

CCV 2,5/ 4-GF-5,08 P26THRR56 - PCB header



1955769

<https://www.phoenixcontact.com/us/products/1955769>

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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 potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: CCV 2,5/..-GF, pitch: 5.08 mm, mounting: THR soldering / wave 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 method: Threaded flange, type of packaging: 56 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

Your advantages

- Designed for integration into the SMT soldering process
- Vertical connection enables multi-row arrangement on the PCB
- Screwable flange for superior mechanical stability
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

Commercial data

Item number	1955769
Packing unit	140 pc
Minimum order quantity	140 pc
Sales key	AA03
Product key	AACTBH
GTIN	4017918926526
Weight per piece (including packing)	6.989 g
Weight per piece (excluding packing)	6.56 g
Customs tariff number	85366930
Country of origin	DE

Technical data

Product properties

Product type	PCB headers
Product family	CCV 2,5/..-GF
Product line	COMBICON Connectors M
Type	Component suitable for through hole reflow
Number of positions	4
Pitch	5.08 mm
Number of connections	4
Number of rows	1
Number of potentials	4
Mounting type	Threaded flange
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	0.9 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

Flange

Tightening torque	0.3 Nm
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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

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

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
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Dimensions

Dimensional drawing	
Pitch	5.08 mm
Width [w]	30.43 mm
Height [h]	14.6 mm
Length [l]	8.57 mm
Installed height	12 mm
Solder pin length [P]	2.6 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
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Result	Test passed
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	
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	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 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

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R_1	0.9 mΩ
Contact resistance R_2	1.2 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	105 °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

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	20g
Shock duration	11 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

Railway application: Oscillation/broadband noise

Specification	DIN EN 50155 (VDE 0115-200):2022-06 IEC 61373:2010-05
Spectrum	Long life test category 1, class B, body mounted
Frequency	$f_1 = 5 \text{ Hz}$ to $f_2 = 150 \text{ Hz}$
ASD level	0.964 (m/s ²)/Hz
Acceleration	0.572 g
Test duration per axis	5 h
Test directions	X-, Y- and Z-axis
Contact interruption	< 1 μs
Result	Test passed

Railway application: Shocks

Specification	DIN EN 50155 (VDE 0115-200):2022-06
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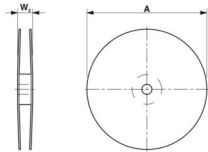
<https://www.phoenixcontact.com/us/products/1955769>

	IEC 61373:2010-05
Pulse shape	Semi-sinusoidal
Acceleration	20g
Shock duration	11 ms
Number of shocks per direction	3
Test directions	X-, Y- and Z-axis (pos. and neg.)
Contact interruption	< 1 μ s
Result	Test passed

Ambient conditions

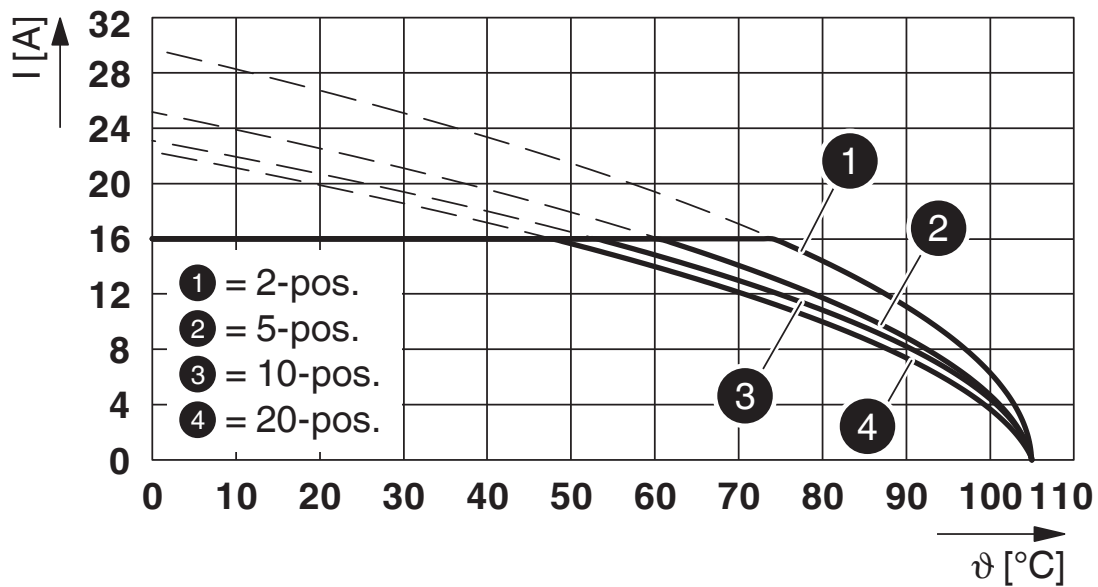
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

