

CC 2,5/ 4-G-5,08 P20THRR32 - PCB header



1507776

<https://www.phoenixcontact.com/us/products/1507776>

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PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Pin, number of rows: 1, number of positions: 4, product range: CC 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 2 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: 32 mm wide tape



The figure shows a 10-position version of the product

Your advantages

- Designed for integration into the SMT soldering process
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

Commercial data

Item number	1507776
Packing unit	330 pc
Minimum order quantity	990 pc
Note	Made to order (non-returnable)
Product key	AACTBC
GTIN	4063151968861
Weight per piece (including packing)	2.845 g
Weight per piece (excluding packing)	1.348 g
Country of origin	DE

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Technical data

Product properties

Product type	PCB headers
Product family	CC 2,5/..-G
Product line	COMBICON Connectors M
Number of positions	4
Pitch	5.08 mm
Number of rows	1
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
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)	400 V
Rated surge voltage (II/2)	4 kV

Mounting

Mounting type	THR soldering / wave soldering
Pin layout	Linear pinning

Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature T_c	260 °C
Solder cycles in the reflow	3

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 μm - 5 μm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 μm - 3 μm Ni)
Metal surface soldering area (top layer)	Tin (3 μm - 5 μm Sn)

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Metal surface soldering area (middle layer)	Nickel (1.3 µm - 3 µm Ni)
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Material data - housing

Color (Housing)	black (9005)
Insulating material	LCP
Insulating material group	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

Notes

Details for soldering processes	Processing using reflow processes in compliance with IEC 60068-2-58 or DIN EN 61760-1 (latest version) Moisture Sensitive Level (MSL) = 1 according to IPC/JEDEC J-STD-020-C
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]	19.92 mm
Height [h]	10.6 mm
Length [l]	12 mm
Installed height	8.6 mm
Solder pin length [P]	2 mm
Pin dimensions	1 x 1 mm

PCB design

Hole diameter	1.6 mm
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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
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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	
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

Electrical tests

Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
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	IIIa
Comparative tracking index (IEC 60112)	CTI 175
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

Durability test

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Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	1.3 m Ω
Contact resistance R_2	1.4 m Ω
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

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

Ambient conditions

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

Packaging specifications

Dimensional drawing	
Type of packaging	32 mm wide tape
[W] tape width	32 mm
[W2] coil overall dimension	≤ 38.4 mm
[A] coil diameter	≤ 330 mm
Outer packaging type	Transparent-Bag

