

# CCA 2,5/10-G-5,08 P14THR - PCB header



1714210

<https://www.phoenixcontact.com/us/products/1714210>

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The figure shows a 10-position version of the product

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: Sn, contact connection type: Pin, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: CCA 2,5/..-G, pitch: 5.08 mm, connection method: Plug-in connection, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 1.4 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: packed in cardboard

## 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
- Closed contour for optimum stability of the plug-in connection

## Commercial data

Item number	1714210
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA03
Product key	AACTBC
GTIN	4046356096201
Weight per piece (including packing)	4.28 g
Weight per piece (excluding packing)	3.693 g
Customs tariff number	85366930
Country of origin	DE

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## Technical data

### Product properties

Product type	PCB headers
Product family	CCA 2,5/..-G
Product line	COMBICON Connectors M
Type	Component suitable for through hole reflow
Number of positions	10
Pitch	5.08 mm
Number of connections	10
Number of rows	1
Number of potentials	10
Mounting type	without
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 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

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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)

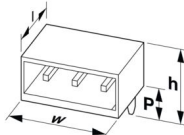
## Material data - housing

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]	53.6 mm
Height [h]	9.97 mm
Length [l]	12 mm
Installed height	8.57 mm
Solder pin length [P]	1.4 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

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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.	7 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

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## Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R <sub>1</sub>	1 mΩ
Contact resistance R <sub>2</sub>	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 <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

## 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

Type of packaging	packed in cardboard
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Drawings

