

# PCB header - IC 2,5/ 5-G-5,08



1786433

<https://www.phoenixcontact.com/us/products/1786433>

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, type of contact: Female connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: IC 2,5/..-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 2, 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
- Easy PCB replacement thanks to plug-in modules
- Well-known mounting principle allows worldwide use
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections

## Commercial Data

Item number	1786433
Packing unit	1 pc
Minimum order quantity	50 pc
Sales Key	A01
Product Key	AACSAC
Catalog Page	Page 332 (C-1-2013)
GTIN	4017918042585
Weight per Piece (including packing)	6.076 g
Weight per Piece (excluding packing)	3.644 g
Customs tariff number	85366930
Country of origin	DE

1786433

<https://www.phoenixcontact.com/us/products/1786433>

## Technical Data

### Product properties

Type	Inverted
Product line	COMBICON Connectors M
Product type	PCB headers
Number of positions	5
Pitch	5.08 mm
Number of connections	5
Number of rows	1
Mounting flange	without
Number of potentials	5
Pin layout	Linear pinning
Solder pins per potential	2

### Electrical properties

Nominal current $I_N$	12 A
Nominal voltage $U_N$	320 V
Pollution degree	3
Contact resistance	1.2 mΩ
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

### 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	hot-dip tin-plated
Metal surface contact area (top layer)	Tin (4 - 8 μm Sn)
Metal surface soldering area (top layer)	Tin (4 - 8 μm Sn)

#### Material data - housing

Housing color	green (6021)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0

# PCB header - IC 2,5/ 5-G-5,08

1786433

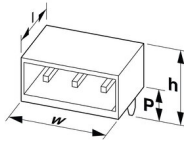
<https://www.phoenixcontact.com/us/products/1786433>

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	5.08 mm
Width [w]	27.4 mm
Height [h]	13.7 mm
Length [l]	18.9 mm
Installed height	10.2 mm
Solder pin length [P]	3.5 mm

## PCB design

Pin spacing	5.04 mm
-------------	---------

## Mechanical tests

### 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

### Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	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

# PCB header - IC 2,5/ 5-G-5,08



1786433

<https://www.phoenixcontact.com/us/products/1786433>

## Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

## Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	24

### 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	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
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 - 60.1 Hz)
Sweep speed	5g (60.1 - 150 Hz)
Test duration per axis	2.5 h

### Durability test

# PCB header - IC 2,5/ 5-G-5,08



1786433

<https://www.phoenixcontact.com/us/products/1786433>

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R <sub>1</sub>	1.2 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	100 °C/168 h
Power-frequency withstand voltage	2.21 kV

## Ambient conditions

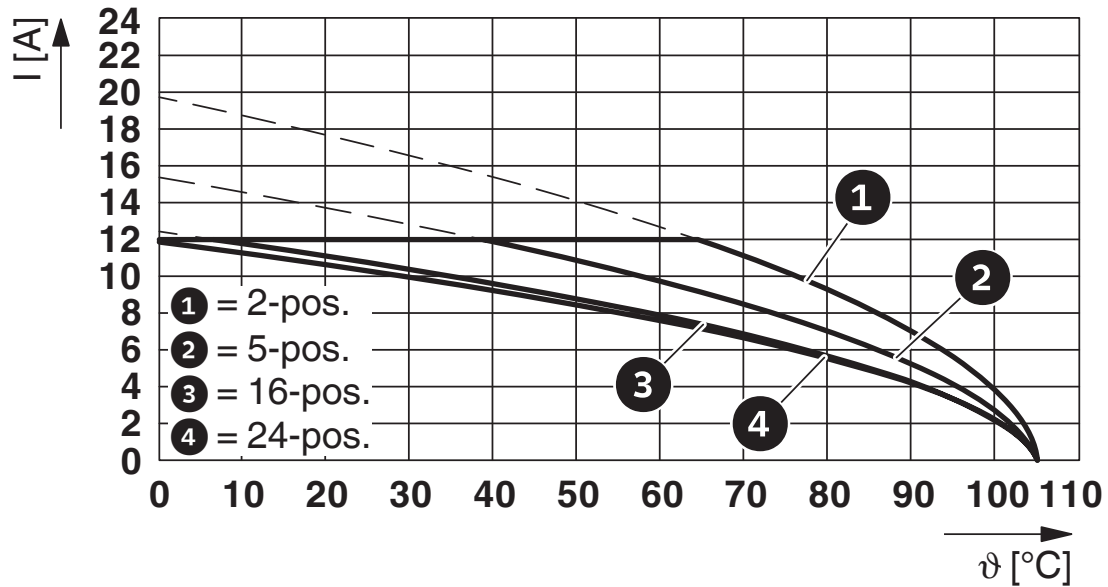
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