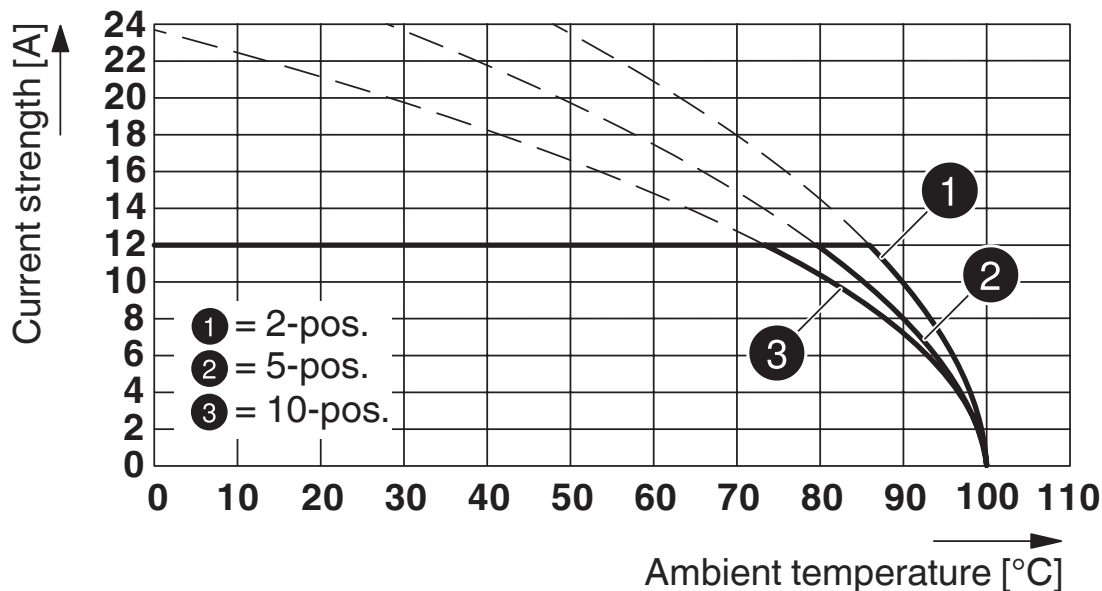
Drawings

Diagram

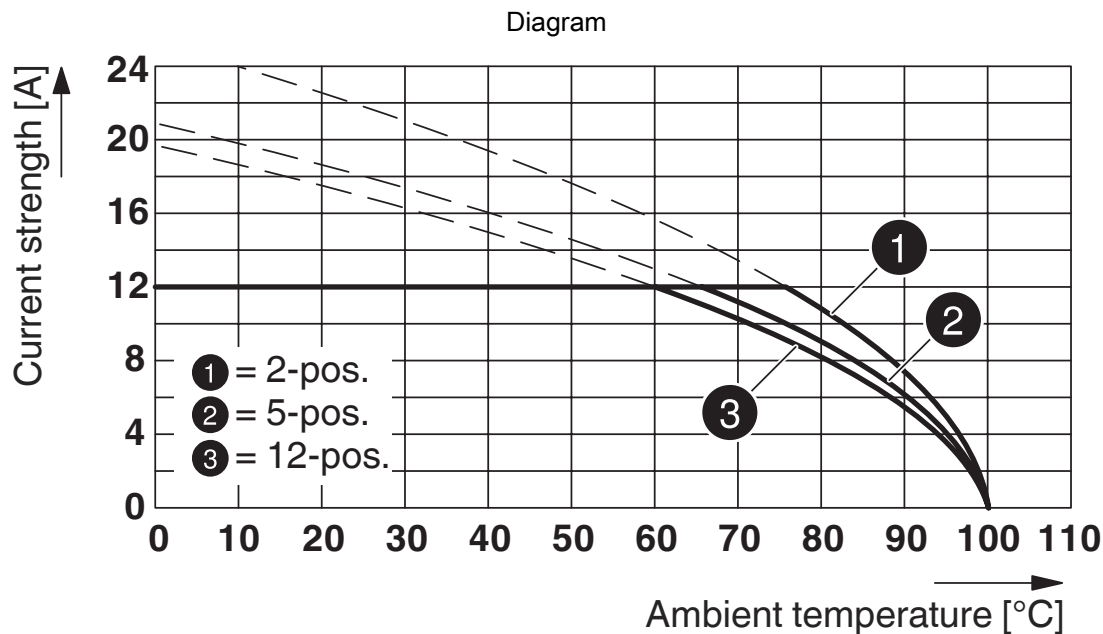


Type: MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

