

PCB header - IC 2,5/11-GF-5,08

1825213

<https://www.phoenixcontact.com/us/products/1825213>



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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 11, number of rows: 1, number of positions: 11, number of connections: 11, product range: IC 2,5/-GF, pitch: 5.08 mm, 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: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Screwable flange for superior mechanical stability
- Well-known mounting principle allows worldwide use
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections
- Easy PCB replacement thanks to plug-in modules

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Commercial Data

Item number	1825213
Packing unit	1 pc
Minimum order quantity	50 pc
Sales Key	A01
Product Key	AACSAD
Catalog Page	Page 333 (C-1-2013)
GTIN	4017918103644
Weight per Piece (including packing)	11.86 g
Weight per Piece (excluding packing)	10 g
Customs tariff number	85366930
Country of origin	DE

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Technical Data

Product properties

Type	Inverted
Product line	COMBICON Connectors M
Product type	PCB headers
Number of positions	11
Pitch	5.08 mm
Number of connections	11
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	11
Pin layout	Linear pinning

Electrical properties

Nominal current I_N	12 A
Nominal voltage U_N	320 V
Pollution degree	3
Contact resistance	1.4 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	Wave soldering
Mounting type	Wave soldering

Flange

Tightening torque	0.3 Nm
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Flange

Tightening torque	0.3 Nm
Screw	Sheet metal screw ISO 1481-ST 2,2x6,5 C or ISO 7049-ST 2,2x6,5 C

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)

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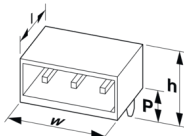
Material data - housing

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

Dimensional drawing	
Pitch	5.08 mm
Width [w]	66 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	5.08 mm
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Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Repeated connection and disconnection

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
	0.2 mm ² / solid / > 10 N

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Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm ² / flexible / > 10 N
	2.5 mm ² / solid / > 50 N
	2.5 mm ² / flexible / > 50 N

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	12 N
Withdraw strength per pos. approx.	9 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

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	16

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

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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

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	4.8 kV
Contact resistance R ₁	1.4 mΩ
Contact resistance R ₂	1.4 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

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 ... 105 °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

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Packaging specifications

Type of packaging	packed in cardboard
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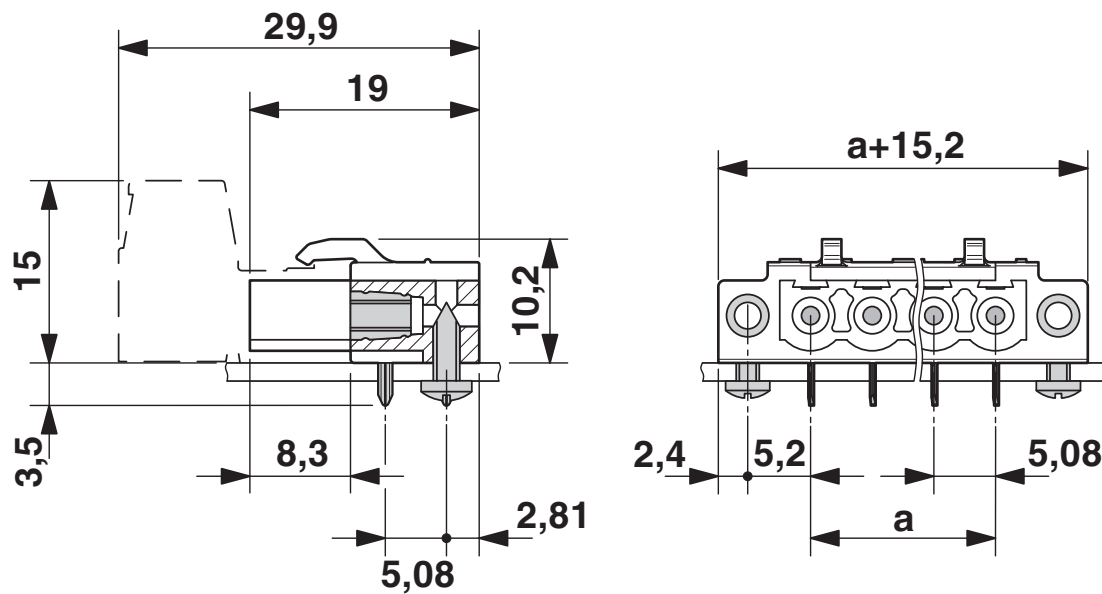
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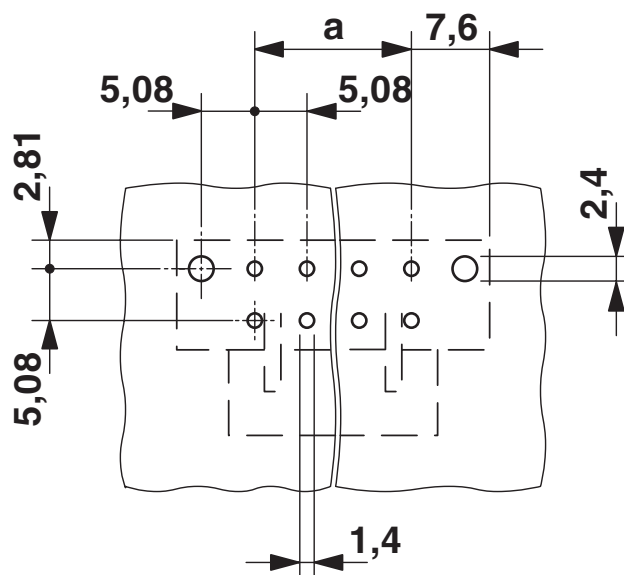