Type of packaging	packed in cardboard
Outer packaging type	Carton

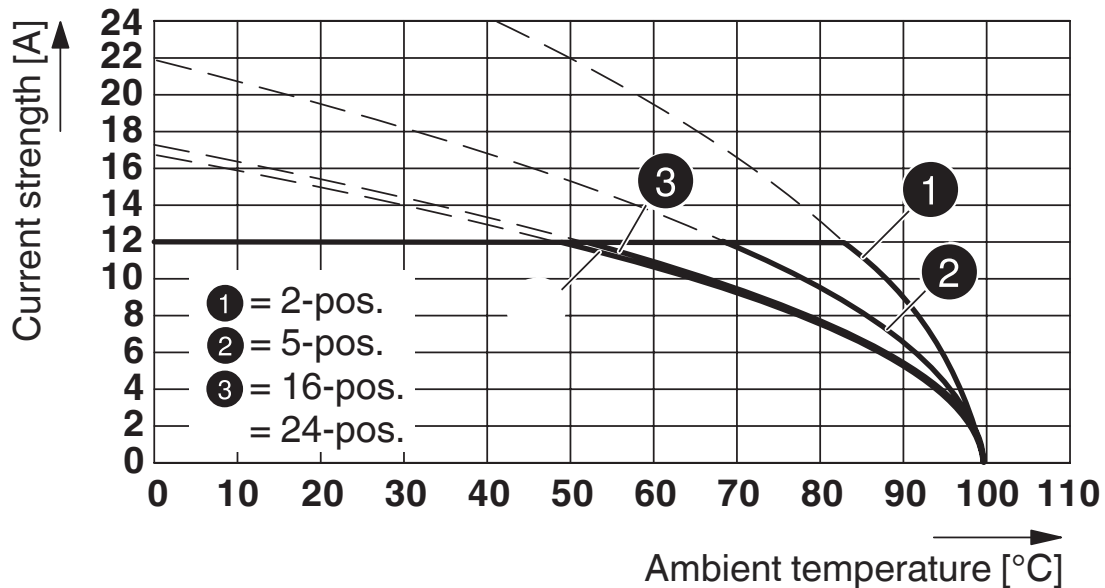
Drawings

Diagram



Type: IC 2,5/...-G-5,08 with MSTBVA 2,5/...-G-5,08

