

# CCV 2,5/13-GF-5,08-LR P26THR - PCB header



1827760

<https://www.phoenixcontact.com/de/produkte/1827760>

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PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: CCV 2,5/..-GF-LR, 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: Snap-in locking, mounting: Lock & release threaded flange, type of packaging: packed in cardboard

## 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
- Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies

## Commercial data

Item number	1827760
Packing unit	52 pc
Minimum order quantity	52 pc
Note	Made to order (non-returnable)
Sales key	E1 - Leiterplattenanschl.
Product key	AACTBK
GTIN	4046356953276
Weight per piece (including packing)	7,98 g
Weight per piece (excluding packing)	5,489 g
Customs tariff number	85366930
Country of origin	DE

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## Technical data

### Product properties

Type	Component suitable for through hole reflow
Product line	COMBICON Connectors M
Product type	PCB headers
Product family	CCV 2,5/..-GF-LR
Number of positions	13
Pitch	5.08 mm
Number of connections	13
Number of rows	1
Mounting flange	Lock & release threaded flange
Number of potentials	13
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	1.2 m $\Omega$
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
Pin layout	Linear pinning

### Flange

Tightening torque	0.3 Nm
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### 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)

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Metal surface soldering area (middle layer)	Nickel (1.3 - 3 $\mu$ m Ni)
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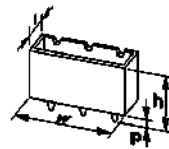
## Material data - housing

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]	76.15 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

## 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

### Polarization and coding

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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.	11 N
Withdraw strength per pos. approx.	9 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

## Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min

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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 $R_1$	1.2 m $\Omega$
Contact resistance $R_2$	1.4 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	105 °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

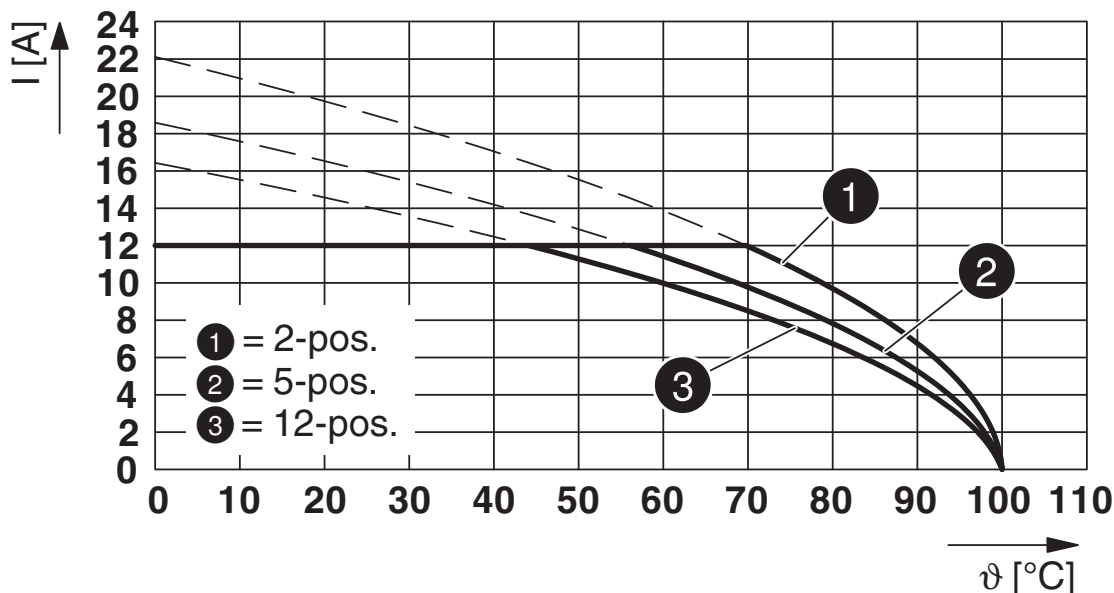
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
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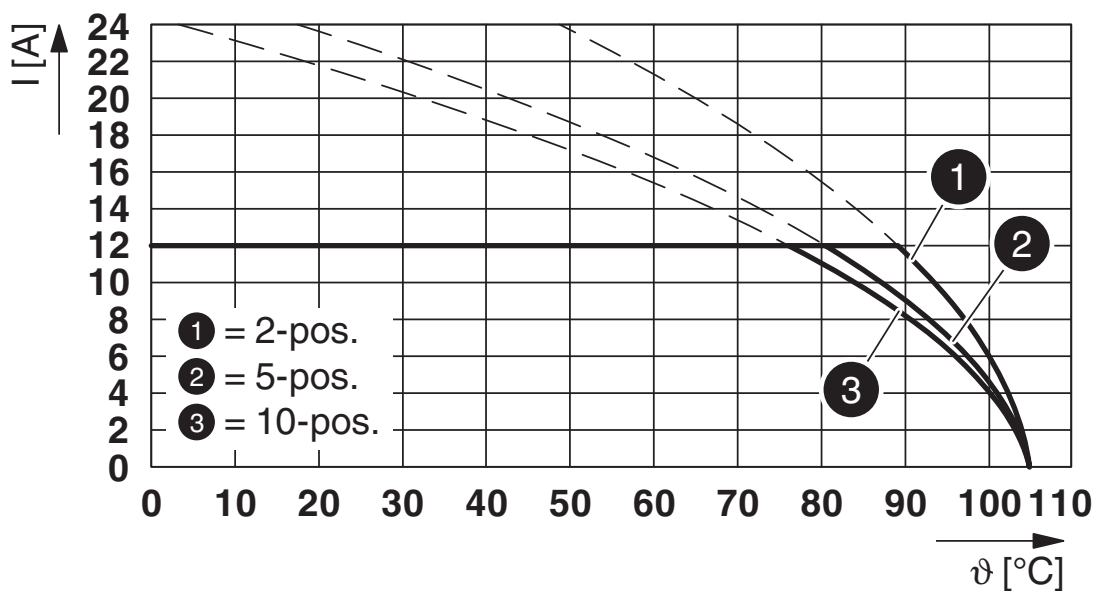
Drawings

