

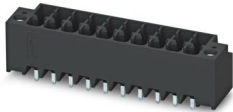
# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header



1787535

<https://www.phoenixcontact.com/us/products/1787535>

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: 1.5 mm<sup>2</sup>, color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 32, number of rows: 2, number of positions: 16, number of connections: 32, product range: DMCV 1,5/...-G1F-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2 mm, number of solder pins per potential: 1, plug-in system: COMBICON DFMC 1,5, 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
- Vertical connection enables multi-row arrangement on the PCB
- Screwable flange for superior mechanical stability
- Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- Small component size for applications where space is at a premium

## Commercial data

Item number	1787535
Packing unit	50 pc
Minimum order quantity	50 pc
Sales key	AA02
Product key	AABTJC
Catalog page	Page 187 (C-1-2013)
GTIN	4046356597159
Weight per piece (including packing)	6.567 g
Weight per piece (excluding packing)	6.547 g
Customs tariff number	85366930
Country of origin	DE

1787535

<https://www.phoenixcontact.com/us/products/1787535>

## Technical data

### Product properties

Product type	PCB headers
Product family	DMCV 1,5/..-G1F-THR
Product line	COMBICON Connectors S
Type	Headers
Number of positions	16
Pitch	3.5 mm
Number of connections	32
Number of rows	2
Number of potentials	32
Mounting flange	Lock & release threaded flange
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

Nominal current $I_N$	8 A
Nominal voltage $U_N$	160 V
Degree of pollution	3
Contact resistance	2.1 m $\Omega$
Rated voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Rated voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV

### Mounting

Mounting type	THR soldering
Pin layout	Linear pinning

### Flange

Tightening torque	0.2 Nm
-------------------	--------

### 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 $\mu\text{m}$ Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 $\mu\text{m}$ Ni)
Metal surface soldering area (top layer)	Tin (3 - 5 $\mu\text{m}$ Sn)

# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header



1787535

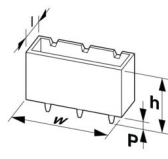
<https://www.phoenixcontact.com/us/products/1787535>

Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)
---	------------------------

## Material data - housing

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

## Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	63 mm
Height [h]	12 mm
Length [l]	10.6 mm
Installed height	10 mm
Solder pin length [P]	2 mm
Pin dimensions	0.8 x 0.8 mm

## PCB design

Pin spacing	5.50 mm
Hole diameter	1.4 mm

## Mechanical tests

### Visual inspection

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

### Dimension check

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

### Contact holder in insert

Specification	IEC 60512-15-1:2008-05
---------------	------------------------

1787535

<https://www.phoenixcontact.com/us/products/1787535>

Contact holder in insert Requirements >20 N	Test passed
--	-------------

#### Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	3 N
Withdraw strength per pos. approx.	2 N

### Electrical tests

#### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	20

#### 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	IIIa
Comparative tracking index (IEC 60112)	CTI 175
Rated insulation voltage (III/3)	160 V
Rated surge voltage (III/3)	2.5 kV
minimum clearance value - non-homogenous field (III/3)	1.5 mm
minimum creepage distance (III/3)	2.5 mm
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
minimum clearance value - non-homogenous field (III/2)	1.5 mm
minimum creepage distance (III/2)	1.6 mm
Rated insulation voltage (II/2)	250 V
Rated surge voltage (II/2)	2.5 kV
minimum clearance value - non-homogenous field (II/2)	1.5 mm
minimum creepage distance (II/2)	2.5 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 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

#### Durability test

# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header



1787535

<https://www.phoenixcontact.com/us/products/1787535>

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R <sub>1</sub>	2.1 mΩ
Contact resistance R <sub>2</sub>	2.4 mΩ
Insertion/withdrawal cycles	25