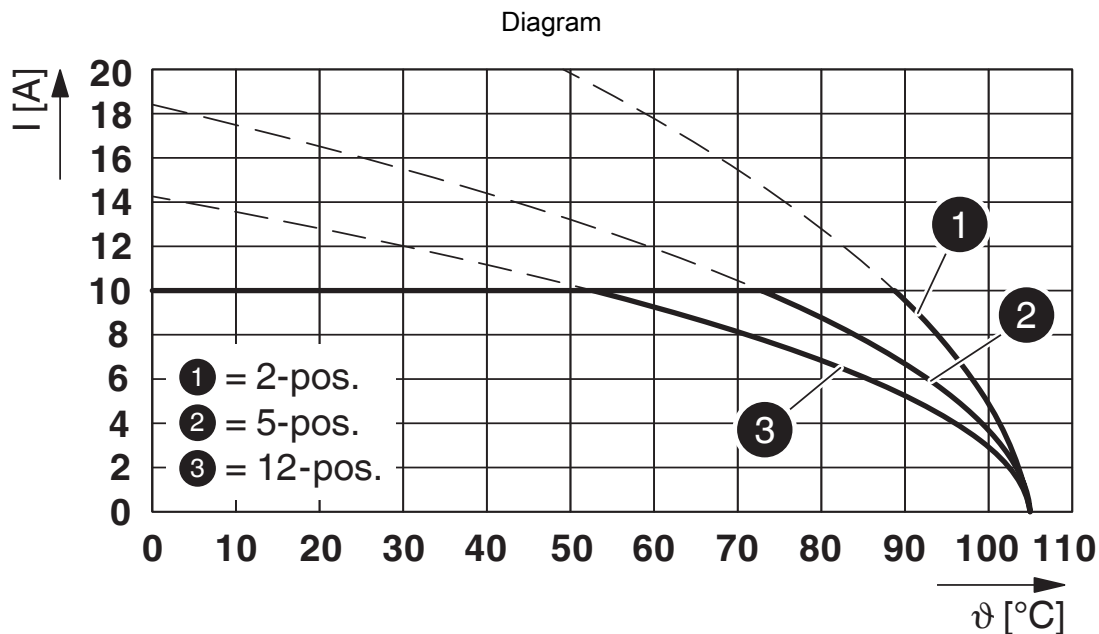
Diagram



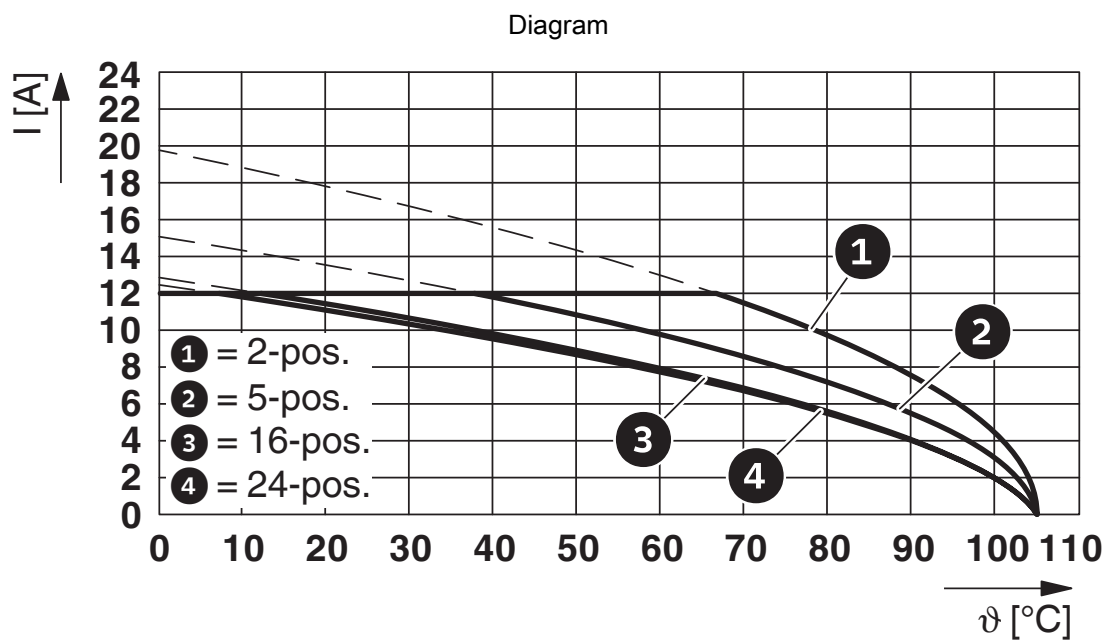
Type: IC 2,5/...-G-5,08 with MSTBA 2,5/...-G-5,08