Diagram



Type: LPC 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P...THR

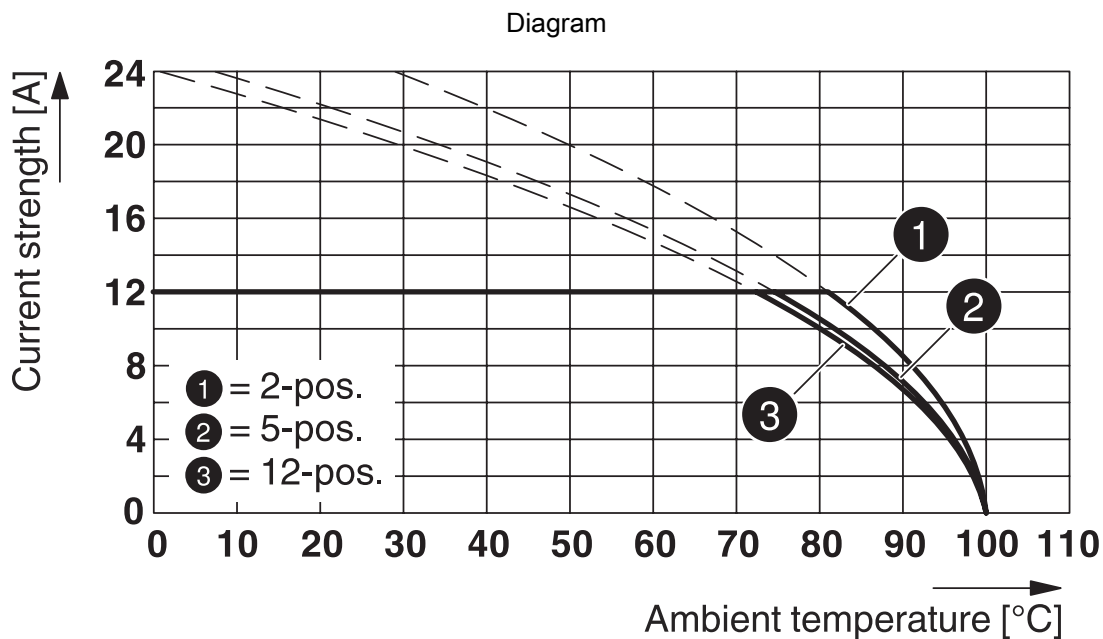
Diagram



Type: MSTBT 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26 THR



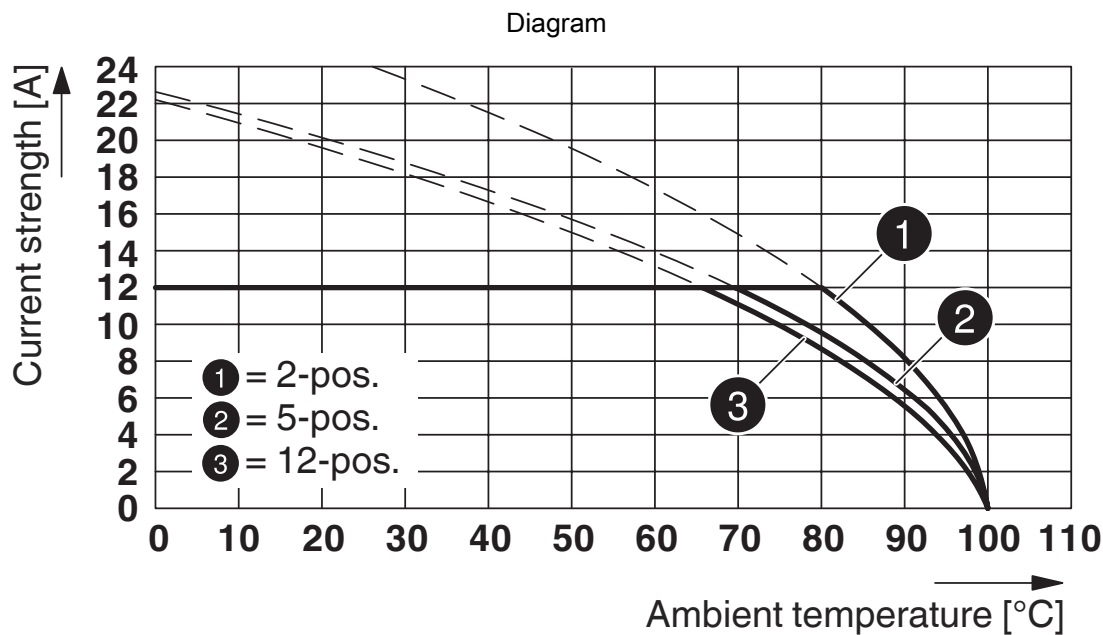
Type: FKCN 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR



Type: FKCN 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR



Type: FKCS 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR



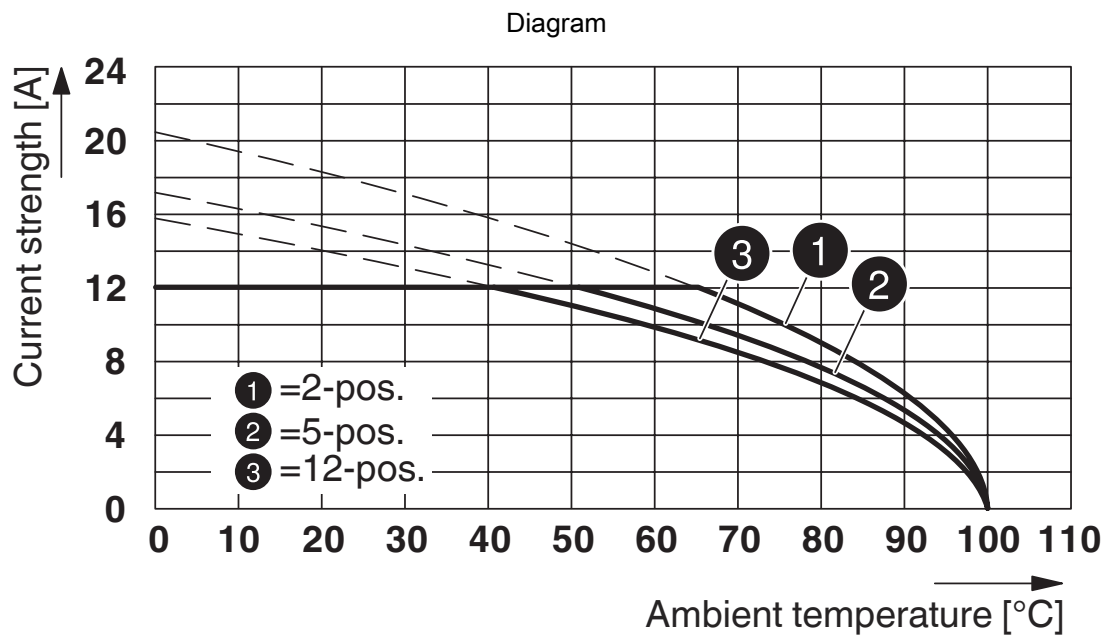
Type: MSTBP 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR

