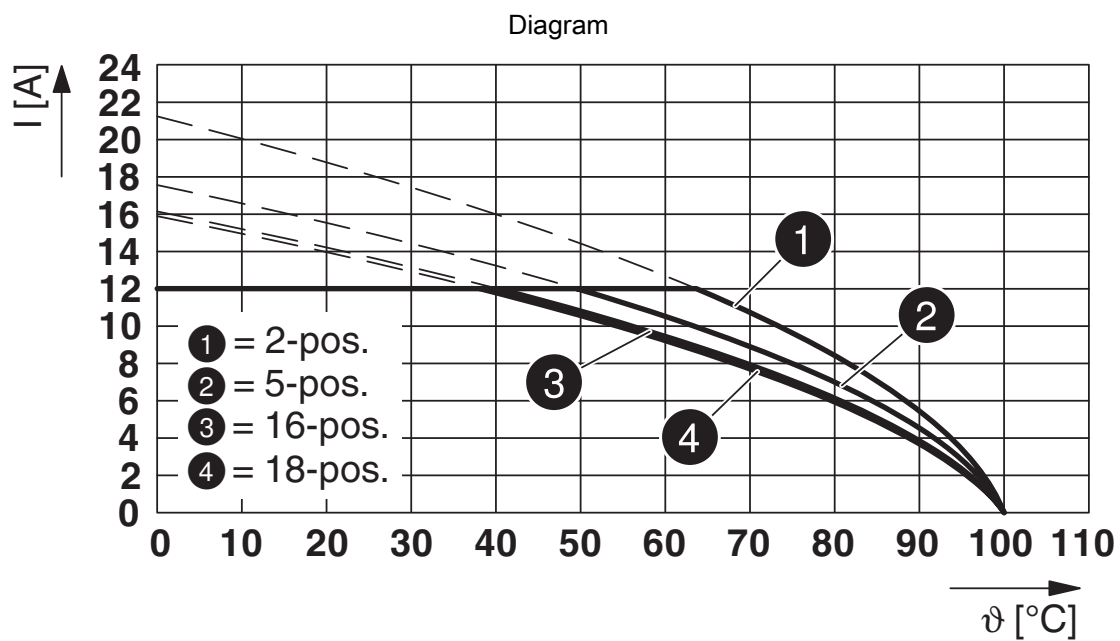


1753631

<https://www.phoenixcontact.com/ca/products/1753631>



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



Type: FKCV(W/R) 2,5/...-ST with MSTBV 2,5/...-G

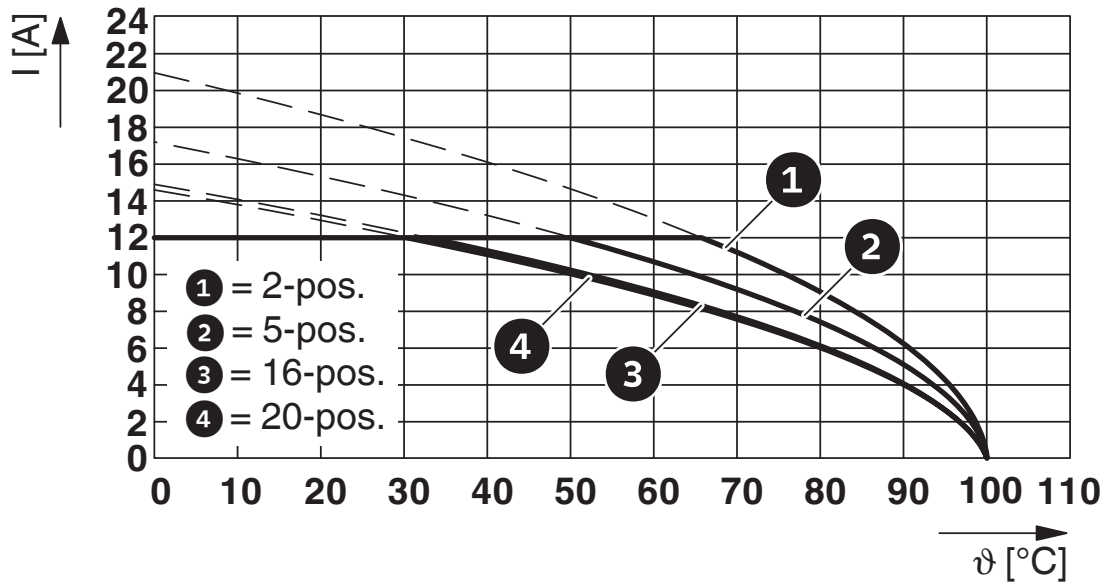
# MSTBV 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

Diagram



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

# MSTBV 2,5/12-G - PCB header





1753631


<https://www.phoenixcontact.com/ca/products/1753631>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ca/products/1753631>

 <b>CSA</b> Approval ID: 13631-2585951				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	300 V	12 A	-	-
Use group D	300 V	10 A	-	-

 <b>cULus Recognized</b> Approval ID: E60425-19931011				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	300 V	12 A	-	-
Use group D	300 V	10 A	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40050648				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	250 V	12 A	-	-

# MSTBV 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

## 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 2,5/12-G - PCB header



1753631

<https://www.phoenixcontact.com/ca/products/1753631>

## 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%
-------------------------------------	----------------------------

Phoenix Contact 2024 © - all rights reserved  
<https://www.phoenixcontact.com>

PHOENIX CONTACT Ltd  
8240 Parkhill Drive  
Milton, Ontario L9T 5V7  
1-800-890-2820  
[cdinfo@phoenixcontact.ca](mailto:cdinfo@phoenixcontact.ca)