1786433

<https://www.phoenixcontact.com/us/products/1786433>



Type: IC 2,5/...-G-5,08 with MDSTBA 2,5/...-G-5,08

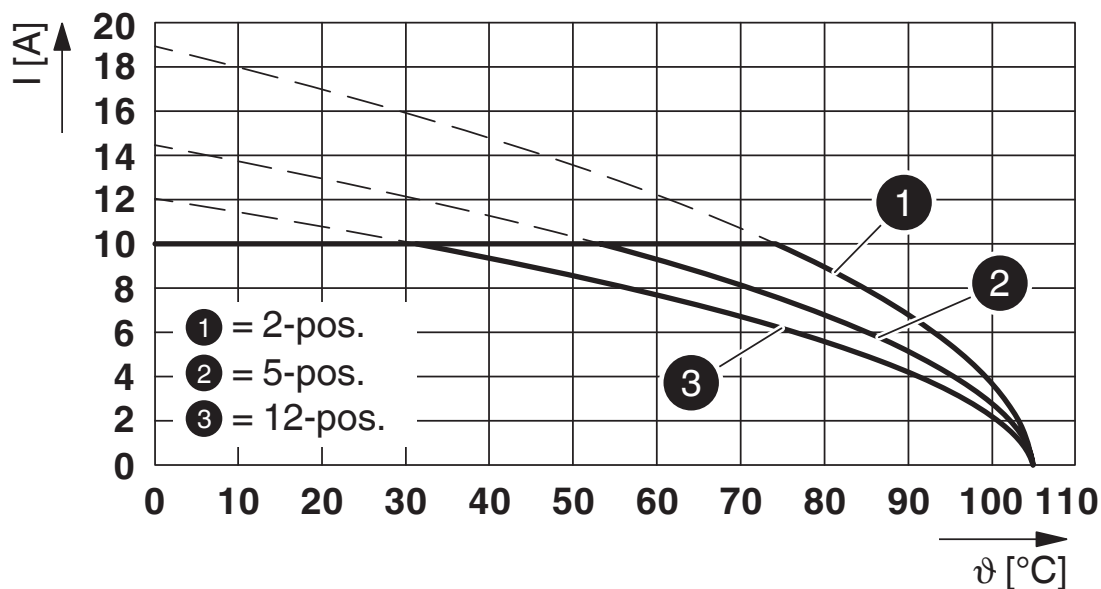


Type: IC 2,5/...-G-5,08 with MSTBV 2,5/...-G-5,08

1786433

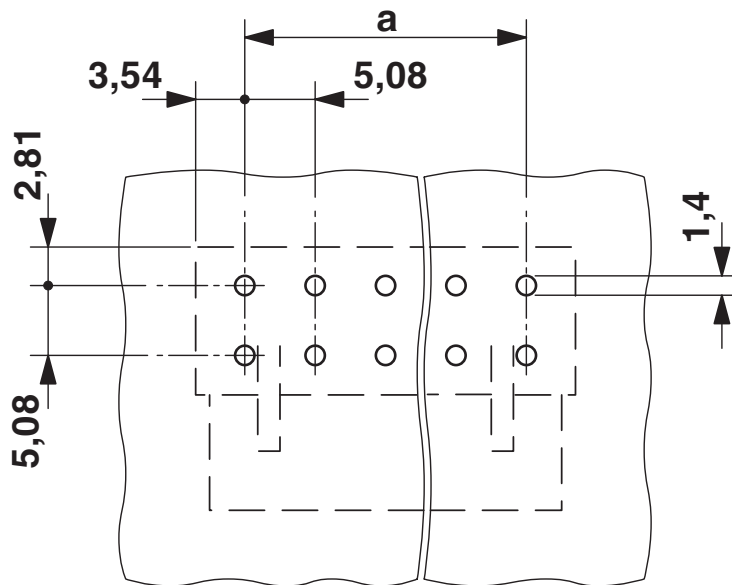
<https://www.phoenixcontact.com/us/products/1786433>