Packaging specifications

Dimensional drawing	
Type of packaging	56 mm wide tape
[W] tape width	56 mm
[W2] coil overall dimension	\leq 62.4 mm
[A] coil diameter	\leq 330 mm
Outer packaging type	Transparent-Bag

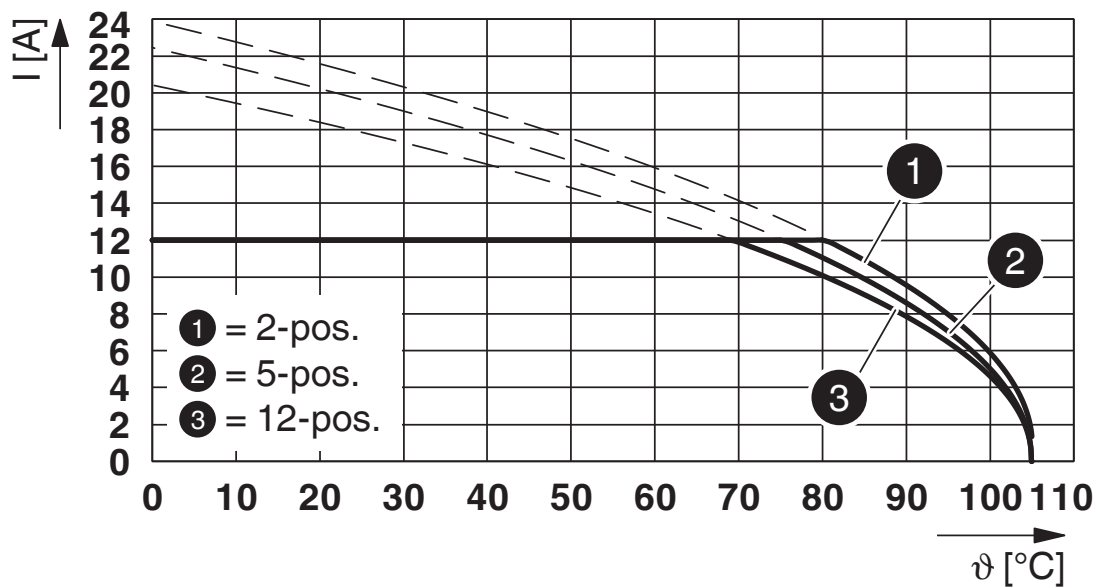