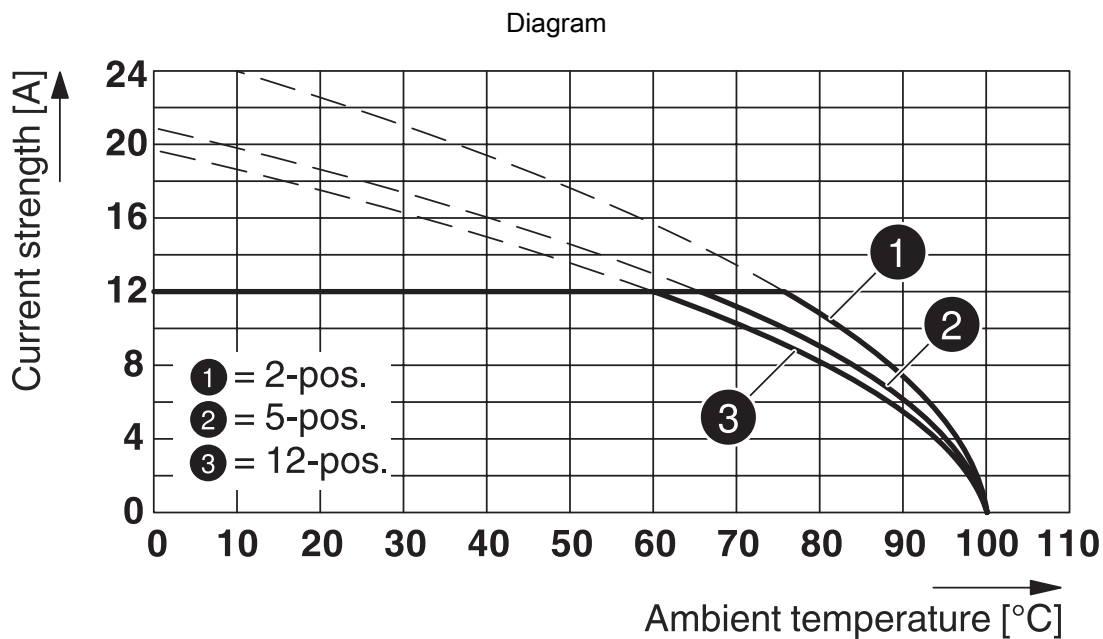
Diagram



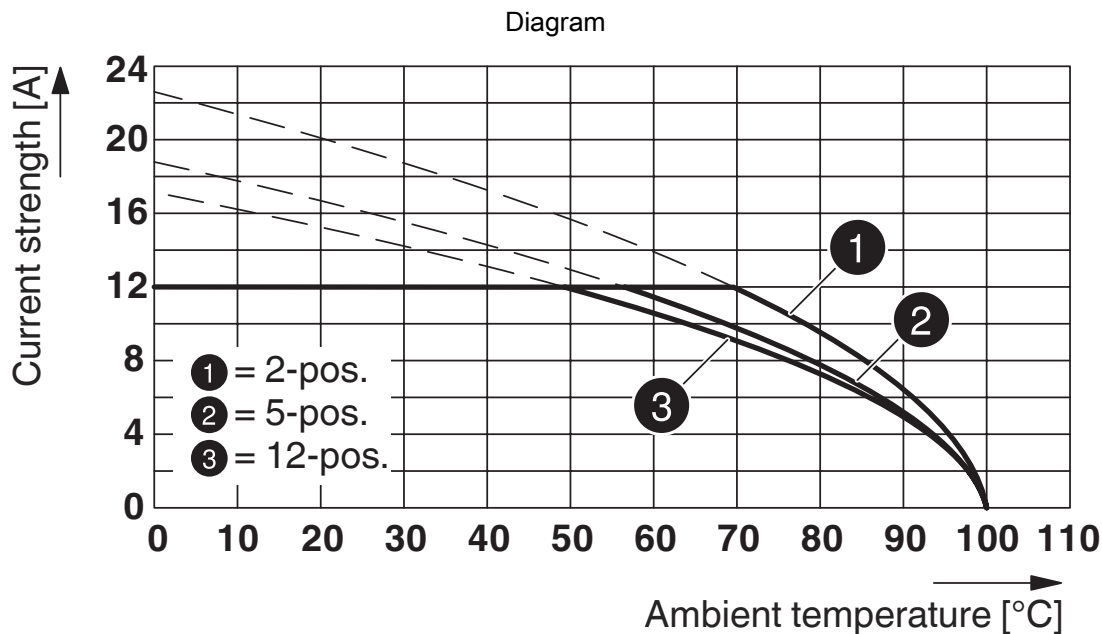
Type: TVMSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