## 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	1.39 kV

## Ambient conditions

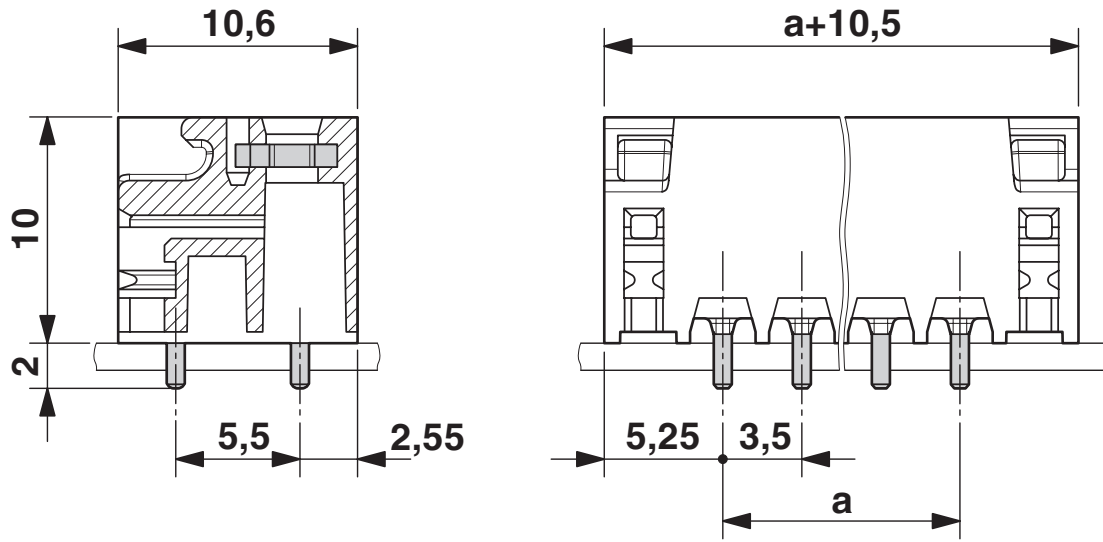
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C

## Packaging specifications

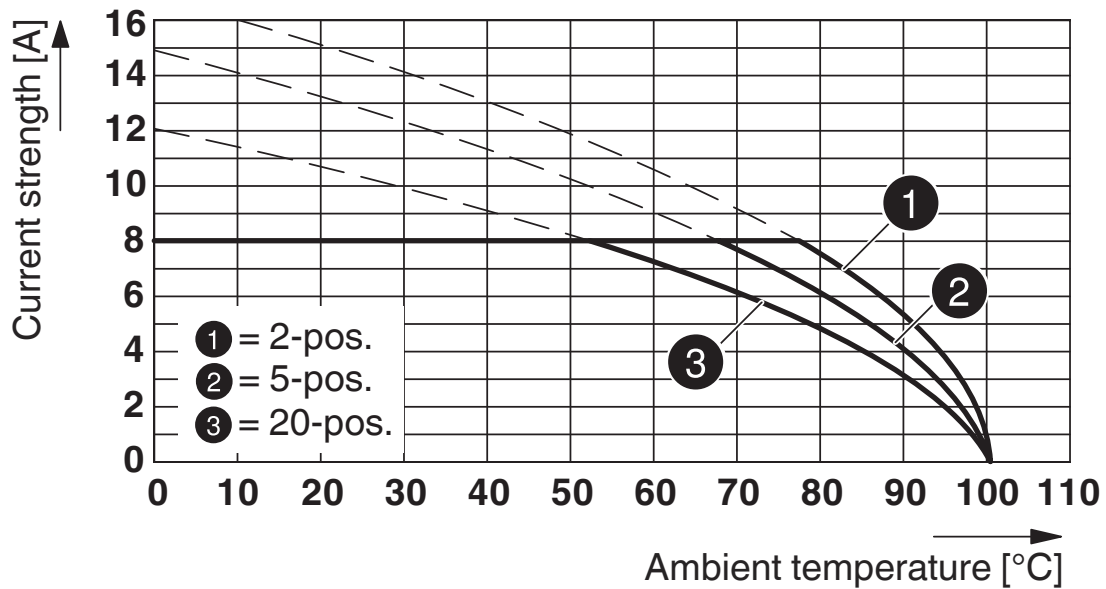
Type of packaging	packed in cardboard
-------------------	---------------------