Diagram



Type: IC 2,5/...-G-5,08 with MDSTBVA 2,5/...-G-5,08

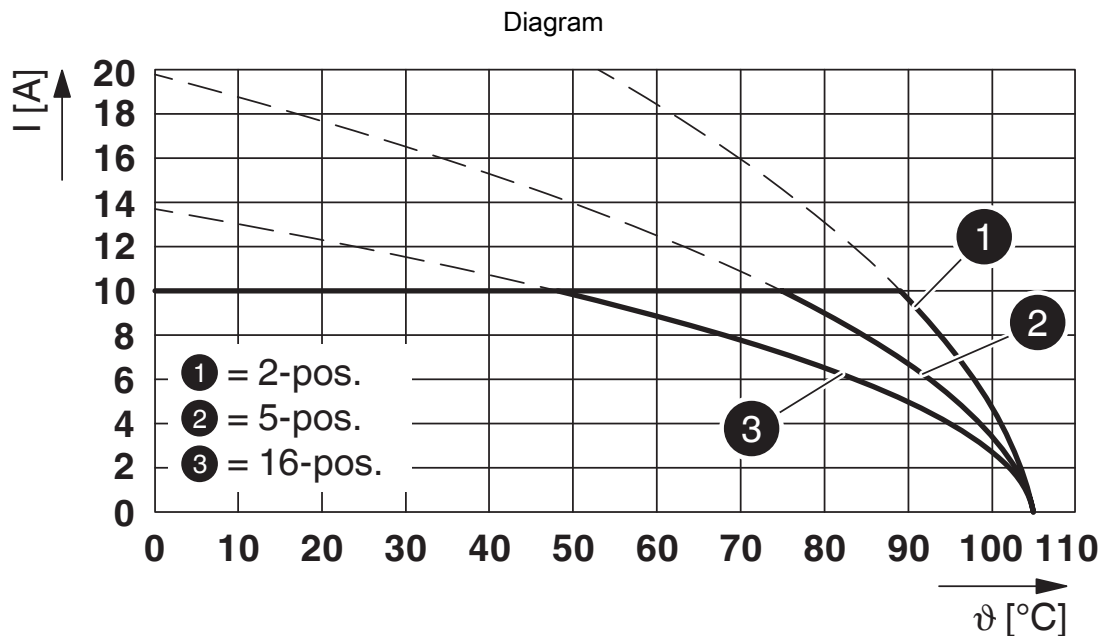
Drilling plan/solder pad geometry



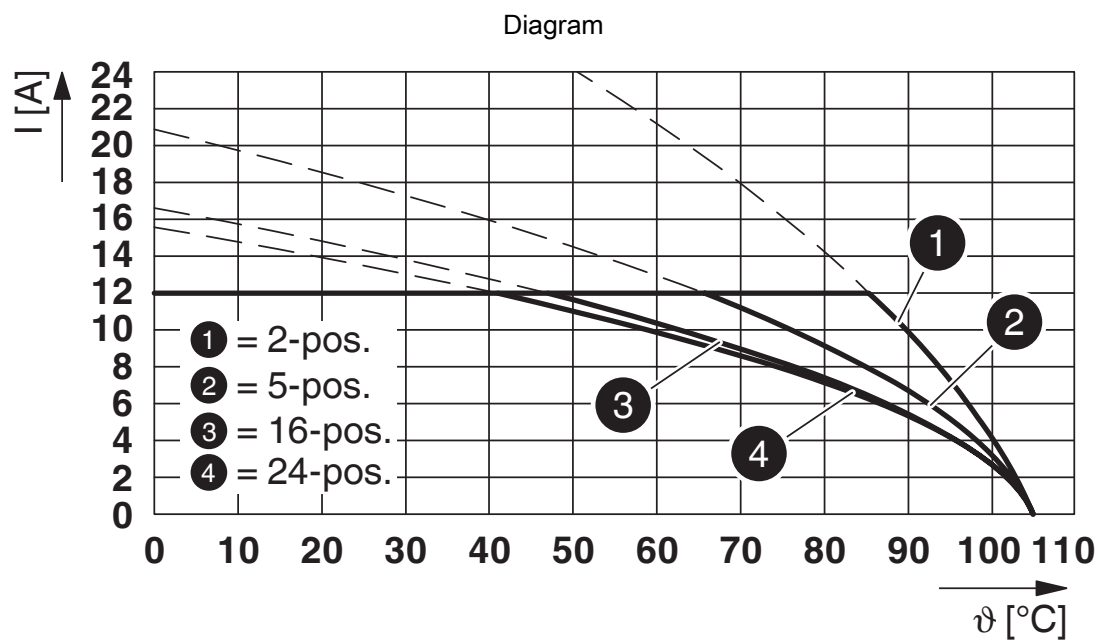


1786433

<https://www.phoenixcontact.com/us/products/1786433>