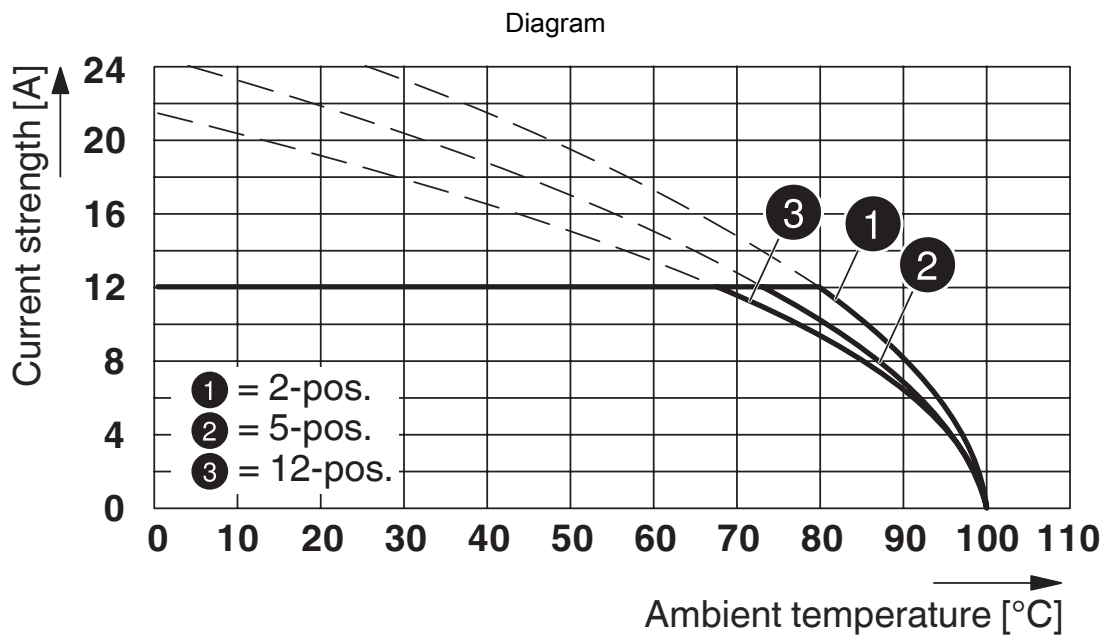
Type: FRONT-MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



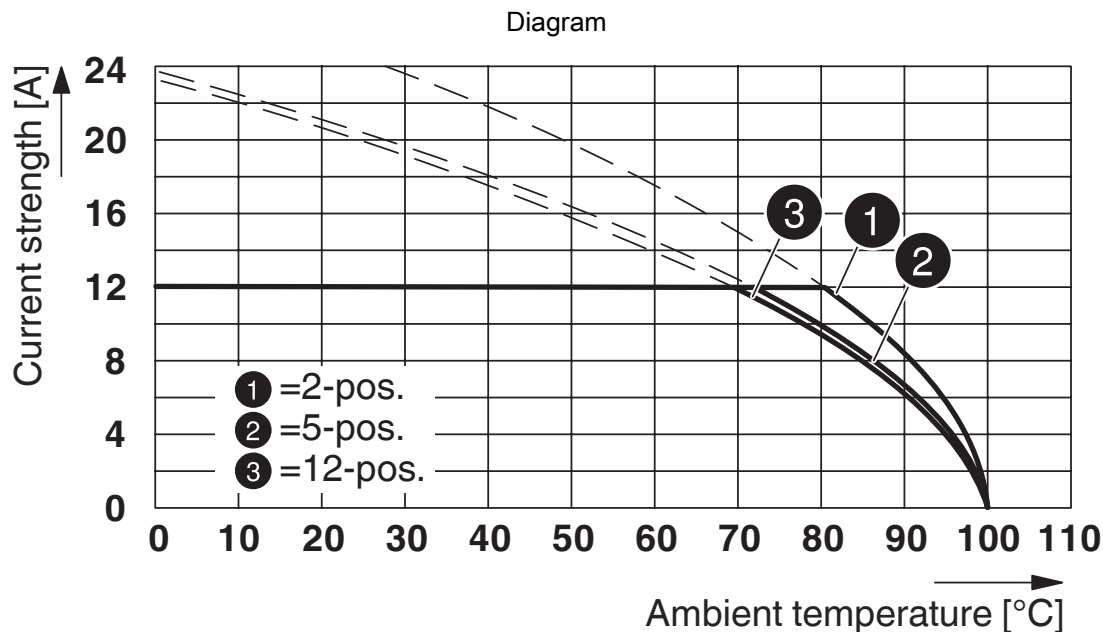
Type: FKC 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