Diagram



Type: MVSTB(R/W) 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR

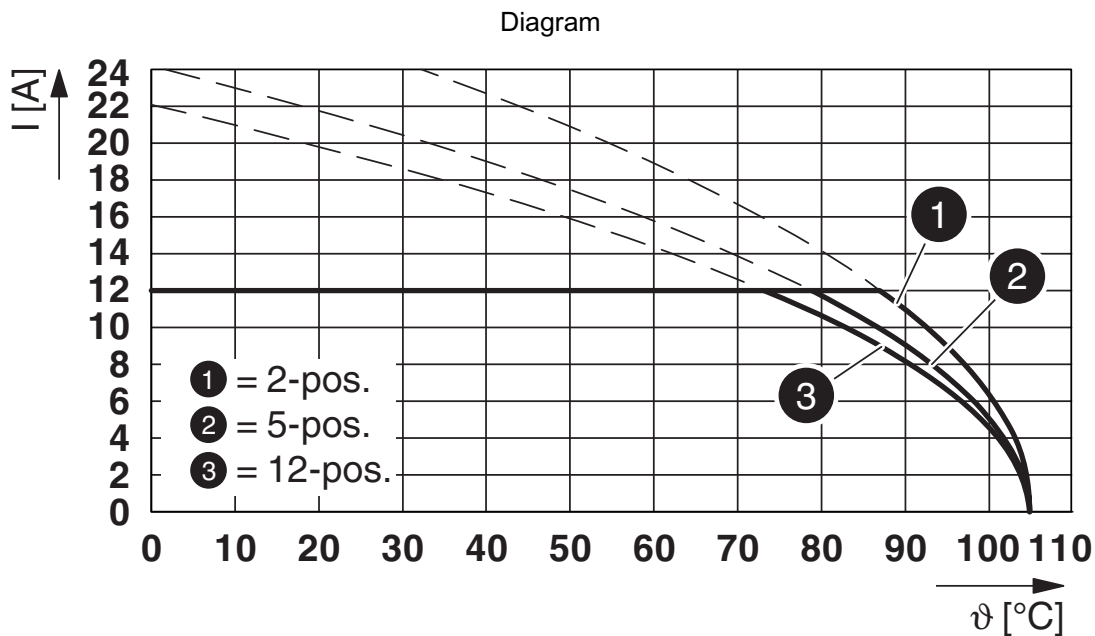
Diagram



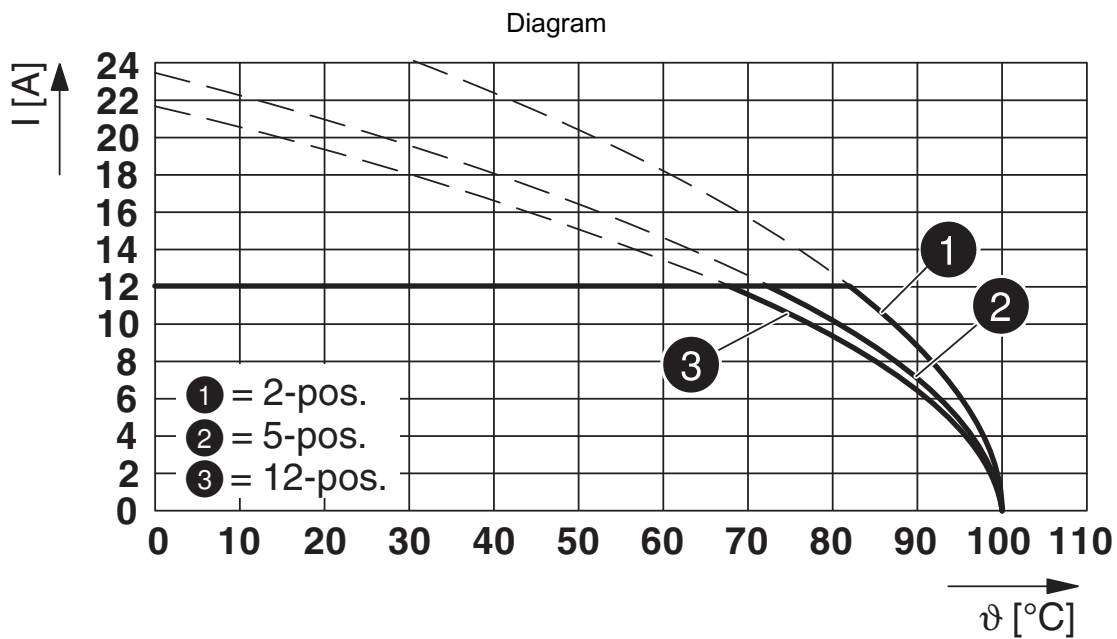