Type: IC 2,5/...-G-5,08 with MDSTB 2,5/...-G-5,08

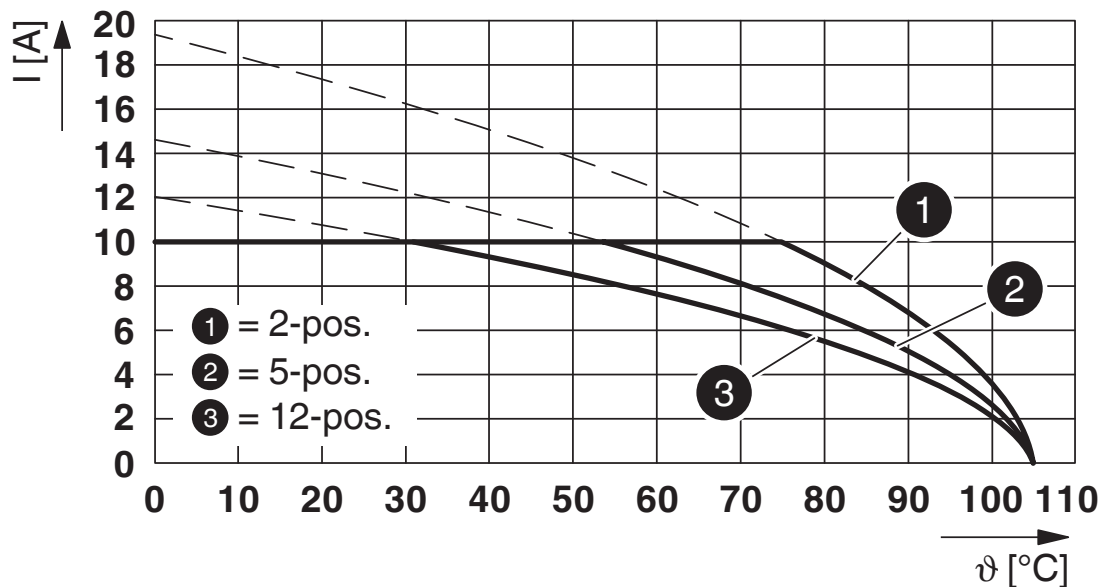


Type: IC 2,5/...-G-5,08 with MSTBW 2,5/...-G-5,08

1786433

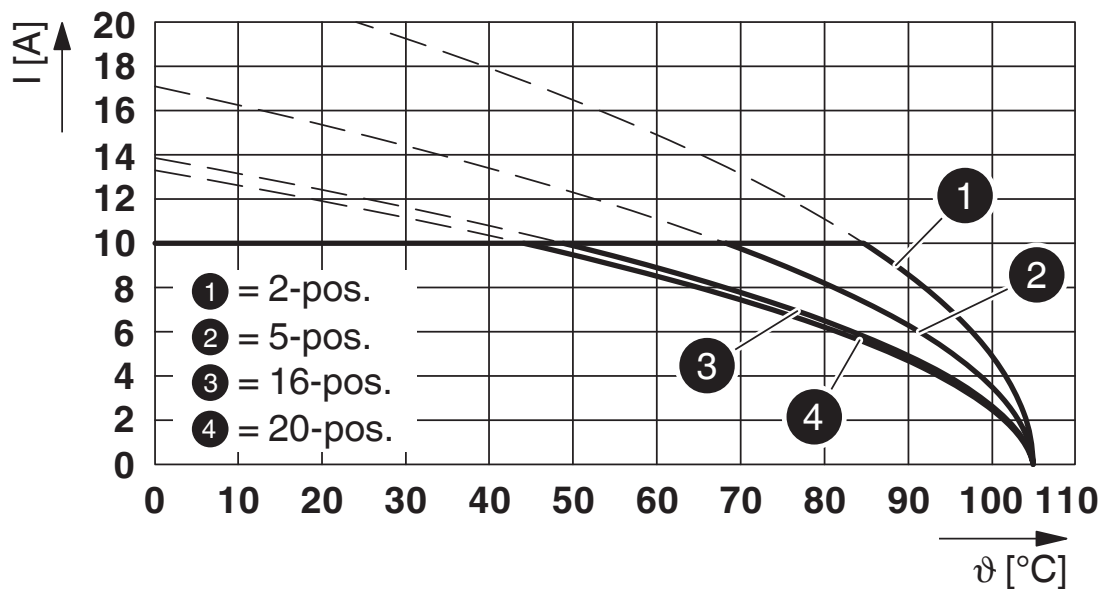
<https://www.phoenixcontact.com/us/products/1786433>