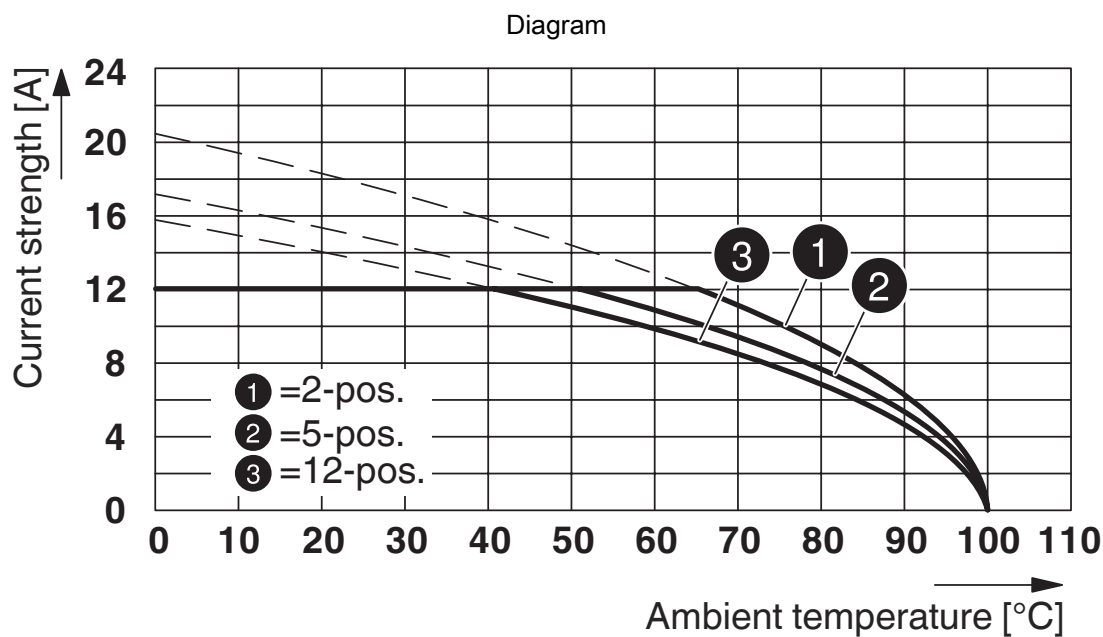
Type: SMSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



Type: MSTBP 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26 THR



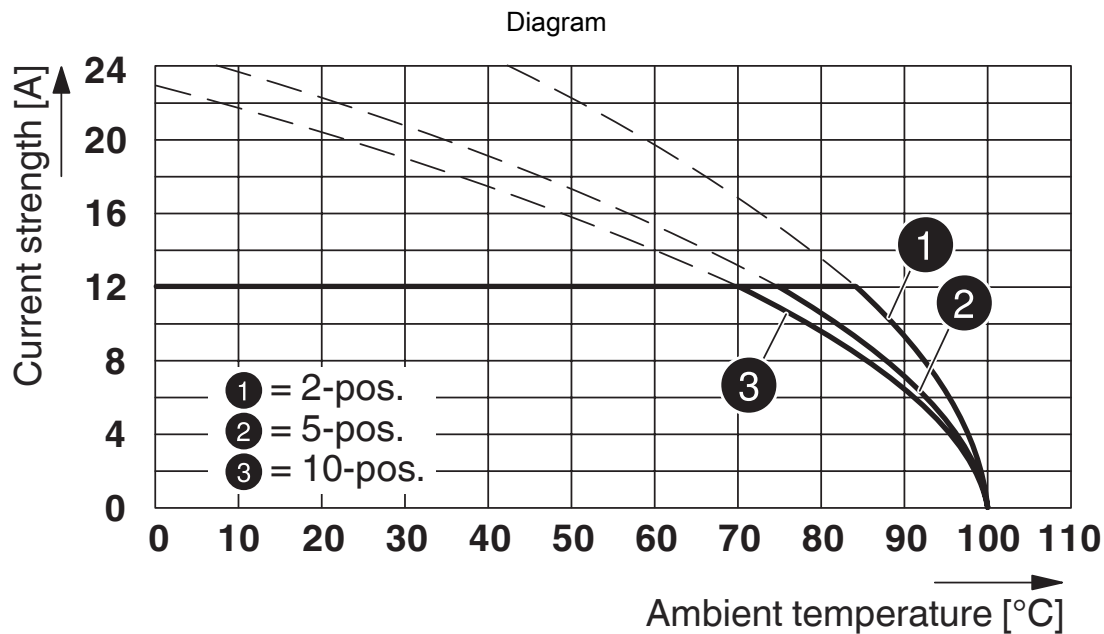
Type: MSTBT 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR



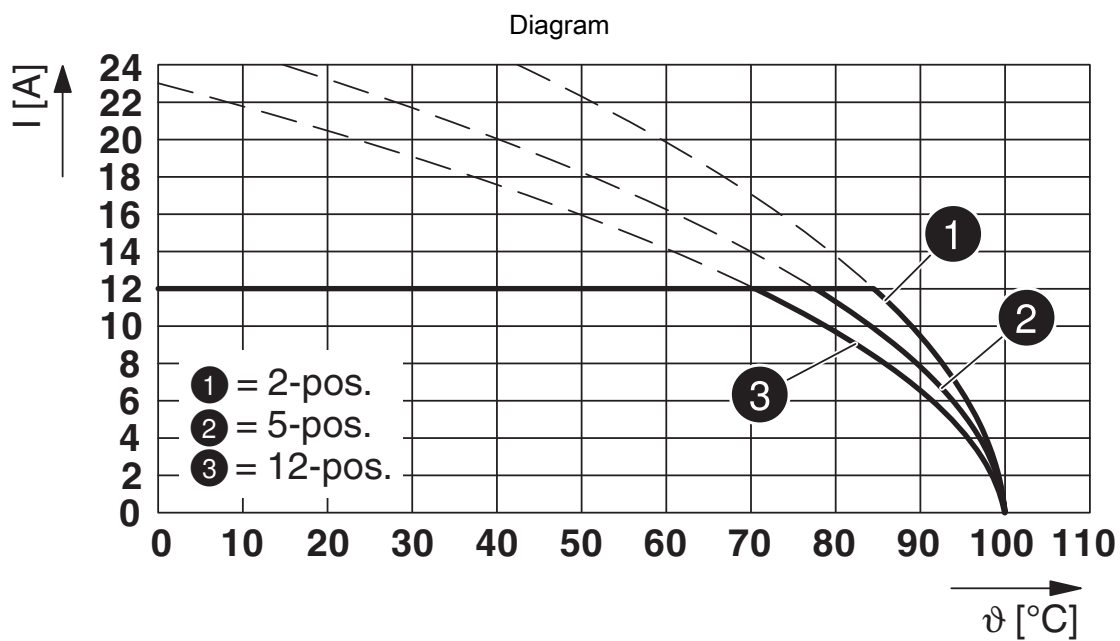
Type: MVSTBR 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

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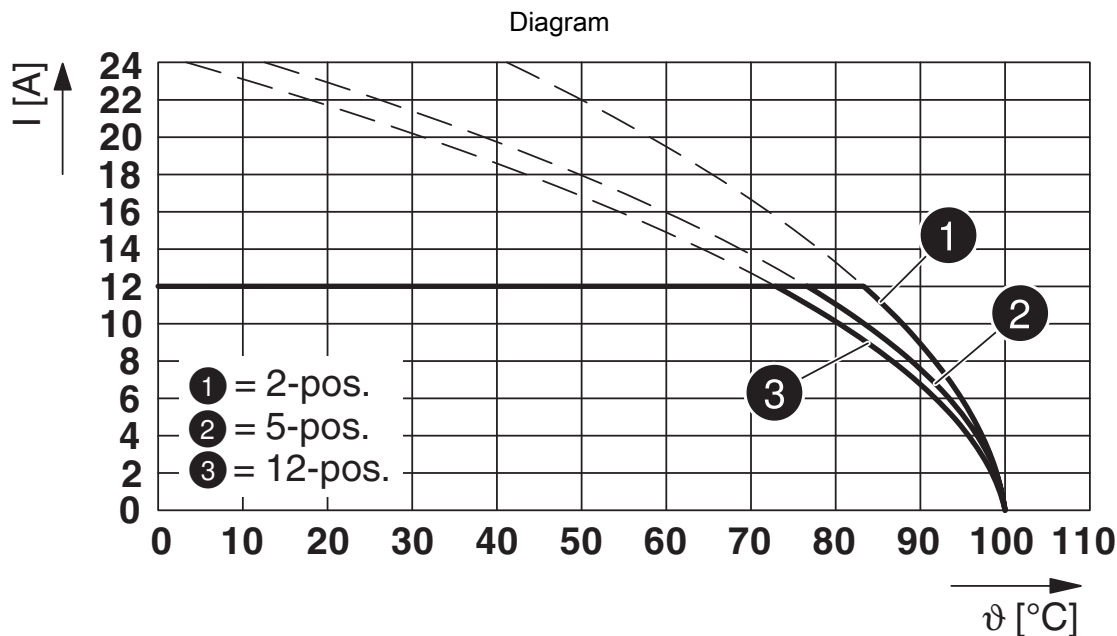
Type: TMSTBP 2,5/...-STF-5,08 with CC 2,5/...-G-5,08 P26THR