Type: TFKC 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR

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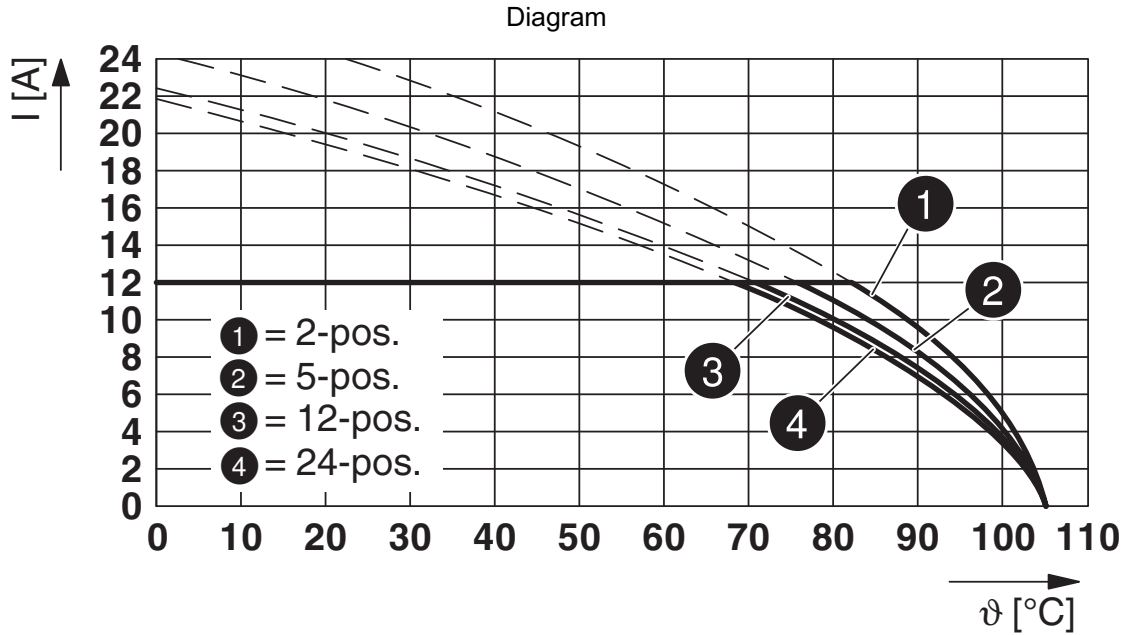
<https://www.phoenixcontact.com/de/produkte/1827760>