Diagram



Type: IC 2,5/...-G-5,08 with MDSTBV 2,5/...-G-5,08

Diagram

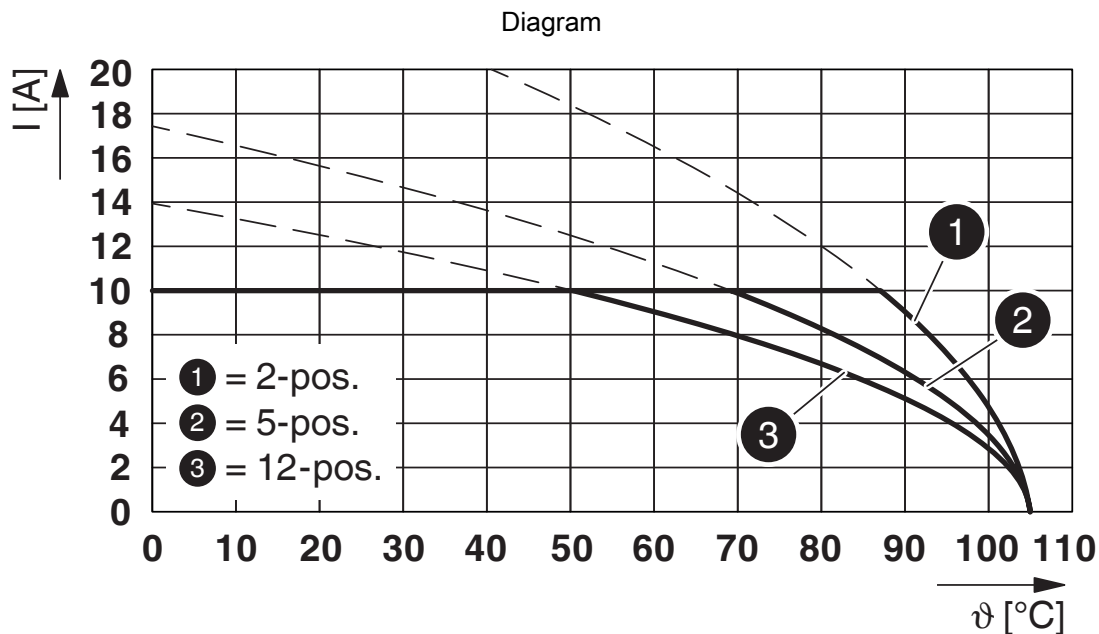


Type: IC 2,5/...-G-5,08 with MDSTB 2,5/...-G1-5,08

# PCB header - IC 2,5/ 5-G-5,08

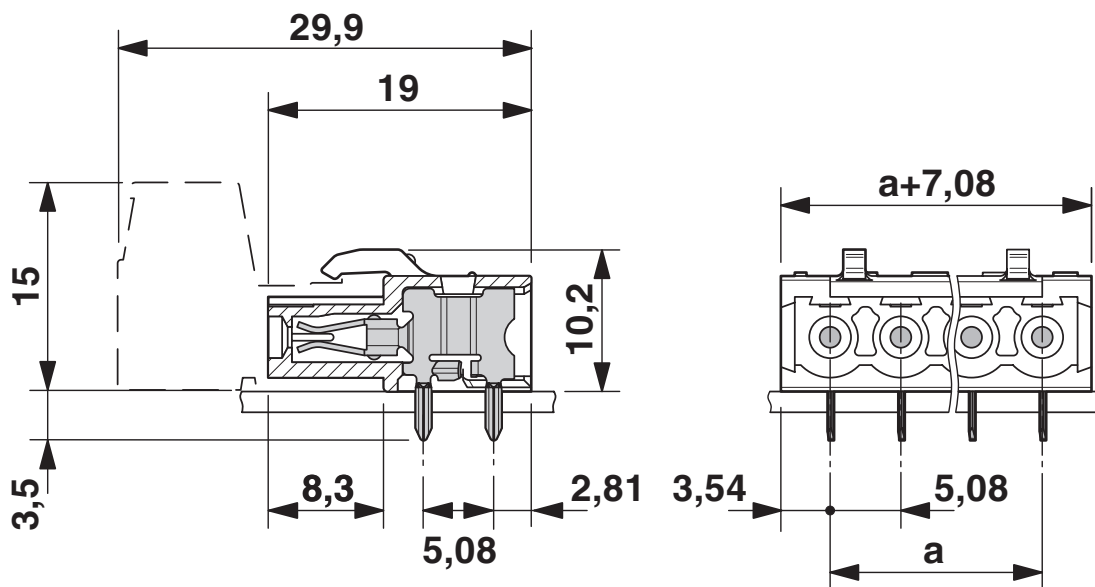
1786433

<https://www.phoenixcontact.com/us/products/1786433>



Type: IC 2,5/...-G-5,08 with MDSTBW 2,5/...-G-5,08

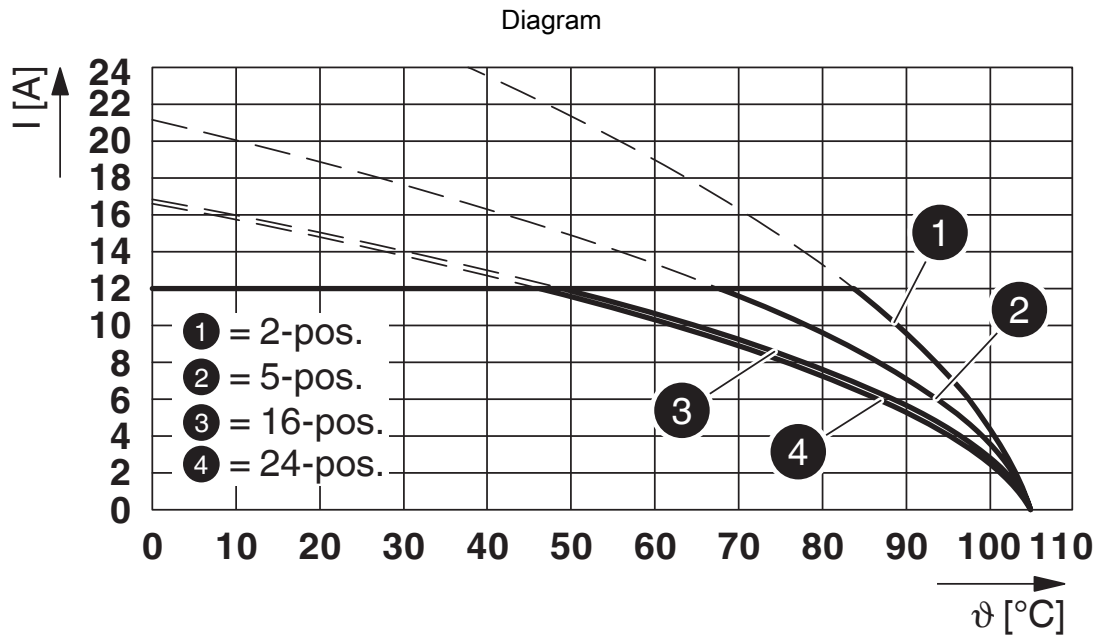
Dimensional drawing



# PCB header - IC 2,5/ 5-G-5,08

1786433

<https://www.phoenixcontact.com/us/products/1786433>



Type: IC 2,5/...-G-5,08 with MSTB 2,5/...-G-5,08


# PCB header - IC 2,5/ 5-G-5,08




1786433


<https://www.phoenixcontact.com/us/products/1786433>

## Approvals

 <b>CSA</b> Approval ID: 13631				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B	300 V	10 A	-	-
Use group D	300 V	10 A	-	-

 <b>IECEE CB Scheme</b> Approval ID: DE1-60988-B1B2				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	250 V	12 A	-	-

 <b>EAC</b> Approval ID: B.01687				
--	--	--	--	--

 <b>cULus Recognized</b> Approval ID: E60425-19931014				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Use group B	250 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	-	-

# PCB header - IC 2,5/ 5-G-5,08



1786433

<https://www.phoenixcontact.com/us/products/1786433>

## Classifications

### ECLASS

ECLASS-9.0	27440402
ECLASS-10.0.1	27440402
ECLASS-11.0	27460201

### ETIM

ETIM 8.0	EC002637
----------	----------

### UNSPSC

UNSPSC 21.0	39121400
-------------	----------

# PCB header - IC 2,5/ 5-G-5,08

1786433

<https://www.phoenixcontact.com/us/products/1786433>



## Environmental Product Compliance

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

# PCB header - IC 2,5/ 5-G-5,08

1786433

<https://www.phoenixcontact.com/us/products/1786433>

## Accessories

### Coding profile

Coding profile - CP-MSTB - 1734634

<https://www.phoenixcontact.com/us/products/1734634>

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



### Feed-through header

Feed-through header - DFK-MSTBA 2,5/ 5-G-5,08 - 1898868