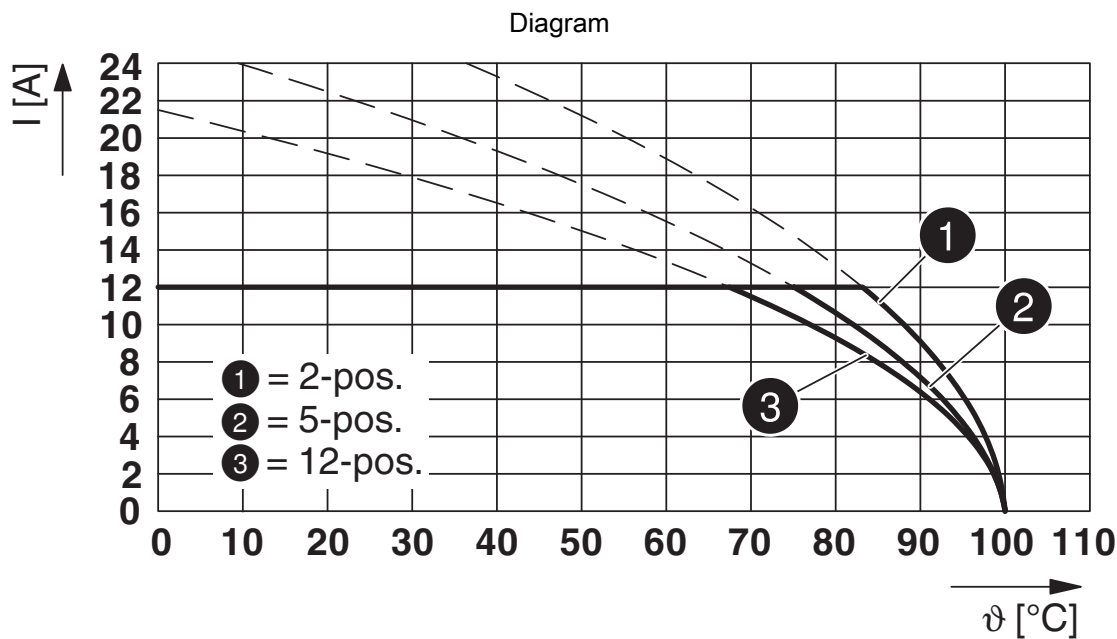
Type: FKCN 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P...THR