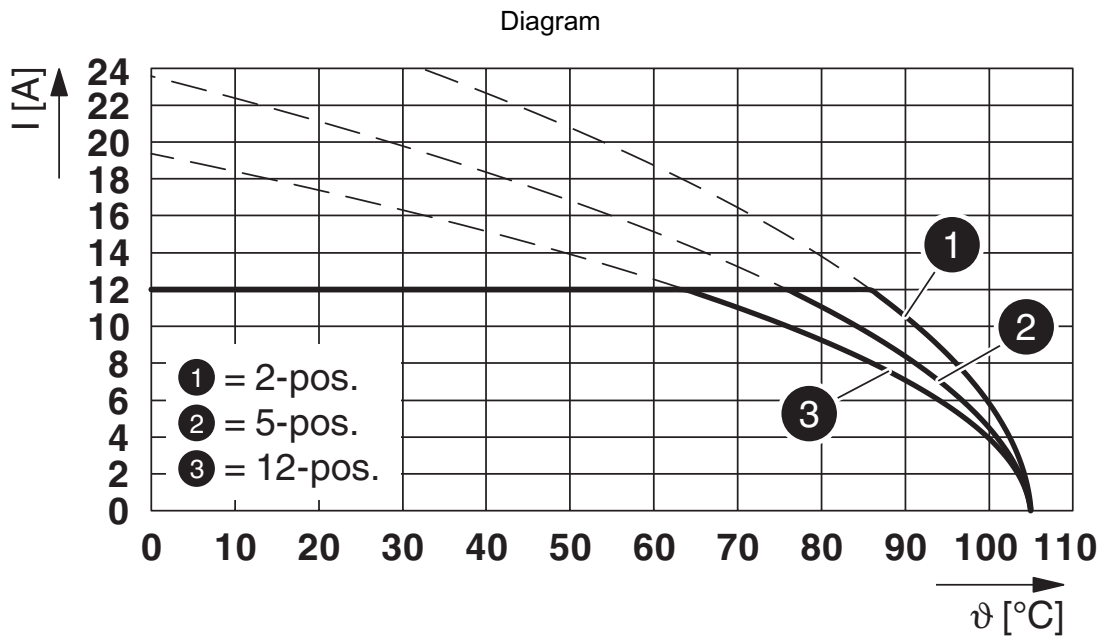
Type: FKCT 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P26THR



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



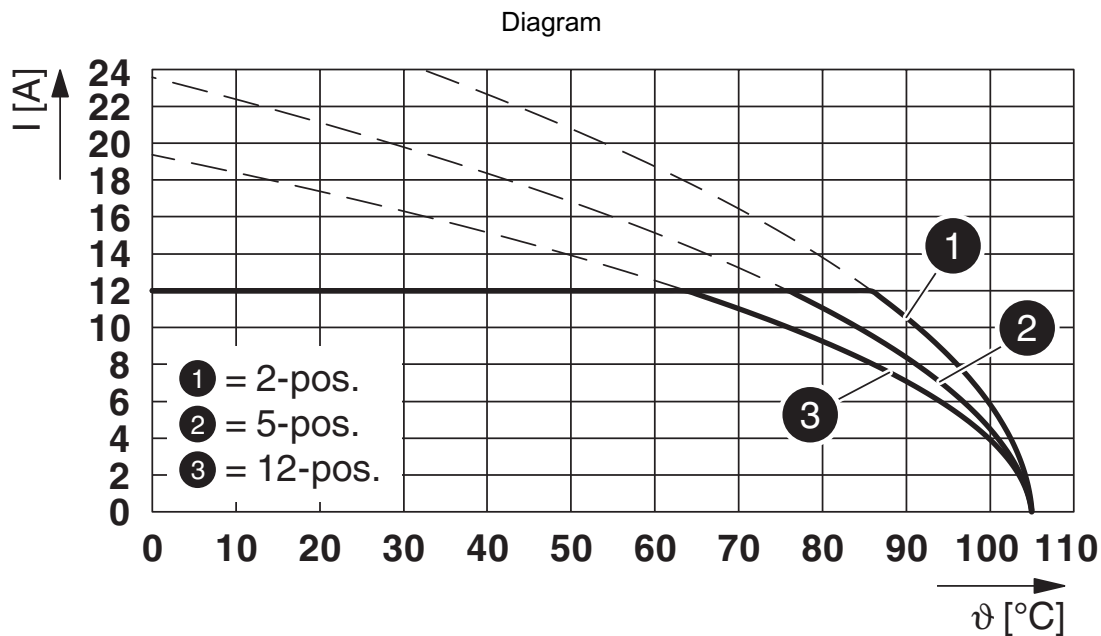
Type: FRONT-MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR



