

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

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 mm², color: black, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Pin, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: MCV 1,5/-GF-THR, pitch: 3.5 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: 56 mm wide tape, For user information and design recommendations for through-hole reflow technology, go to: Downloads

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

Commercial Data

Item number	1779116
Packing unit	1 pc
Minimum order quantity	200 pc
Sales Key	AA02
Product Key	AABTAD
Catalog Page	Page 213 (C-1-2013)
GTIN	4046356532372
Weight per Piece (including packing)	4.812 g
Weight per Piece (excluding packing)	3.965 g
Customs tariff number	85366930
Country of origin	DE

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

Technical Data

Product properties

Type	Component suitable for through hole reflow
Product line	COMBICON Connectors S
Product type	PCB headers
Product family	MCV 1,5/..-GF-THR
Number of positions	4
Pitch	3.5 mm
Number of connections	4
Number of rows	1
Mounting flange	Threaded flange
Number of potentials	4
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	1.2 mΩ
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	0.3 Nm
-------------------	--------

Processing notes

Process	Reflow/wave soldering
Moisture Sensitive Level	MSL 1
Classification temperature T_c	260 °C
Solder cycles in the reflow	3

Material specifications

Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC
------	--

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

	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)

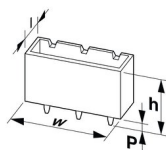
Material data - housing

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

Material data – actuating element

Color ()	()
----------	----

Dimensions

Dimensional drawing	
Pitch	3.5 mm
Width [w]	24.3 mm
Height [h]	11.8 mm
Length [l]	6.9 mm
Installed height	9.2 mm
Solder pin length [P]	2.6 mm

Mechanical tests

Test for conductor damage and slackening

Specification	IEC 60999-1:1999-11
Result	Test passed

Pull-out test

Specification	IEC 60999-1:1999-11
Conductor cross section/conductor type/tractive force setpoint/actual value	0.14 mm² / solid / > 10 N
	0.14 mm² / flexible / > 10 N
	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

Insertion and withdrawal forces

Result	Test passed
No. of cycles	25
Insertion strength per pos. approx.	6 N
Withdraw strength per pos. approx.	4 N

Torque test

Specification	IEC 60999-1:1999-11
---------------	---------------------

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	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

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

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)
Sweep speed	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h

Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV
Contact resistance R_1	1.2 m Ω
Contact resistance R_2	1.3 m Ω
Insertion/withdrawal cycles	25
Insulation resistance, neighboring positions	> 5 M Ω

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	100 °C/168 h
Power-frequency withstand voltage	1.39 kV

Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

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

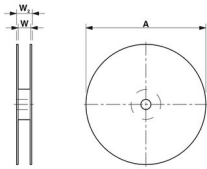
MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

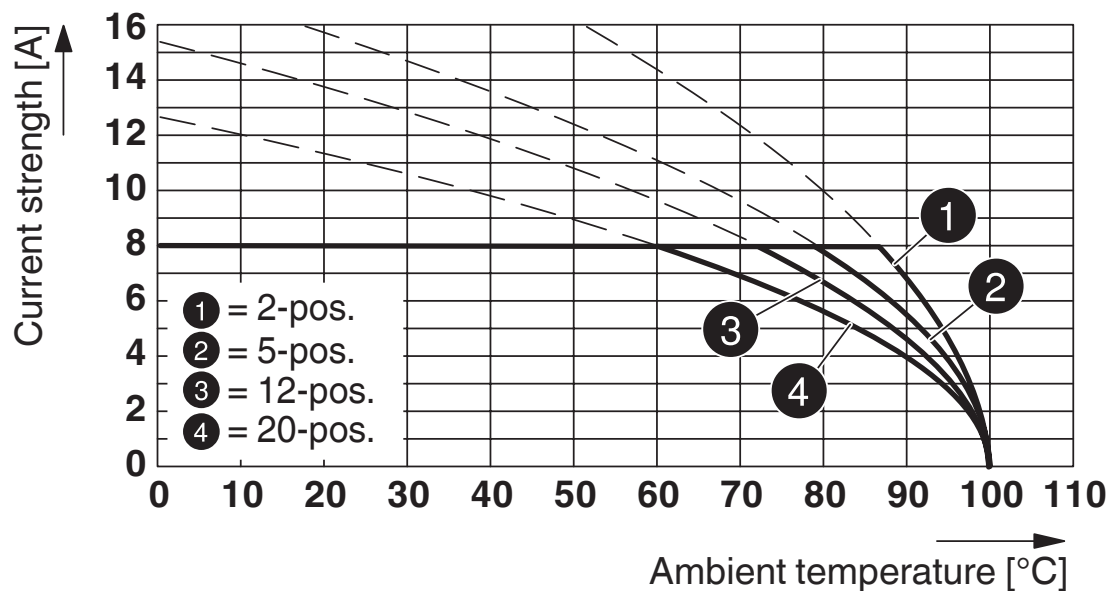
<https://www.phoenixcontact.com/us/products/1779116>

