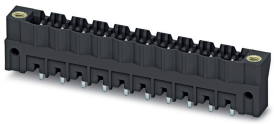
Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

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)

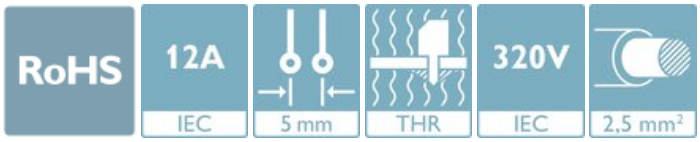


The figure shows an 10-position version

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: 3, Number of rows: 1, Number of positions per row: 3, number of connections: 3, product range: CCV 2,5/..-GF-LR, pitch: 5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: Snap-in locking, mounting: Lock & release threaded flange, 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
- Screwable flange for superior mechanical stability
- Automatic locking and intuitive release through Lock and Release operating lever in contrasting color



Key Commercial Data

Packing unit	1 pc
Minimum order quantity	50 pc
GTIN	4 055626 023960
GTIN	4055626023960
Weight per Piece (excluding packing)	2.400 g
Custom tariff number	85366930
Country of origin	Germany

Technical data

Item properties

Brief article description	Feed-through header
Connector system	CLASSIC COMBICON
Type of contact	Male connector

Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

Technical data

Item properties

Range of articles	CCV 2,5/..-GF-LR
Pitch	5 mm
Number of positions	3
Mounting type	THR soldering
Pin layout	Linear pinning
Locking	Lock & release threaded flange
Number of levels	1
Number of connections	3
Number of potentials	3
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	IIIa
CTI according to IEC 60112	175
Flammability rating according to UL 94	V0

Flange specifications

Type of locking	Snap-in locking

Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

Technical data

Flange specifications

Mounting flange	Lock & release threaded flange
Torque	0.3 Nm

Dimensions for the product

Caption	Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center
Length [l]	8.6 mm
Width [w]	25 mm
Height [h]	14 mm
Pitch	5 mm
Height (without solder pin)	12 mm
Solder pin [P]	2 mm
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.

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

Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

Technical data

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
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.	8 N
Withdraw strength per pos. approx.	6 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R_1	1.2 mΩ
Insertion/withdrawal cycles	25
Contact resistance R_2	1.2 mΩ
Impulse withstand voltage at sea level	4.8 kV

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	20
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 dm^3 SO_2 on 300 dm^3/40 °C/1 cycle
Impulse withstand voltage at sea level	4.8 kV
Power-frequency withstand voltage	2.21 kV

Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

Technical data

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

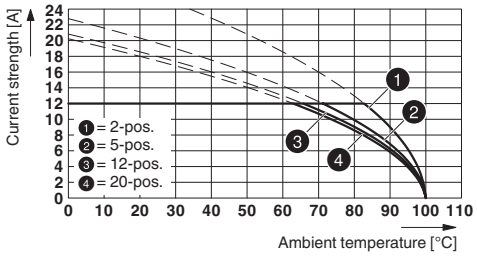
Connection in acc. with standard	EN-VDE
Flammability rating according to UL 94	V0

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

Diagram



Type: MSTB 2,5/...-STF with CCV 2,5/...-GF-LR P20 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

Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

Classifications

eCl@ss

eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 9.0	27440402

ETIM

ETIM 6.0	EC002637
ETIM 7.0	EC002637

UNSPSC

UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

cULus Recognized / EAC

Ex Approvals

Approval details

cULus Recognized http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm E60425-19931011

	B	D
Nominal voltage UN	300 V	300 V
Nominal current IN	16 A	10 A

Printed-circuit board connector - CCV 2,5/ 3-GF-LR P20 THR - 1837378

Approvals

EAC	EAC	B.01687

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