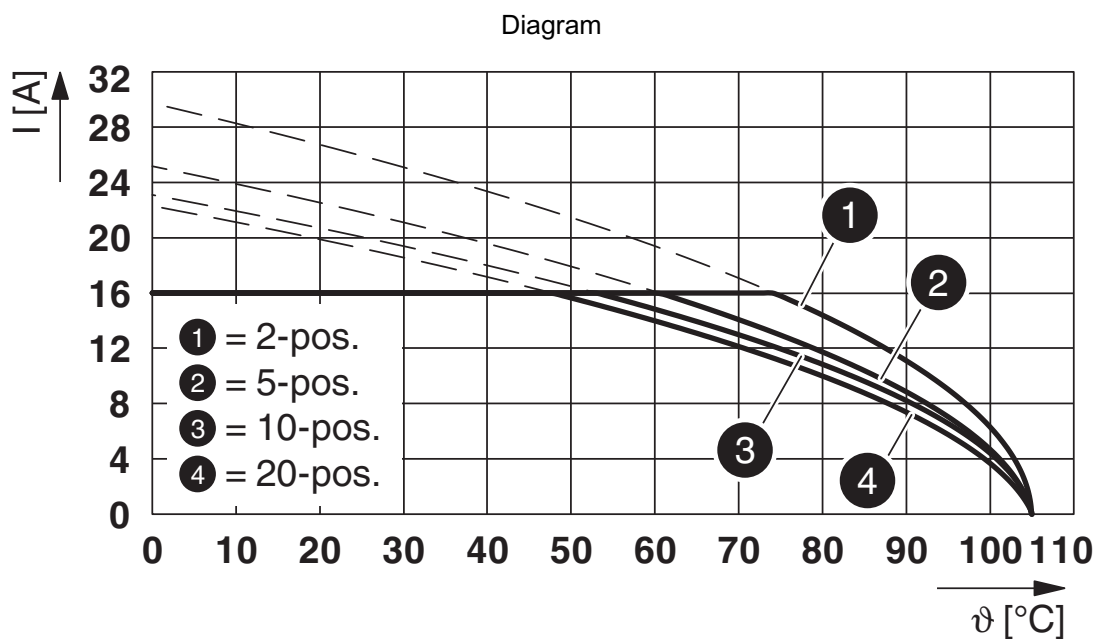
Type: FKCVW 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR

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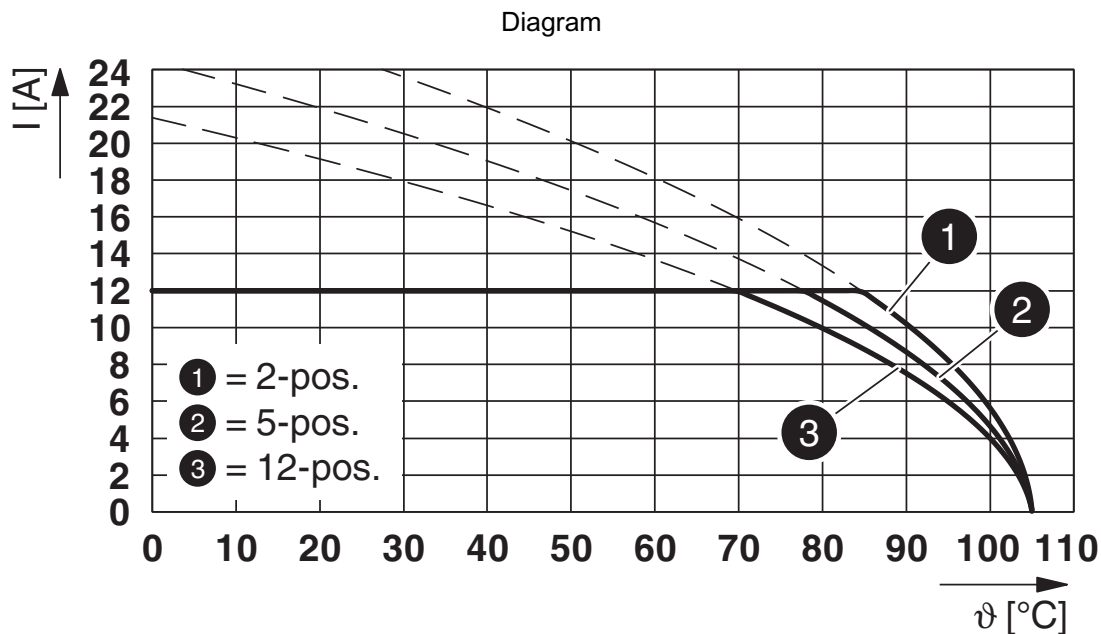
Type: FKCVR 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P...THR



