



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



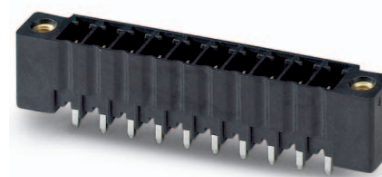
Data sheet

2017-12-08
Product version 02
Document revision 0

Order No.: 1779064

Type: MCV 1,5/ 2-GF-3,5 P26 THR

Header, Reflow/wave soldering



The figure shows a 10-position version of the product

1 Main features



- | | | | |
|-------------------------|---------------------|------------------------|---------------------|
| • No. of pos. | 2 | • Nominal current | 8 A |
| • Nominal cross section | 1.5 mm ² | • Nominal voltage | 160 V |
| • Color | black | • Connection direction | 90 ° |
| • Pitch | 3.5 mm | • Type of packaging | packed in cardboard |
| • Mounting type | THR soldering | | |

2 Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ Screwable flange for superior mechanical stability
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



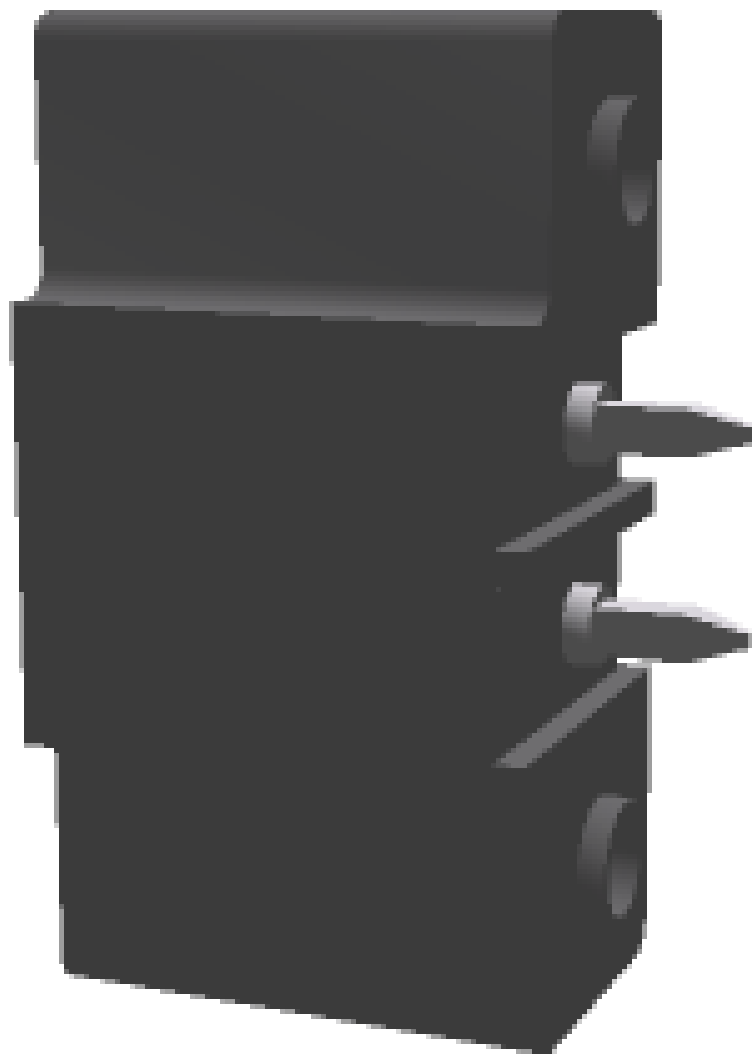
Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1779064

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**3 Table of contents**

1	Main features.....	1
2	Your advantages	1
3	Table of contents	2
4	3D model in PDF can be activated (Acrobat Reader only)	3
5	item properties.....	4
5.1	Material data	4
6	Dimensions.....	4
6.1	Dimensions for the product	4
6.2	Dimensions for PCB design	4
7	Series drawing.....	5
8	Packaging information	5
9	Application.....	5
9.1	Processing notes	5
9.2	Temperature limit values	5
10	Mechanical tests.....	6
11	Electrical tests	7
11.1	Electrical data	7
11.2	Air and creepage distances	7
12	Current carrying capacity/derating curves	8
13	Environmental and durability tests	9
13.1	Vibration test	9
14	Classification for connectors.....	9
15	Approvals	9
16	Commercial Data.....	10
17	Accessories.....	10
18	Combination tests.....	11

