

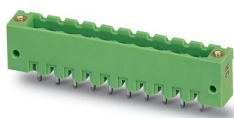
PCB header - MSTBV 2,5 HC/ 2-GF-5,08



1924525

<https://www.phoenixcontact.com/us/products/1924525>

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MSTBV 2,5 HC/...-GF, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5 HC, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Well-known mounting principle allows worldwide use
- 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	1924525
Packing unit	1 pc
Minimum order quantity	50 pc
Sales Key	A02
Product Key	AACSMA
Catalog Page	Page 497 (C-1-2013)
GTIN	4017918613839
Weight per Piece (including packing)	2.192 g
Weight per Piece (excluding packing)	1.926 g
Customs tariff number	85366930
Country of origin	DE

Technical Data

Product properties

Type	Standard
Product line	COMBICON Connectors M
Product type	PCB headers
Number of positions	2
Pitch	5.08 mm
Number of connections	2
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	2
Pin layout	Linear pinning
Solder pins per potential	1

Electrical properties

Nominal current I_N	16 A (see derating curve)
Nominal voltage U_N	320 V
Pollution degree	3
Contact resistance	0.9 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

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	Tin-plated
Metal surface contact area (top layer)	Tin (3 - 5 μm Sn)

PCB header - MSTBV 2,5 HC/ 2-GF-5,08



1924525

<https://www.phoenixcontact.com/us/products/1924525>

Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

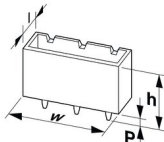
Material data - housing

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]	25.4 mm
Height [h]	12 mm
Length [l]	8.6 mm
Installed height	12 mm
Solder pin length [P]	3.9 mm

PCB design

Pin spacing	5.00 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

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1924525

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Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.2 mm ² / solid / > 10 N
	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	50
Insertion strength per pos. approx.	7 N
Withdraw strength per pos. approx.	5 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	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	I
Comparative tracking index (IEC 60112)	CTI 600

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1924525

<https://www.phoenixcontact.com/us/products/1924525>

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

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	0.9 mΩ
Insertion/withdrawal cycles	50
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

Ambient conditions

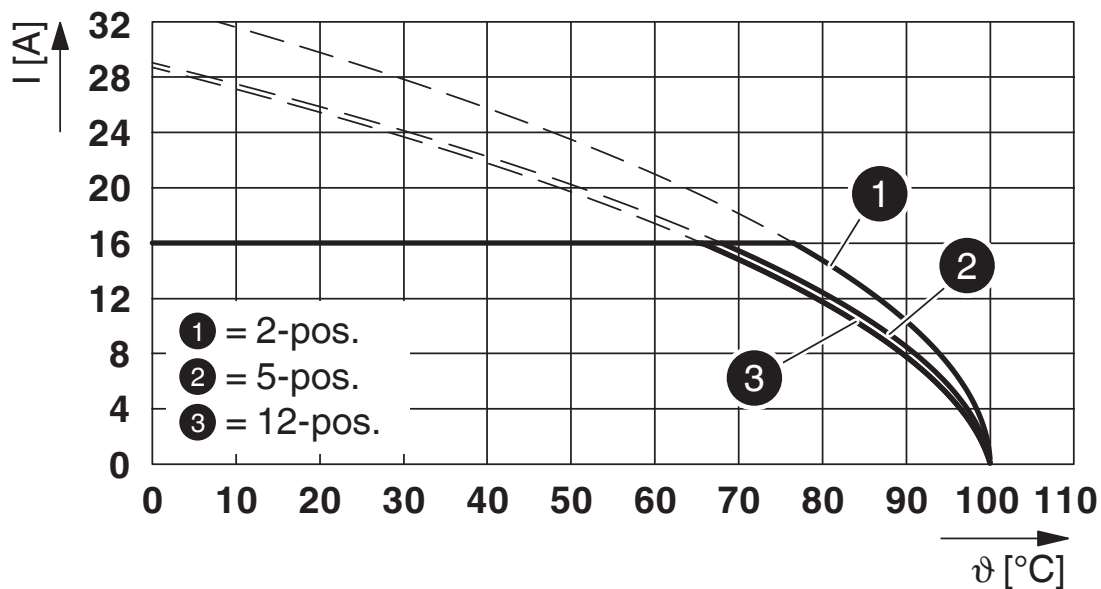
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