Drawings

Diagram



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

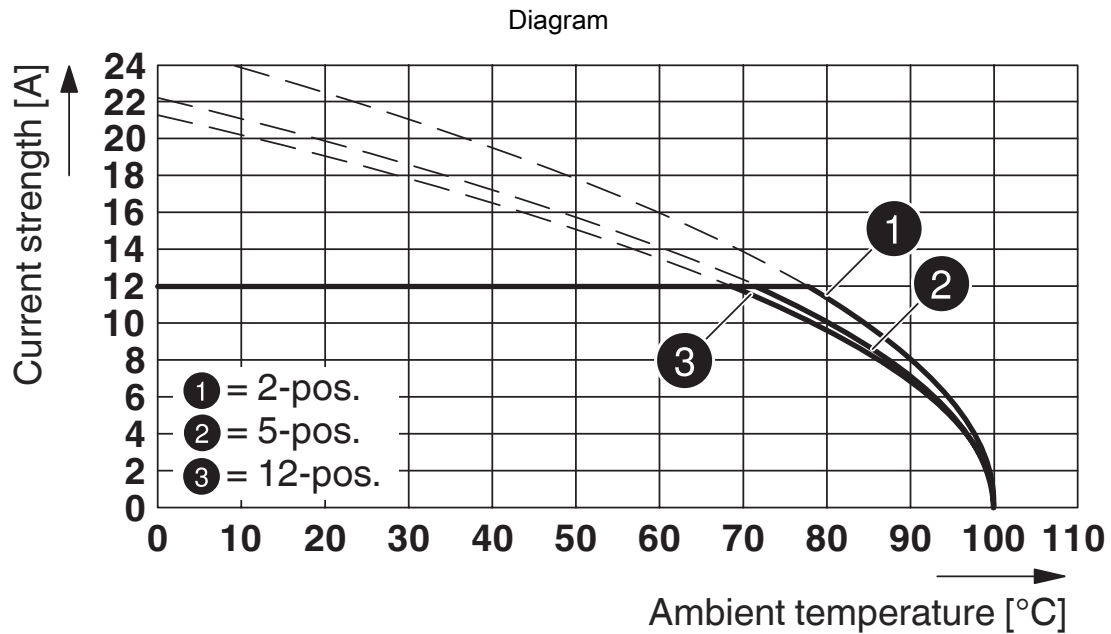
Diagram



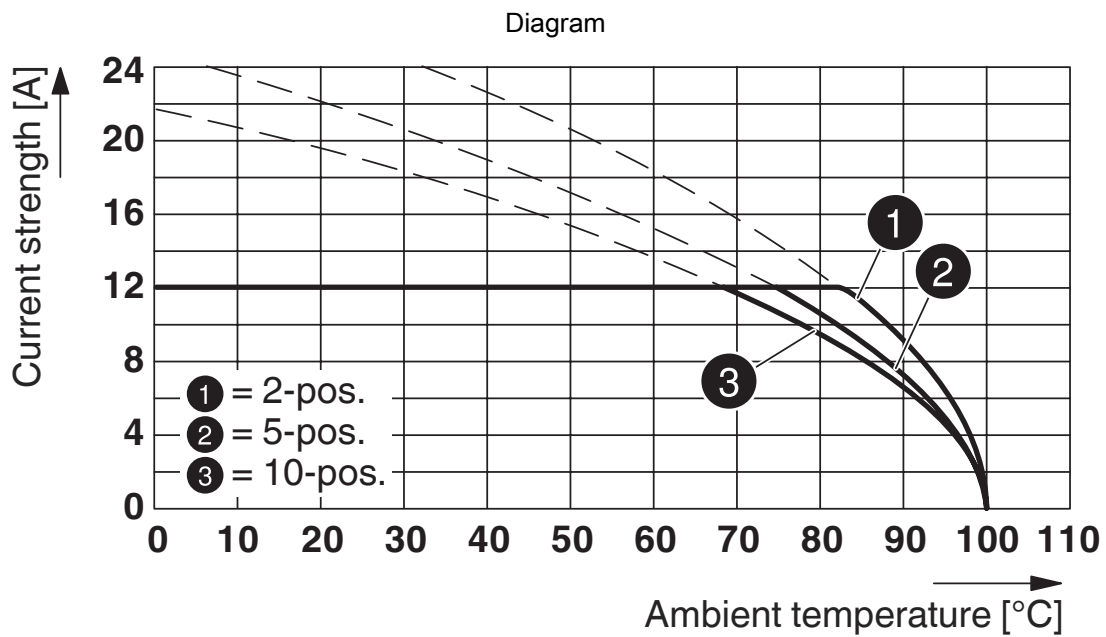
Type: FKCS 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR

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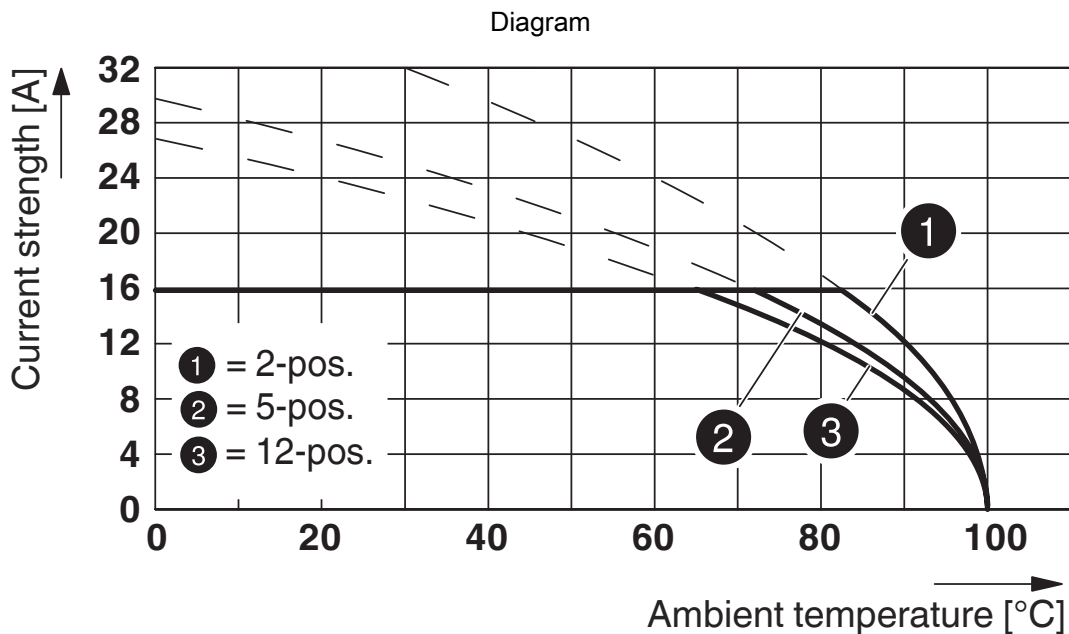
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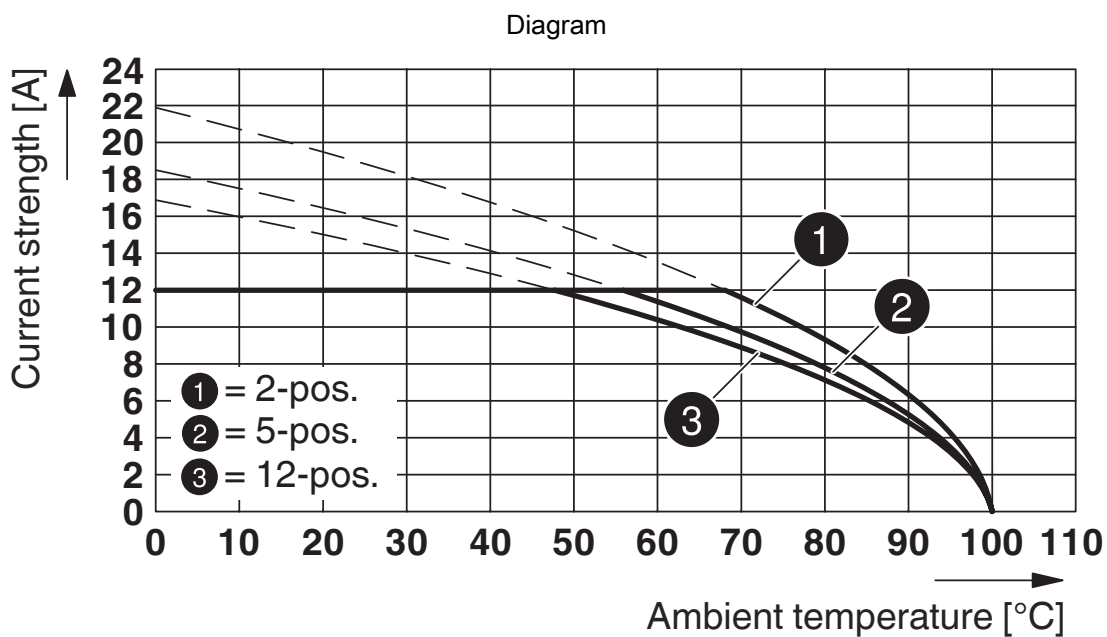
Type: MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR



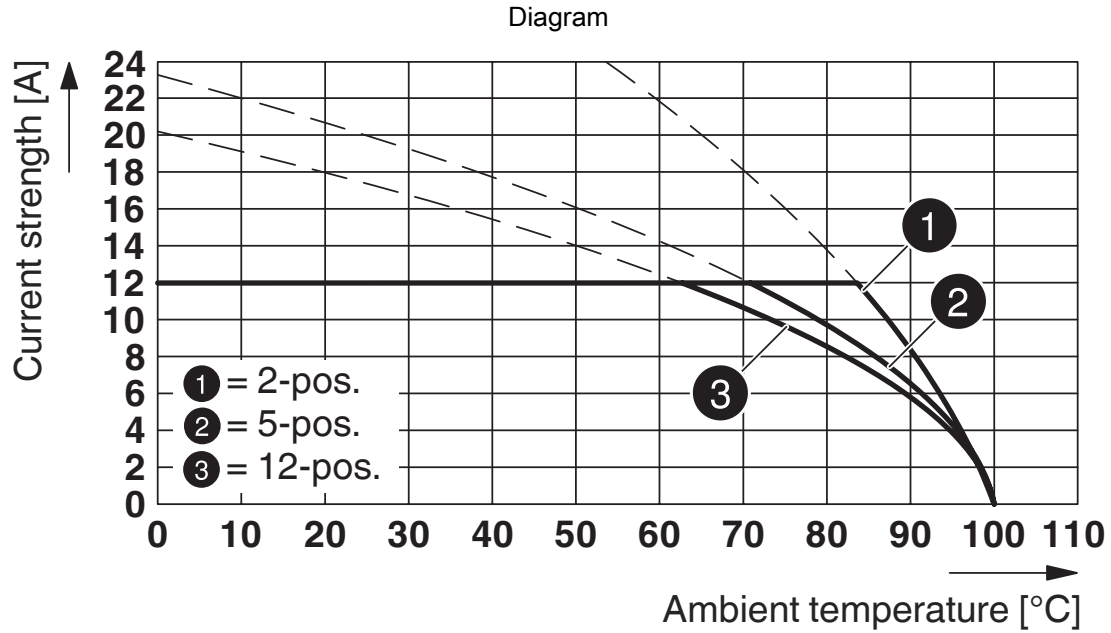
Type: TFKC 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR



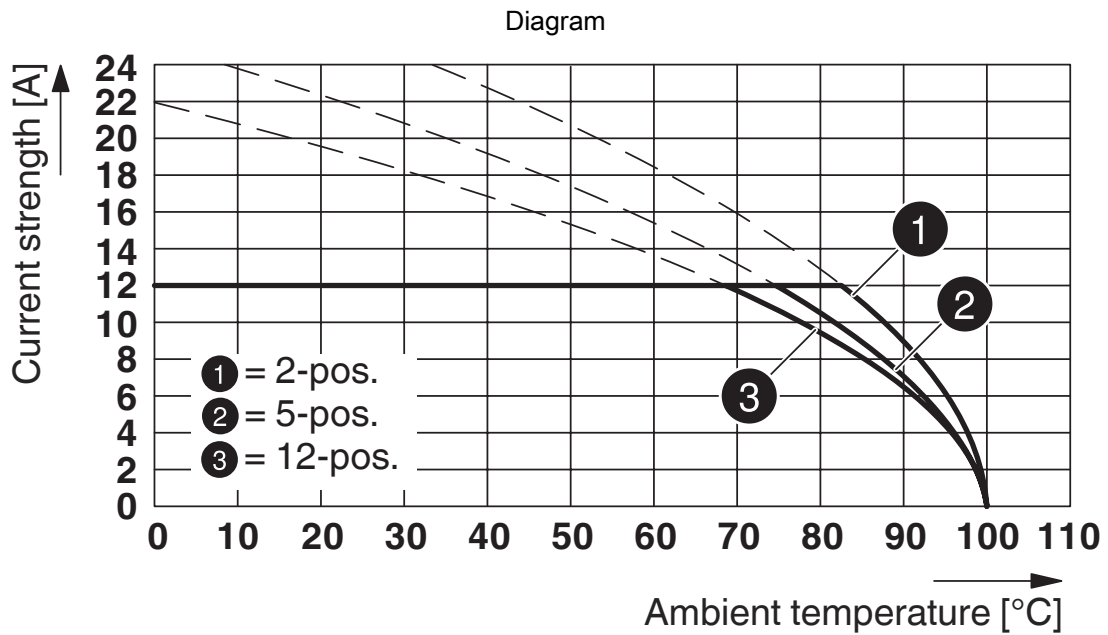
Derating curve for: MSTB 2,5 HC/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR



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



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



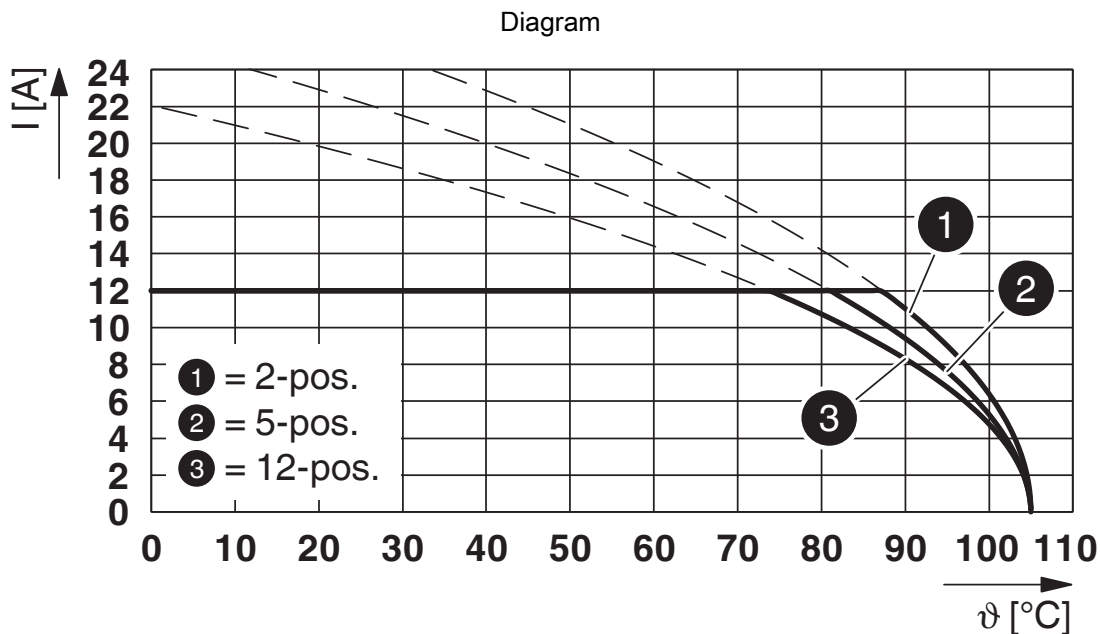
Type: MSTBT 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR

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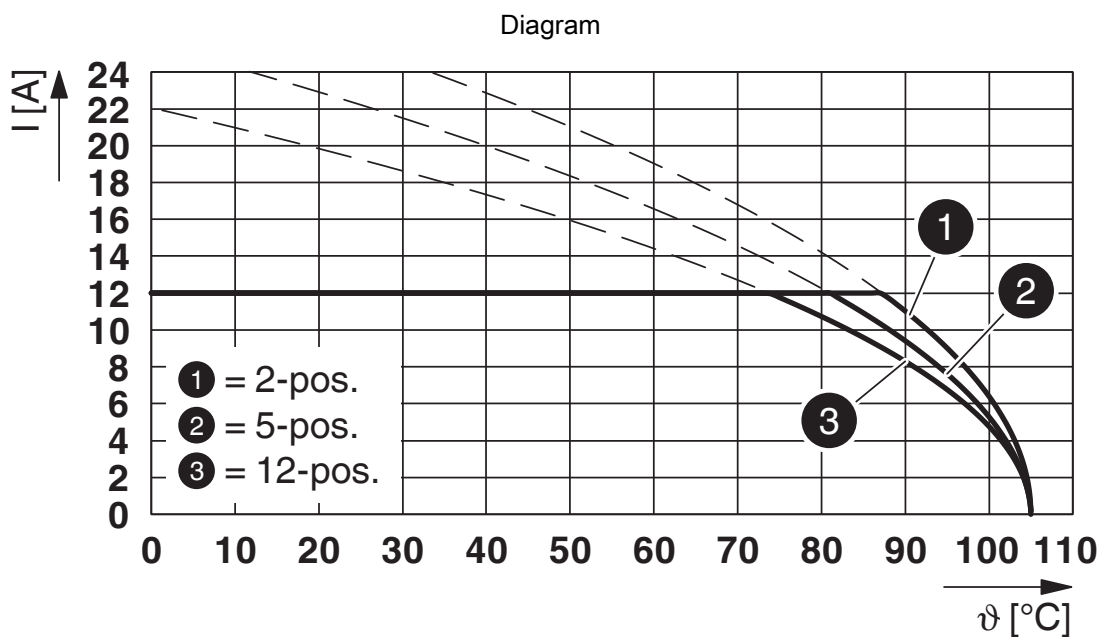