<https://www.phoenixcontact.com/us/products/1898868>



Feed-through header, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: DFK-MSTBA 2,5/...-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 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



# PCB header - IC 2,5/ 5-G-5,08

1786433

<https://www.phoenixcontact.com/us/products/1786433>



## PCB header

PCB header - MSTBO 2,5/ 5-GR-5,08 - 1847136

<https://www.phoenixcontact.com/us/products/1847136>



PCB headers, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTBO 2,5/...-GR, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

## PCB connector

PCB connector - FKIC 2,5/ 5-ST-5,08 - 1873388

<https://www.phoenixcontact.com/us/products/1873388>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: FKIC 2,5/...-ST, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

# PCB header - IC 2,5/ 5-G-5,08

1786433

<https://www.phoenixcontact.com/us/products/1786433>

## PCB header

PCB header - SMSTB 2,5/ 5-G-5,08 - 1769492

<https://www.phoenixcontact.com/us/products/1769492>



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, type of contact: Male connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: SMSTB 2,5/...-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 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

## PCB connector

PCB connector - ICC 2,5/ 5-STZ-5,08 - 1823875

<https://www.phoenixcontact.com/us/products/1823875>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Male connector, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: ICC 2,5/...-STZ, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Snap-in locking, mounting: Engagement nose, type of packaging: packed in cardboard, Corresponding male crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] data: 10A/ICC-MT 0,5-1,0 (3190577); 10A/ICC-MT 0,5-1,0 BA (3190603); 12A/ICC-MT 1,5-2,5 (3190580); 12A/ICC-MT 1,5-2,5 BA (3190593). BA = Bandkontakte

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)