1779064 MCV 1,5/ 2-GF-3,5 P26 THR

4 3D model in PDF can be activated (Acrobat Reader only)



1779064 MCV 1,5/ 2-GF-3,5 P26 THR**5 item properties**

Order No.	1779064
Type	MCV 1,5/ 2-GF-3,5 P26 THR
Type of contact	Male connector
Range of articles	MCV 1,5/...-GF-THR
Pitch	3.5 mm
Number of positions	2
Locking	Threaded flange
Mounting type	THR soldering
Pin layout	Linear pinning
Product note	User information and design recommendations for through hole reflow technology can be found under "Downloads"

5.1 Material data

Material of metal parts		
Note	WEEE/RoHS-compliant, whisker-free acc. to IEC 60068-2-82/JEDEC JESD 201	
Contact material	Cu alloy	
Surface contact area	Ni 1.3 µm ... 3 µm , Sn 3 µm ... 5 µm	
Soldering area surface	Ni 1.3 µm ... 3 µm , Sn 3 µm ... 5 µm	
Surface characteristics	Tin-plated	
Insulating material data	Housing	Housing
Insulating material	LCP	
CTI according to IEC 60112	225	
Flammability rating according to UL 94	V0	
Color	black (9005)	

6 Dimensions**6.1 Dimensions for the product**

Length	6.9 mm
Width	17.3 mm
Height (without solder pin)	9.2 mm
Total height	11.8 mm
Solder pin [P]	2.6 mm
Dimension a	3.5 mm

6.2 Dimensions for PCB design

Hole diameter	1.4 mm
Pin dimensions	0,8 x 0,8 mm

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**7 Series drawing****8 Packaging information**

Type of packaging	packed in cardboard
Pieces per package	100

9 Application**9.1 Processing notes**

Process	Reflow/wave soldering
Specification	Following IPC/JEDEC J-STD-020E:2014-12
Specification	Following IEC 61760-1:2006-04
Specification	Following IEC 60068-2-58:2015-03
Moisture Sensitive Level	MSL 1
Classification temperature T_c	max. 260 °C
Solder cycles in the reflow	3
swash circumference	see dimensional drawing

9.2 Temperature limit values

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

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**10 Mechanical tests****Mechanical test group A**

Specification	IEC 61984:2008-10
Visual test	Test passed
Specification	IEC 60512-1-1:2002-02
Dimensional test	Test passed
Specification	IEC 60512-1-2:2002-02
Resistance of marking	Test passed
Specification	IEC 60068-2-70:1995-12
Insertion and withdrawal force	Test passed
Specification	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	6 N
Withdraw strength per pos. approx.	4 N
Polarization and coding	Test passed
Specification	IEC 60512-13-5:2006-02
Test force	20 N
Contact retention in insert	Test passed
Specification	IEC 60512-15-1:2008-05
Test force per pos.	20.5 N

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**11 Electrical tests****11.1 Electrical data**

Rated current / conductor cross section	8 A / 1.5 mm ²
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	1.2 mΩ
Degree of pollution	2

11.2 Air and creepage distances

Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	IIIa		
Comparative tracking index (IEC 60112:2003-01)	CTI 225		
Rated insulation voltage	160 V	160 V	250 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	III	III	II
Minimum clearance case A (inhomogeneous field)	1.5 mm	1.5 mm	1.5 mm
Minimum value of the creepage path requirement in acc. with table	2.5 mm	1.6 mm	2.5 mm

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**12 Current carrying capacity/derating curves**

Specification

IEC 61984:2008-10

Note

Representation based on IEC 60512-5-2:2002-02

Reduction factor

0.8

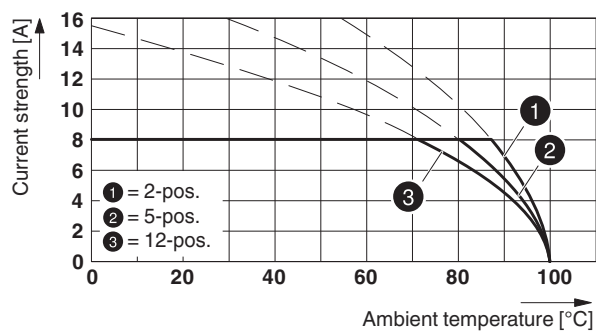
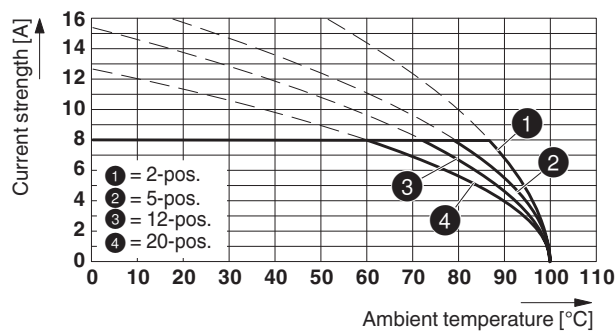
Number of positions