Packaging specifications

Type of packaging	packed in cardboard
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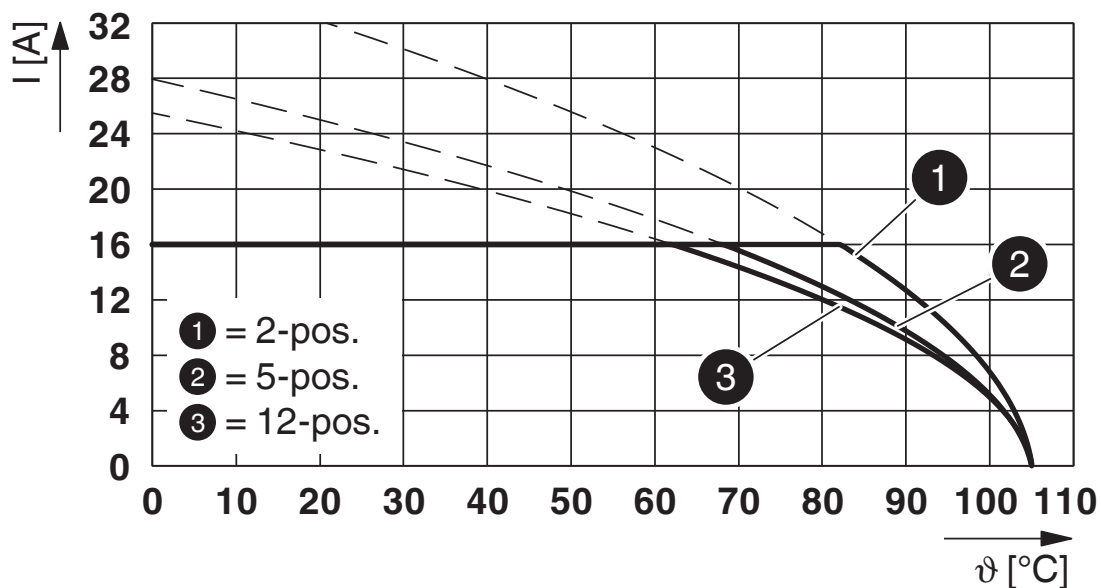
Drawings

Diagram



Type: MSTB 2,5 HC/...-STF-5,08 with MSTBV 2,5/...-GF-5,08

Diagram



Type: FKBC 2,5 HC/...-STF-5,08 with MSTBV 2,5 HC/...-GF-5,08

PCB header - MSTBV 2,5 HC/ 2-GF-5,08



1924525

<https://www.phoenixcontact.com/us/products/1924525>

Approvals

	IECEE CB Scheme			
	Approval ID: DE1-60988-B1B2			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
		250 V	16 A	-
				Cross Section mm ²
				-

	EAC
	Approval ID: B.01687

	cULus Recognized			
	Approval ID: E60425-19931011			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
Use group B				Cross Section mm ²
		300 V	16 A	-
Use group D				
		300 V	10 A	-
				-

	VDE Zeichengenehmigung			
	Approval ID: 40050079			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
		250 V	16 A	-
				Cross Section mm ²
				-

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1924525

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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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1924525

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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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1924525

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Accessories

Coding section

Coding section - CR-MSTB - 1734401

<https://www.phoenixcontact.com/us/products/1734401>

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



Marker card

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293

<https://www.phoenixcontact.com/us/products/0804293>

Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm



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1924525

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Accessories

Accessories - MSTB-BL - 1755477

<https://www.phoenixcontact.com/us/products/1755477>



Keying cap, for forming sections, plugs onto header pin, green insulating material

PCB connector

PCB connector - MSTB 2,5 HC/ 2-STF-5,08 - 1912184

<https://www.phoenixcontact.com/us/products/1912184>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MSTB 2,5 HC/. -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 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB header - MSTBV 2,5 HC/ 2-GF-5,08



1924525

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PCB connector

PCB connector - MVSTBR 2,5 HC/ 2-STF-5,08 - 1912621

<https://www.phoenixcontact.com/us/products/1912621>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MVSTBR 2,5 HC/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - MVSTBW 2,5 HC/ 2-STF-5,08 - 1913060

<https://www.phoenixcontact.com/us/products/1913060>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A (see derating curve), rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MVSTBW 2,5 HC/...-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB header - MSTBV 2,5 HC/ 2-GF-5,08



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PCB connector

PCB connector - FKC 2,5 HC/ 2-STF-5,08 - 1942484

<https://www.phoenixcontact.com/us/products/1942484>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 16 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: FKC 2,5 HC/...STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5 HC, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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