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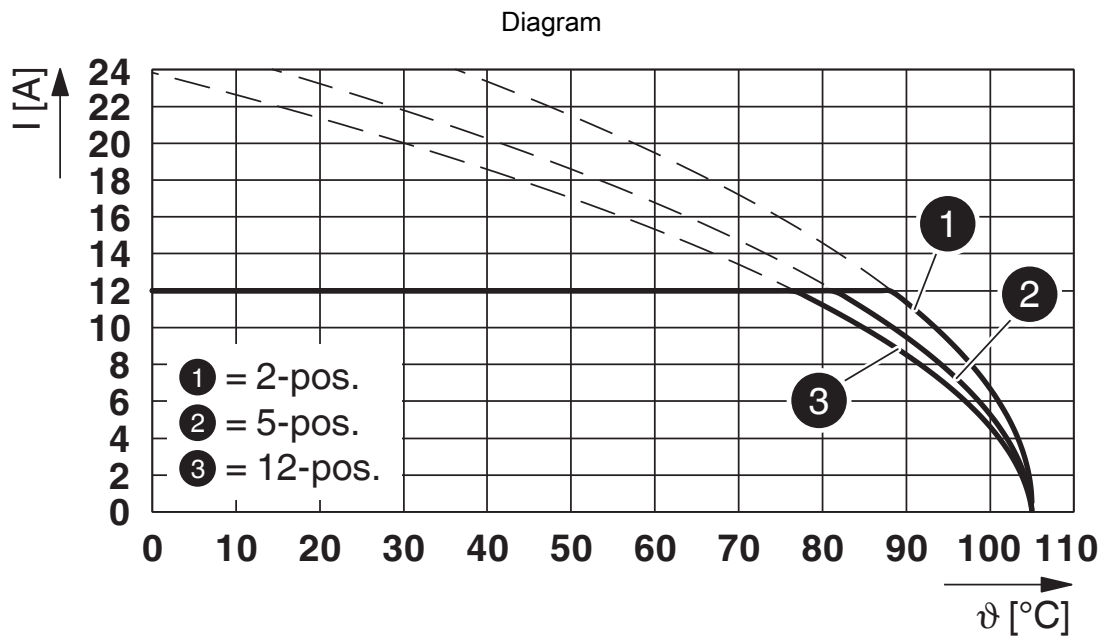
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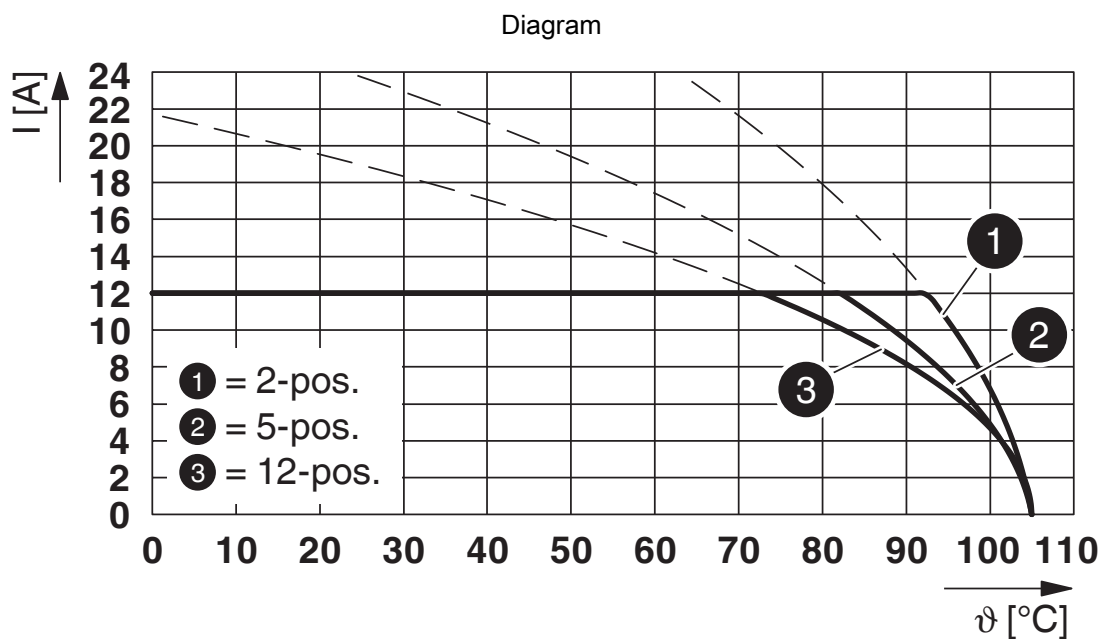
Type: FKCVW 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR

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



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

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1955769>

 cULus Recognized Approval ID: E60425-19931011				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
B				
Standard	300 V	16 A	-	-
D				
Standard	300 V	10 A	-	-
Alternative 1	150 V	15 A	-	-

 VDE report with production monitoring Approval ID: 40041286				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	400 V	12 A	-	-

 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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UNSPSC

UNSPSC 21.0	39121400
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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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EF3.1 Climate Change

CO2e kg	0.052 kg CO2e
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com