Drawings

Dimensional drawing



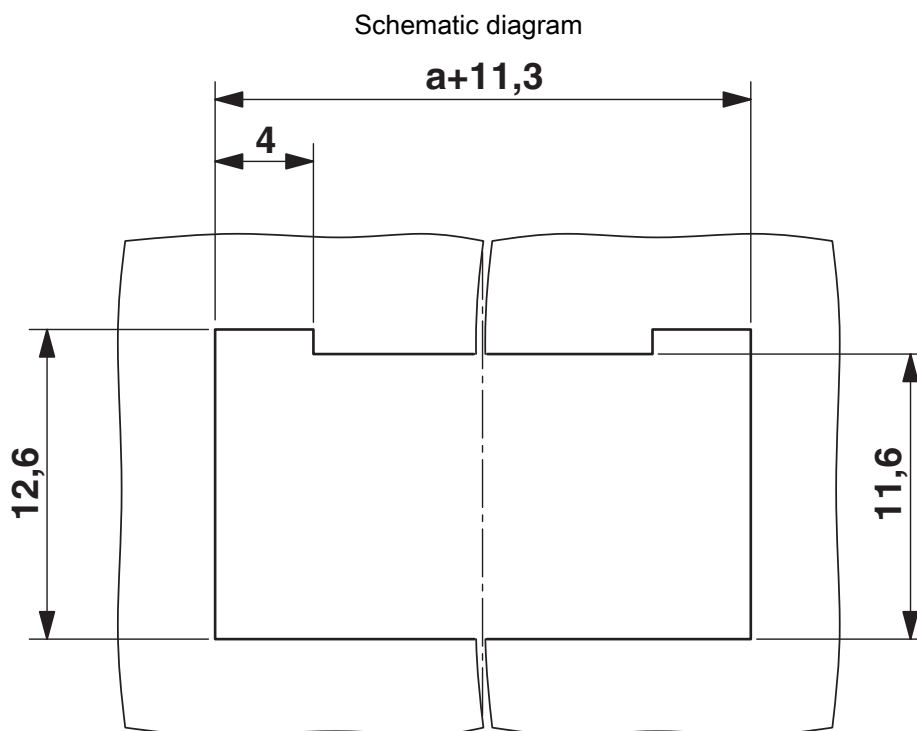
Diagram



Type: DFMC 1,5/...-STF-3,5 with DMCV 1,5/...-G1F-3,5-LR P...THR



Type: DFMC 1,5/...-ST-3,5-LR with DMCV 1,5/...-G1F-3,5-LR P20THR



Panel cutout

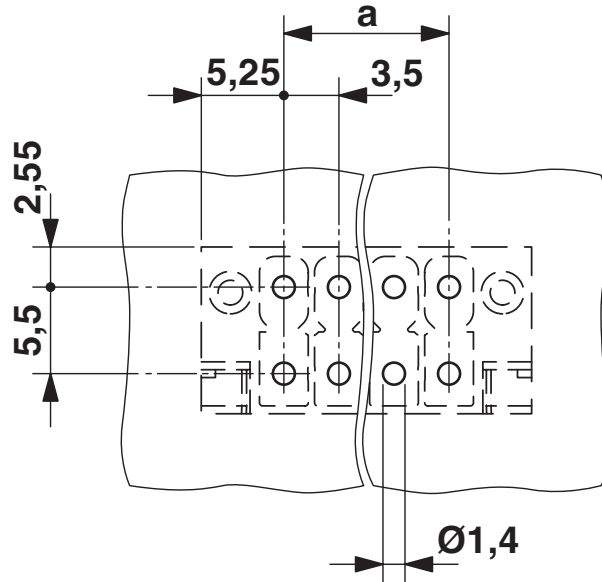
# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header