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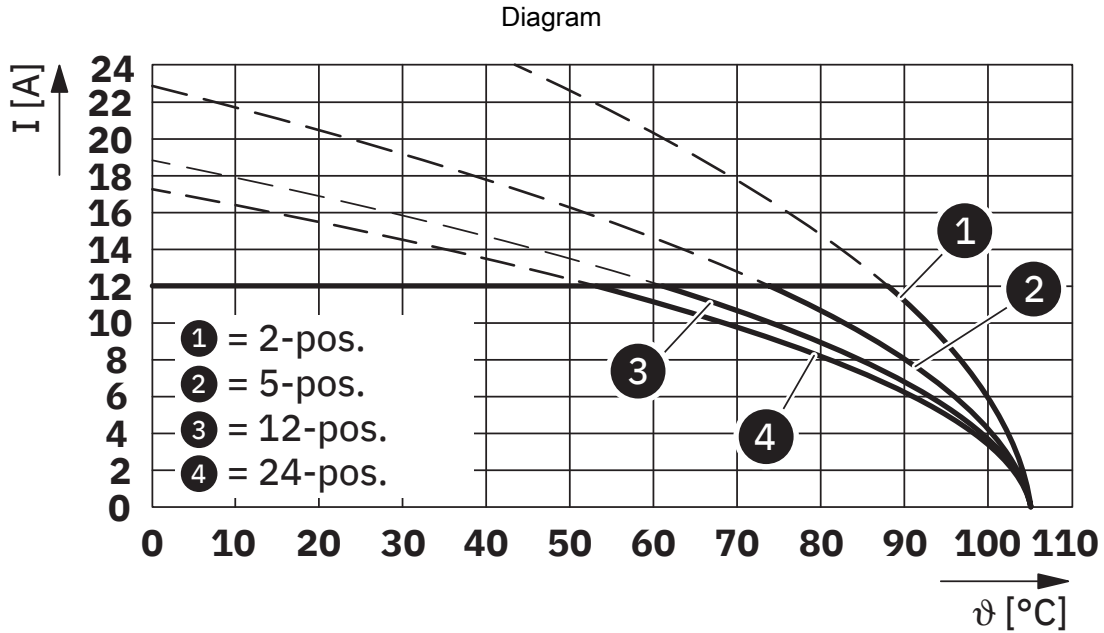
Type: TFKC 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P...THR



