

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's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)



The figure shows a 10-position version of the product

PCB header, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: CCV 2,5/..-GF, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard, User information and design recommendations for through hole reflow technology can be found under: Downloads

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
- Maximum flexibility when it comes to device design one header for connectors with different connection technologies













Key Commercial Data

Packing unit	50 pc
GTIN	4 017918 926465
GTIN	4017918926465

Technical data

Item properties

r property	
Brief article description	Feed-through header
Plug-in system	CLASSIC COMBICON
Type of contact	Male connector
Range of articles	CCV 2,5/GF
Pitch	5.08 mm
Number of positions	9
Mounting type	THR soldering
Pin layout	Linear pinning
Locking	Threaded flange
Number of levels	1
Number of connections	9



Technical data

Item properties

Number of potentials	9
Pin connector pattern alignment	Standard

Electrical parameters

Nominal current	12 A
Nom. voltage	320 V
Rated voltage (III/3)	250 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	400 V
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV

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)
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	black (9005)
Insulating material	LCP
Insulating material group	Illa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

Flange specifications

Type of locking	Screw locking
Mounting flange	Threaded flange
Torque	0.3 Nm

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [1]	8.57 mm
Width [w]	55.83 mm
Height [h]	14.6 mm
Pitch	5.08 mm
Height (without solder pin)	12 mm
Solder pin [P]	2.6 mm



Technical data

Dimensions for the product

Pin dimensions	1 x 1 mm
Dimensions for PCB design	

Hole diameter	1.6 mm
---------------	--------

Packaging information

Type of packaging	packed in cardboard
Pieces per package	50
Denomination packing units	Pcs.

General product information

Type of note	Details for soldering processes
	Notes on operation
Note	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
	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.
Type of note	Details for soldering processes
Note	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

Processing notes

Process	Reflow/wave soldering
Specification	Following IPC/JEDEC J-STD-020D.1:2008-03
	Following IEC 61760-1:2006-04
	Following IEC 60068-2-58:2005-02
Moisture Sensitive Level	MSL 1
Classification temperature T _c	260 °C
Solder cycles in the reflow	3

Ambient conditions

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

Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	3 mm
Minimum clearance - inhomogeneous field (III/2)	3 mm
Minimum clearance - inhomogeneous field (II/2)	3 mm
Minimum creepage distance value (III/3)	4 mm



Technical data

Air clearances and creepage distances

Minimum creepage distance value (III/2)	3.2 mm
Minimum creepage distance value (II/2)	4 mm

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	5 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

Durability tests (B)

Specification	IEC 60512-5:1992-08
Contact resistance R ₁	0.6 mΩ
Insertion/withdrawal cycles	50
Contact resistance R ₂	0.8 mΩ
Impulse withstand voltage at sea level	4.8 kV

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	12
Upper limiting temperature requirements <100 °C	Test passed

Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm³ SO₂ on 300 dm³/40 °C/1 cycle
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV AC

Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

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)
Acceleration	5 g (60.1 - 150 Hz)
Test duration per axis	2.5 h

Standards and Regulations

Connection in acc. with standard	EN-VDE



Technical data

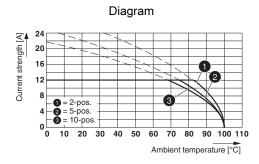
Standards and Regulations

	CUL
Flammability rating according to UL 94	V0

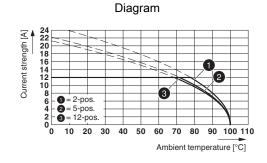
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years	
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"	

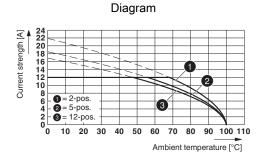
Drawings



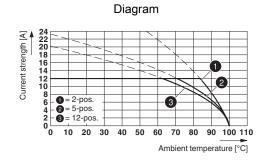
Type: TFKC 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR



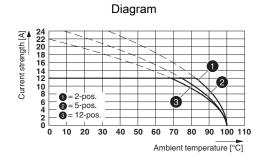
Type: MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR



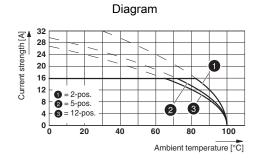
Type: SMSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR



Type: FRONT-MSTB 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR

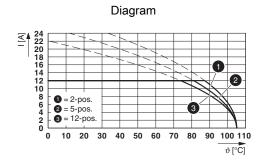


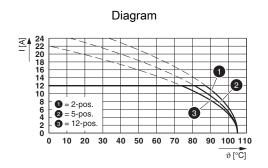
Type: MSTBT 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P26THR