Drawings

Dimensional drawing



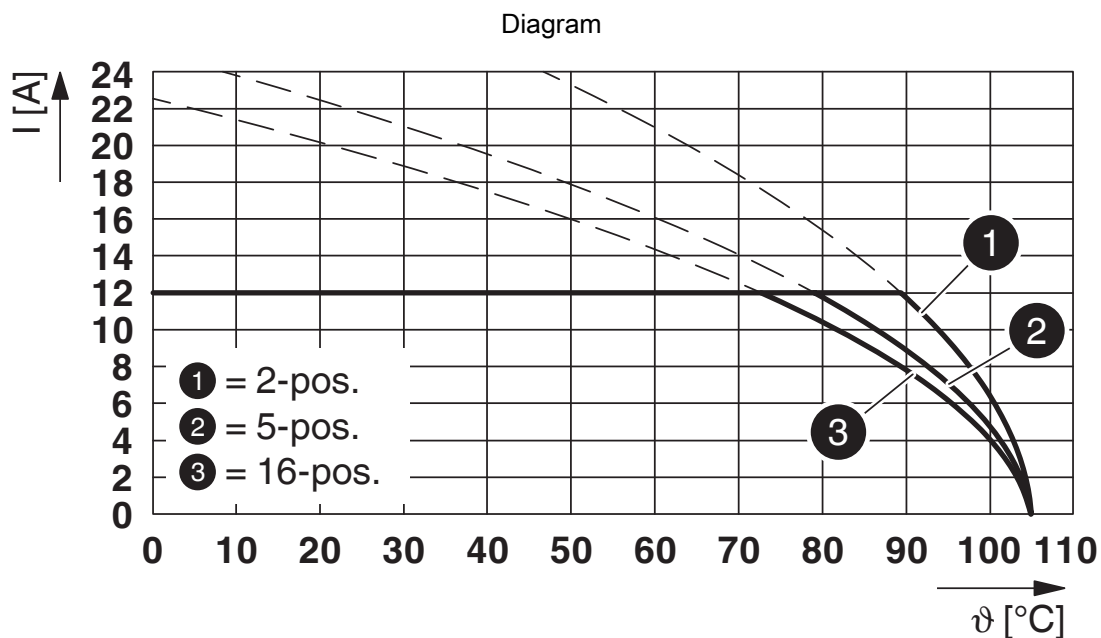
Drilling plan/solder pad geometry



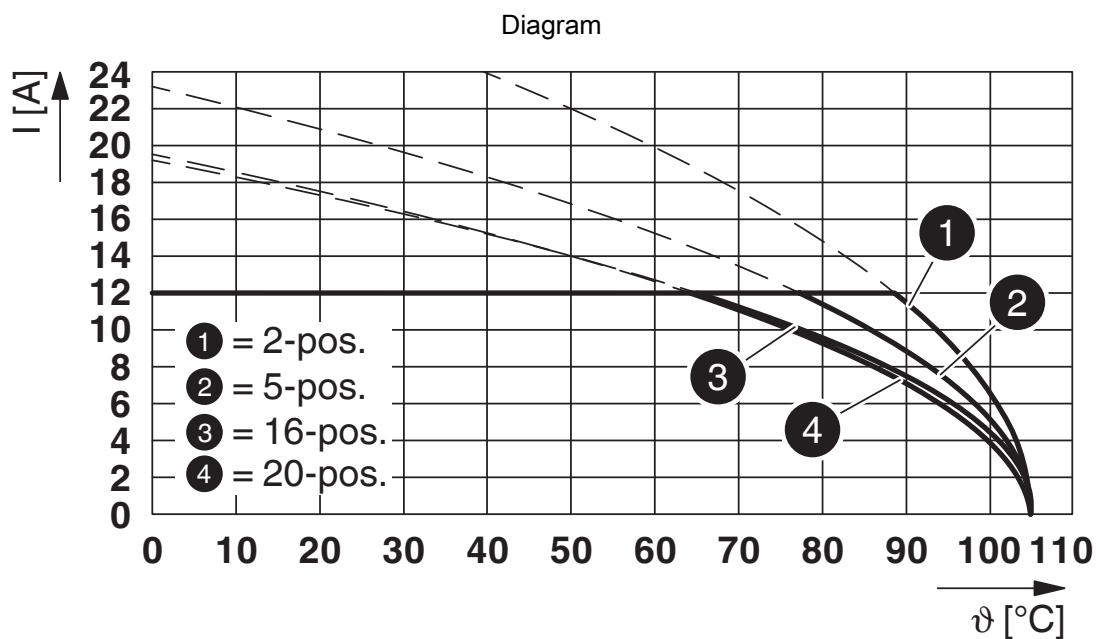
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Type: FKIC 2,5/...-STF-5,08 with IC 2,5/...-GF-5,08



Type: IC 2,5/...-STF-5,08 with IC 2,5/...-GF-5,08

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Approvals

 CSA Approval ID: 13631				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	300 V	10 A	-	-
Use group D				
	300 V	10 A	-	-

 IECEE CB Scheme Approval ID: DE1-60988-B1B2				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	250 V	12 A	-	-

 EAC Approval ID: B.01687				
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 cULus Recognized Approval ID: E60425-19931014				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
Use group B				
	250 V	12 A	-	-
Use group D				
	300 V	10 A	-	-

 VDE Zeichengenehmigung Approval ID: 40050648				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	250 V	12 A	-	-

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Classifications

ECLASS

ECLASS-9.0	27440402
ECLASS-10.0.1	27440402
ECLASS-11.0	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

Test plugs

Test plugs - MPS-MT - 0201744

<https://www.phoenixcontact.com/us/products/0201744>



Test plugs, with solder connection up to 1 mm² conductor cross section, color: gray

Reducing plug

Reducing plug - RPS - 0201647

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Reducing plug, color: gray

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Coding profile

Coding profile - CP-MSTB - 1734634

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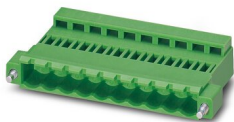
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



PCB connector

PCB connector - ICC 2,5/11-STZF-5,08 - 1823477

<https://www.phoenixcontact.com/us/products/1823477>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Male connector, number of potentials: 11, number of rows: 1, number of positions: 11, number of connections: 11, product range: ICC 2,5/...-STZF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard, Corresponding male crimp contacts with current [A] and conductor cross section range [mm²] 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

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PCB connector

PCB connector - IC 2,5/11-STF-5,08 - 1825404

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PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 11, number of rows: 1, number of positions: 11, number of connections: 11, product range: IC 2,5/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - FKIC 2,5/11-STF-5,08 - 1873595

<https://www.phoenixcontact.com/us/products/1873595>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 11, number of rows: 1, number of positions: 11, number of connections: 11, product range: FKIC 2,5/...-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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