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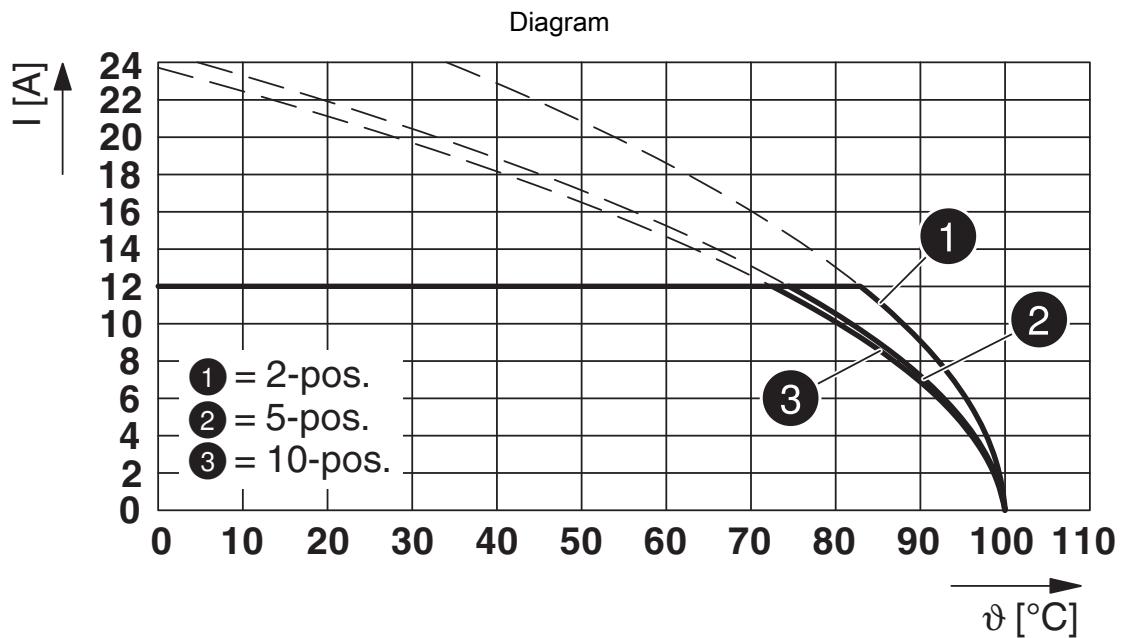
Type: FKCT 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P...THR



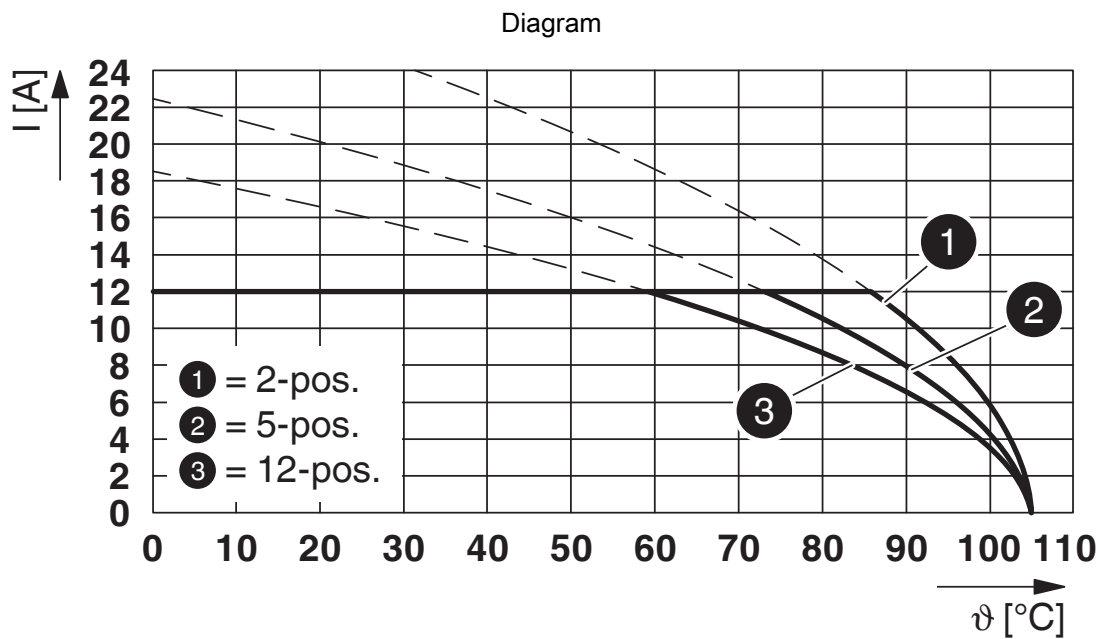
Type: FKCV(W/R) 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P...THR

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Type: TFKC 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P...THR



Type: ICV 2,5/...-G-5,08 with CC 2,5/...-G-5,08 P...THR

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1507776>

 VDE approval of drawings Approval ID: 40050079				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	320 V	16 A	-	-

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Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

ETIM 10.0	EC002637
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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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%
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