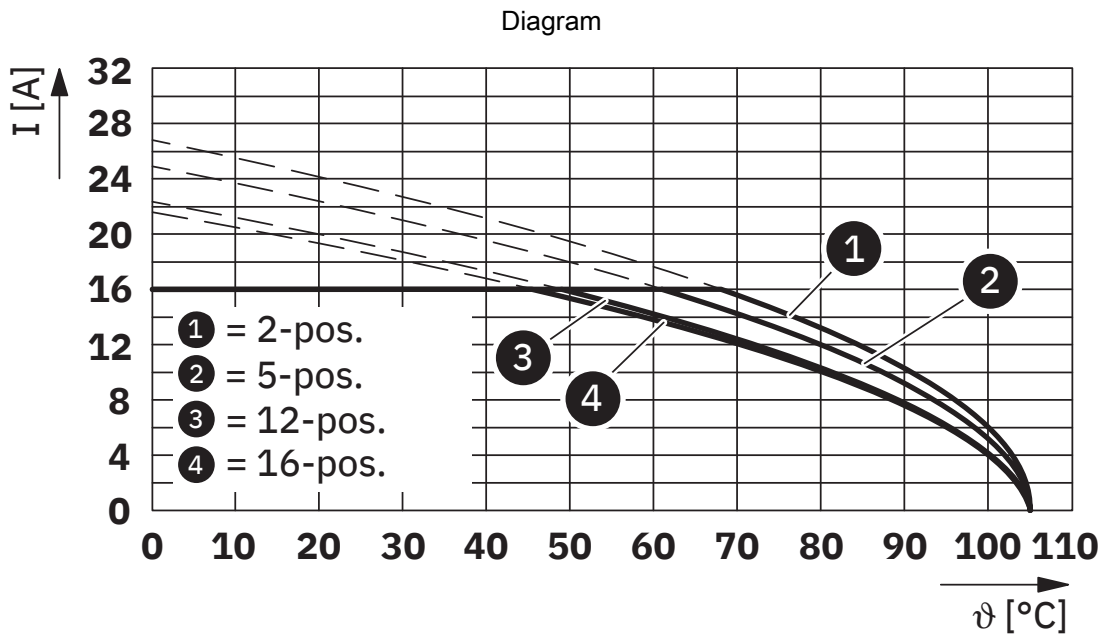
Type: MVSTBW 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR

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



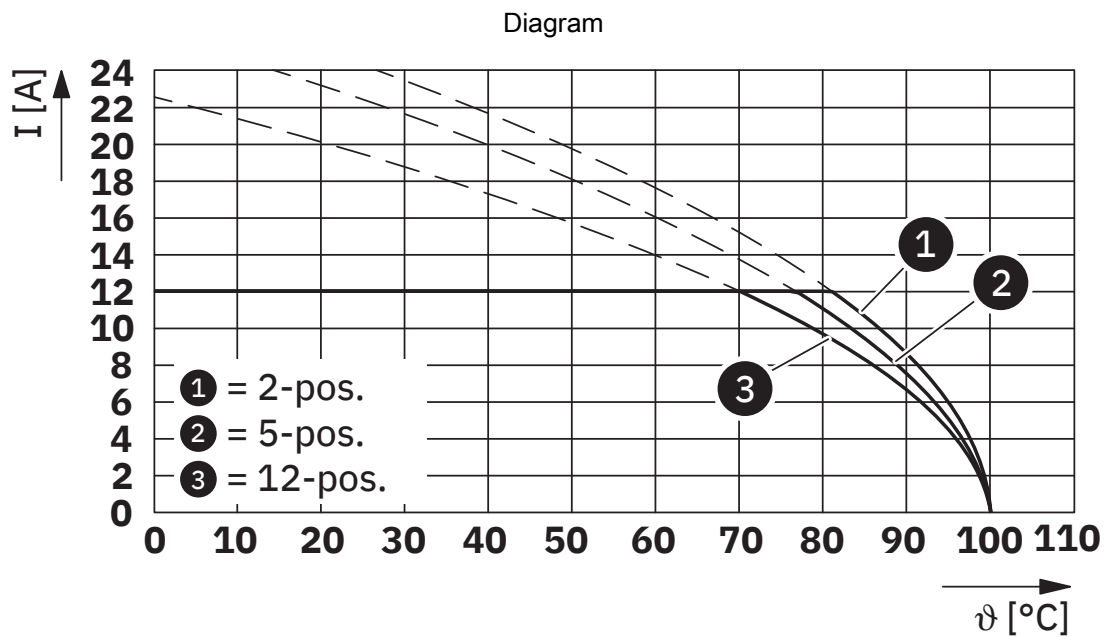
Type: XPC 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P...THR

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Type: TVMSTB 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P...THR



Type: FKCVR 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P...THR

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Type: FKCT 2,5/...-ST-5,08 with CCA 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/1714210>

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

 <b>VDE approval of drawings</b> 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	0.024 kg CO2e
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