Derating curve for: MSTB 2,5 HC/..-STF-5,08 with CCV 2,5/..-GF-5,08 P26THR

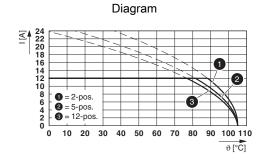


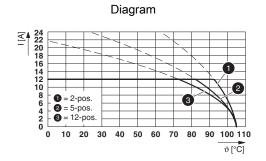




Type: FKCVR 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR

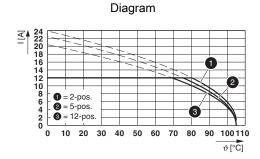
Type: FKCVW 2,5/...-STF-5,08 with CCV 2,5/...-GF-5,08 P...THR





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

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



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

Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 11.0	27460201
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402



Classifications

eCl	(@ss

eCl@ss 9.0

ETIM	
ETIM 3.0	EC001121
ETIM 4.0	EC002637
ETIM 6.0	EC002637

27440402

EC002637

ETIM 7.0 UNSPSC

UNSPSC 6.01	30211810
UNSPSC 7.0901	39121409
UNSPSC 11	39121409
UNSPSC 12.01	39121409
UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

 ${\tt VDE~Gutachten~mit~Fertigungs\"{u}berwachung~/~IECEE~CB~Scheme~/~EAC~/~cULus~Recognized}\\$

Ex Approvals

Approval details

VDE Gutachten mit Fertigungsüberwachung	VDE	http://www2.vde.com/de/Institut/Online-Service/ VDE-gepruefteProdukte/Seiten/Online-Suche.aspx		40041286
Nominal voltage UN			400 V	
Nominal current IN			12 A	



Approvals

IECEE CB Scheme	CB scheme	http://www.iecee.org/	DE1-58421-B1B2
Nominal voltage UN		400 V	
Nominal current IN		12 A	

EAC [A[B.01687
---------	---------

cULus Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E60425-19931011	
	В	D
Nominal voltage UN	300 V	300 V
Nominal current IN	16 A	10 A

Accessories

Accessories

Coding element

Coding section - CR-MSTB - 1734401



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

Coding section - CR-MSTB NAT HT - 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

Labeled terminal marker



Accessories

Marker card - SK 5.08/3.8:FORTL.ZAHLEN - 0804293



Marker card, 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

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Terminal marking

Marker card - SK 5,08/3,8:UNBEDRUCKT - 0805412



Marker card, Card, white, unlabeled, can be labeled with: Marker pen, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

Additional products

Printed-circuit board connector - TVMSTB 2,5/ 9-STF-5,08 - 1719163



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 400 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 18, product range: TVMSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCN 2,5/ 9-STF-5,08 - 1754869

CLAS

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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FKCN 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



Accessories

Printed-circuit board connector - FRONT-MSTB 2,5/ 9-STF-5,08 - 1777866



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FRONT-MSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Front screw connection, conductor/PCB connection direction: 0°, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTB 2,5/ 9-STF-5,08 - 1778056



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0°, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTBT 2,5/ 9-STF-5,08 - 1805369



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MSTBT 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0°, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - MSTBC 2,5/ 9-STZF-5,08 - 1809802



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, type of contact: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MSTBC 2,5/..-STZF, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0°, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

Printed-circuit board connector - MVSTBW 2,5/ 9-STF-5,08 - 1834974



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MVSTBW 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



Accessories

Printed-circuit board connector - MVSTBR 2.5/ 9-STF-5.08 - 1835164



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: MVSTBR 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - TMSTBP 2,5/ 9-STF-5,08 - 1853175



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 18, product range: TMSTBP 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module.

Printed-circuit board connector - FKC 2,5/ 9-STF-5,08 - 1873278



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FKC 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCVW 2,5/ 9-STF-5,08 - 1873870



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FKCVW 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCVR 2,5/ 9-STF-5,08 - 1874170



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FKCVR 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



Accessories

Printed-circuit board connector - QC 1/9-STF-5.08 - 1883420



PCB connector, nominal cross section: 1 mm², color: green, nominal current: 10 A, rated voltage (III/2): 630 V, contact surface: Tin, type of contact: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: QC 1/..-STF, pitch: 5.08 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, Locking clip: - without locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCT 2,5/ 9-STF-5,08 - 1902372



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FKCT 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: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - TFKC 2,5/ 9-STF-5,08 - 1962765



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 18, product range: TFKC 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0°, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - SMSTB 2,5/ 9-STF-5,08 - 1971138



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: SMSTB 2,5/..-STF, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, conductor/PCB connection direction: -45 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard

Printed-circuit board connector - FKCS 2,5/ 9-STF-5,08 - 1975338



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: Female connector, Number of potentials: 9, Number of rows: 1, Number of positions per row: 9, number of connections: 9, product range: FKCS 2,5/..-STF, pitch: 5.08 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, Locking clip: - Locking clip, plug-in system: CLASSIC COMBICON, Locking: Screw locking, type of packaging: packed in cardboard



Phoenix Contact 2021 © - all rights reserved http://www.phoenixcontact.com

PHOENIX CONTACT GmbH & Co. KG Flachsmarktstr. 8 32825 Blomberg Germany Tel. +49 5235 300

Fax +49 5235 3 41200

http://www.phoenixcontact.com