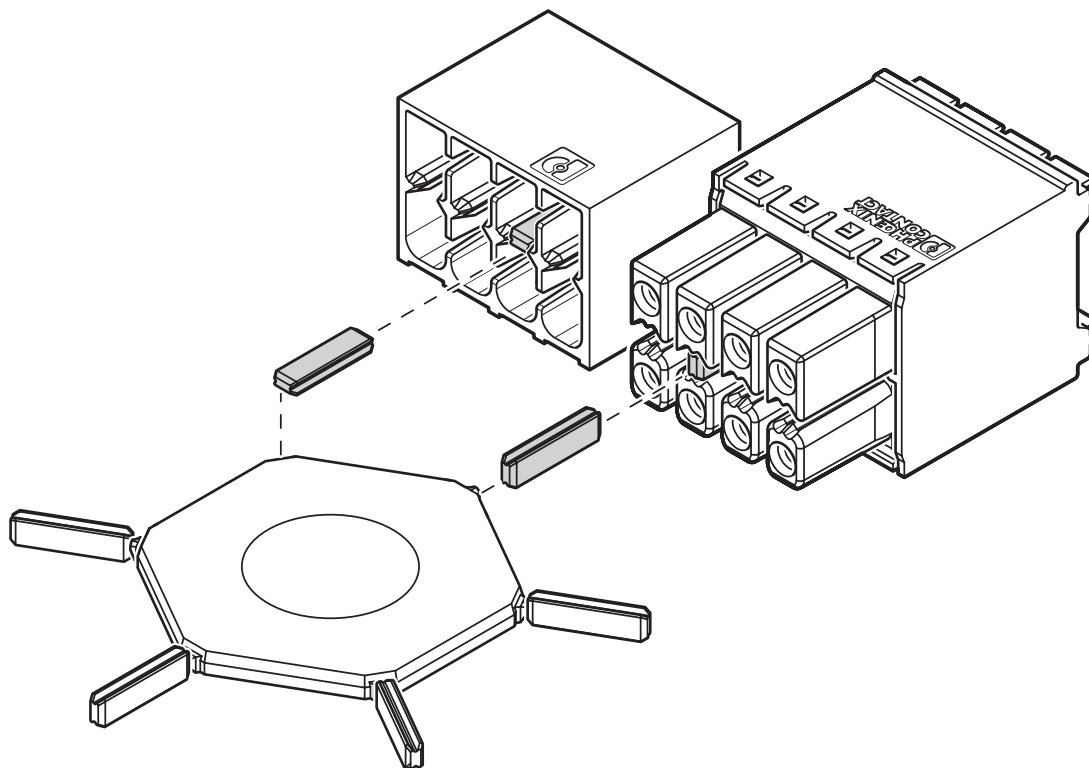
1787535

<https://www.phoenixcontact.com/us/products/1787535>

Drilling plan/solder pad geometry



Schematic diagram



Use of the CP-DMC... coding profile

# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header





1787535

<https://www.phoenixcontact.com/us/products/1787535>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1787535>

 <b>cULus Recognized</b> Approval ID: E60425-20110128				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
Use group B	300 V	8 A	-	-
Use group C	50 V	8 A	-	-
Use group D	300 V	8 A	-	-

 <b>VDE Gutachten mit Fertigungsüberwachung</b> Approval ID: 40038423				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	160 V	8 A	-	-

# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header



1787535

<https://www.phoenixcontact.com/us/products/1787535>

## Classifications

### ECLASS

ECLASS-11.0	27460201
ECLASS-12.0	27460201
ECLASS-13.0	27460201

### ETIM

ETIM 9.0	EC002637
----------	----------

### UNSPSC

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

1787535

<https://www.phoenixcontact.com/us/products/1787535>

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
---	--------------------

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
-------------------------------------	----------------------------

# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header



1787535

<https://www.phoenixcontact.com/us/products/1787535>

## Accessories

### CP-DMC 1,5 NAT - Coding profile

1790647

<https://www.phoenixcontact.com/us/products/1790647>

Coding profile, for insertion between the coding ribs of the connector and the header following the reflow soldering process, insulating material, color: natural

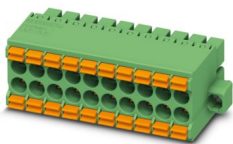


### DFMC 1,5/16-STF-3,5 - PCB connector

1790438

<https://www.phoenixcontact.com/us/products/1790438>

PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 32, number of rows: 2, number of positions: 16, number of connections: 32, product range: DFMC 1,5/..-STF, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON DFMC 1,5, locking: Screw locking mechanism, mounting: Screw flange, type of packaging: packed in cardboard



# DMCV 1,5/16-G1F-3,5-LR P20THR - PCB header

1787535

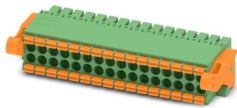
<https://www.phoenixcontact.com/us/products/1787535>



## DFMC 1,5/16-ST-3,5-LR - PCB connector

1790629

<https://www.phoenixcontact.com/us/products/1790629>



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Socket, number of potentials: 32, number of rows: 2, number of positions: 16, number of connections: 32, product range: DFMC 1,5/..-ST-LR, pitch: 3.5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON DFMC 1,5, locking: Snap-in locking, mounting: Lock & Release ejector lever, type of packaging: packed in cardboard

---

Phoenix Contact 2024 © - 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)