See diagram

Conductor cross section

1.5 mm²

Note

Type: MC 1,5/...-ST(F)-3,5 with MCV 1,5/...-G(F)-3,5 P... THR**Type: FMC 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5 P... THR**

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**13 Environmental and durability tests****13.1 Vibration test**

Specification	IEC 60068-2-6:2007-12
Result	Test passed
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
Test directions	X-, Y- and Z-axis

14 Classification for connectors

Specification	IEC 61984:2008-10
Main features	Connectors without switching capacity (COC)
Construction form	Fixed connectors
Strain relief elements	without strain relief
Protection against electric shock	Not encapsulated - touch-proof when inserted
Protection class	
Protective conductor	without PE
Lock	no

15 Approvals**VDE Gutachten mit Fertigungsüberwachung** mm²/AWG/kcmil

Voltage	160 V			
Current	8 A			

cULus Recognized

Use group	B	D		
mm ² /AWG/kcmil				
Voltage	300 V	300 V		
Current	8 A	8 A		

IECEE CB Scheme

mm ² /AWG/kcmil				
Voltage	160 V			
Current	8 A			

EAC

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**16 Commercial Data**

Order No.	1779064
Type	MCV 1,5/ 2-GF-3,5 P26 THR
Pieces per package	100
Net weight	1.626 g
GTIN	4046356532242
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 Accessories

Description	Order No.	Type
Coding profile, is inserted into the slot on the plug or inverted header, red insulating material	1734634	CP-MSTB

1779064 MCV 1,5/ 2-GF-3,5 P26 THR**18 Combination tests****MCV 1,5/-GF-THR**

Specification

Mechanical tests (A)

Insertion/withdrawal force per position

Polarization when inserted
Requirement >20 NContact holder in insert
Requirements >20 N**Durability tests (B)**Contact resistance R_1

Insertion/withdrawal cycles

Contact resistance R_2 Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$ Insulation resistance
Requirements > 5 M Ω **Thermal tests (C)**

Tested number of positions

Tested conductor cross section

Test current

Upper limiting temperature
Requirements < 100°C**Climatic tests (D)**

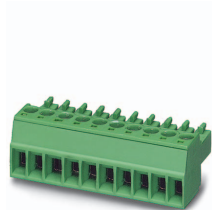
Test sequence 1: low temperature storage

Test sequence 2: heat storage

Test sequence 3: noxious gas storage
(ISO 6988)Rated impulse voltage at sea level
Voltage waveform $\geq (1.2/50 \mu s)$ Power-frequency withstand voltage
Voltage waveform $\geq (50/60 \text{ Hz})$ **Environmental and endurance tests (E)**

Specification

Degree of protection

**MC 1,5/-ST**

IEC 61984

approx. 6 N / 4 N

Test passed

Test passed

1.2 m Ω

25

1.3 m Ω

2.95 kV

1.39 kV

> 1 T Ω

12

1.5 mm²

8 A DC

Test passed

-40 °C/2 h

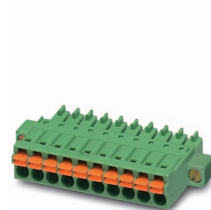
100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

2.95 kV

1.39 kV

IEC 61984:2008-10

Finger safety with IP20
test finger**FMC 1,5/-STF**

IEC 61984

approx. 9 N / 7 N

Test passed

Test passed

1.6 m Ω

25

1.7 m Ω

2.95 kV

1.39 kV

> 22 T Ω

20

1.5 mm²

8 A

Test passed

-40 °C/2 h

100 °C/168 h

0.2 dm³ SO₂ on 300 dm³/
40 °C/1 cycle

2.95 kV

1.39 kV

IEC 61984:2008-10

Finger safety with IP20
test finger