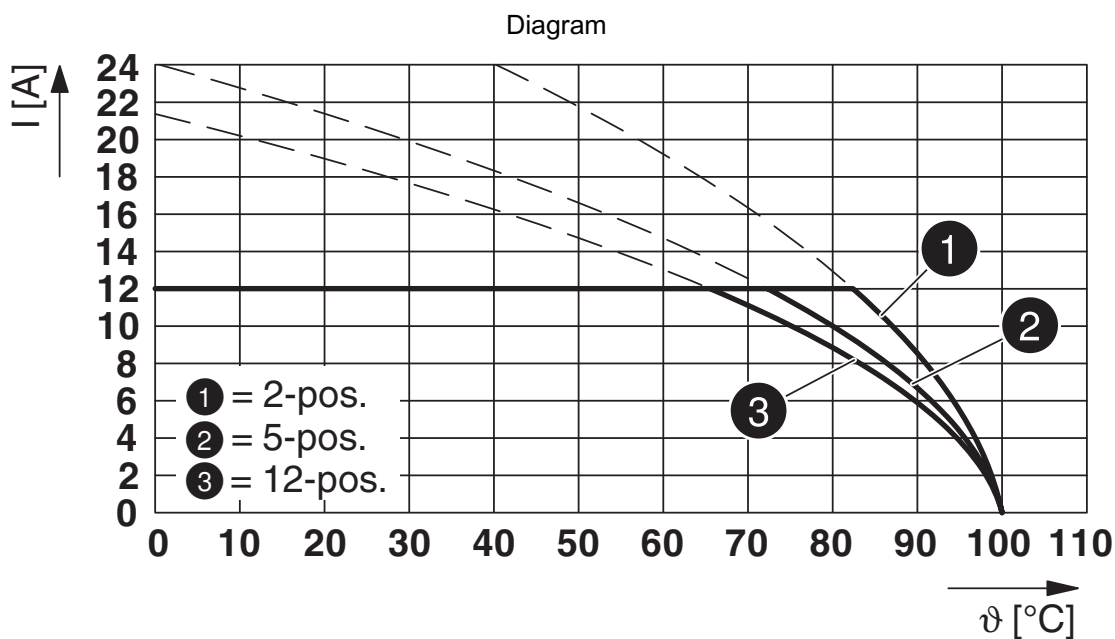
Type: LPC 2,5/...-ST-5,08-LR with CCV 2,5/...-GF-5,08-LR P...THR

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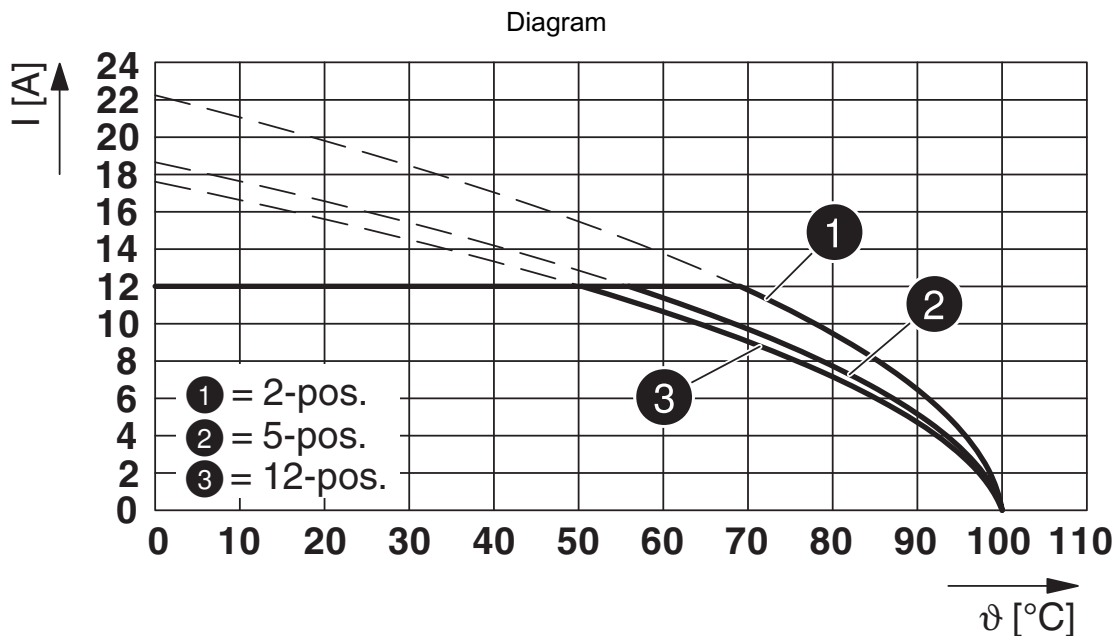
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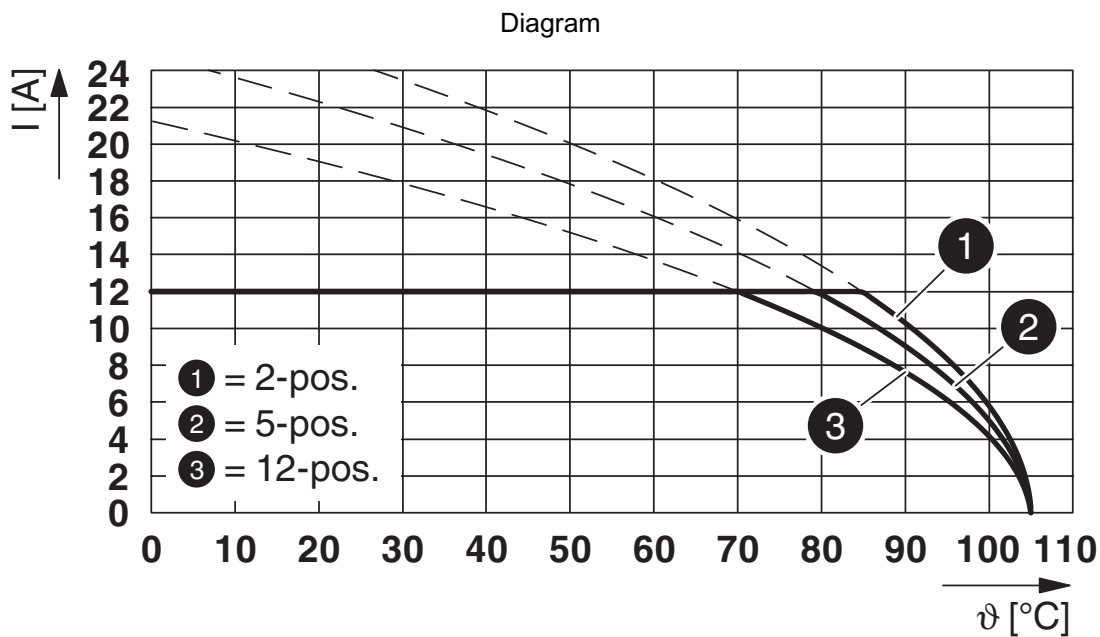
Type: FKCN 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08-LR P... THR



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



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



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

# CCV 2,5/13-GF-5,08-LR P26THR - PCB header



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/de/produkte/1827760>



**EAC**

Approval ID: B.01687



**cULus Recognized**

Approval ID: E60425-19931011

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B				
Standard	300 V	16 A	-	-
Use group D				
Standard	300 V	10 A	-	-
Alternative 1	150 V	15 A	-	-



**VDE Gutachten mit Fertigungsüberwachung**

Approval ID: 40041286

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	400 V	12 A	-	-

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

### CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/de/produkte/1734401>

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



### CR-MSTB NAT HT - Coding section

1954362

<https://www.phoenixcontact.com/de/produkte/1954362>

HT coding section, prior to the reflow soldering process it is inserted into the recess on the header, made from high-temperature-resistant beige insulation material



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