Packaging specifications

Dimensional drawing		
Type of packaging		56 mm wide tape
[W] tape width		56 mm
[W2] coil overall dimension		62.4 mm
[A] coil diameter		330 mm
Outer packaging type		Transparent-Bag
ESD level		(D) electrostatically conductive
Specification		DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

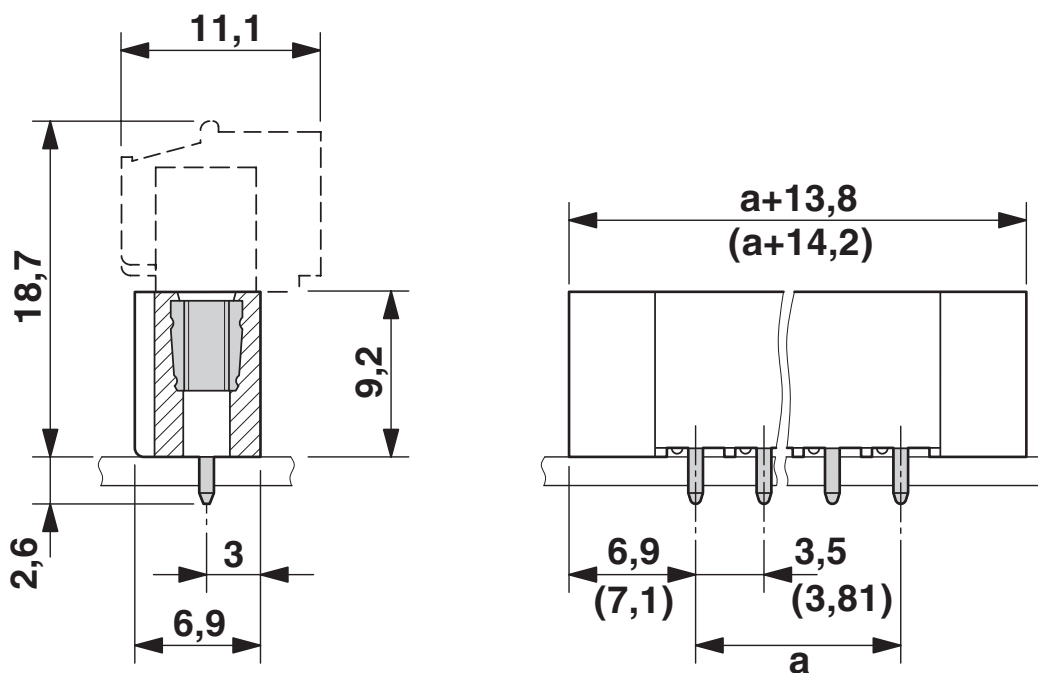
Drawings

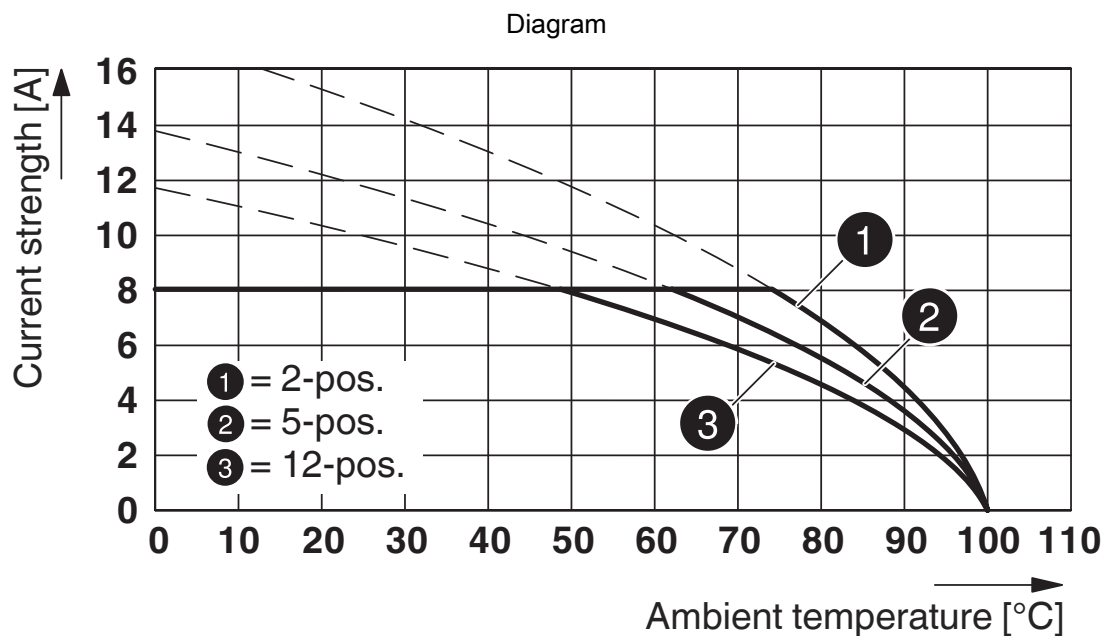
Diagram



Type: FMC 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5 P... THR

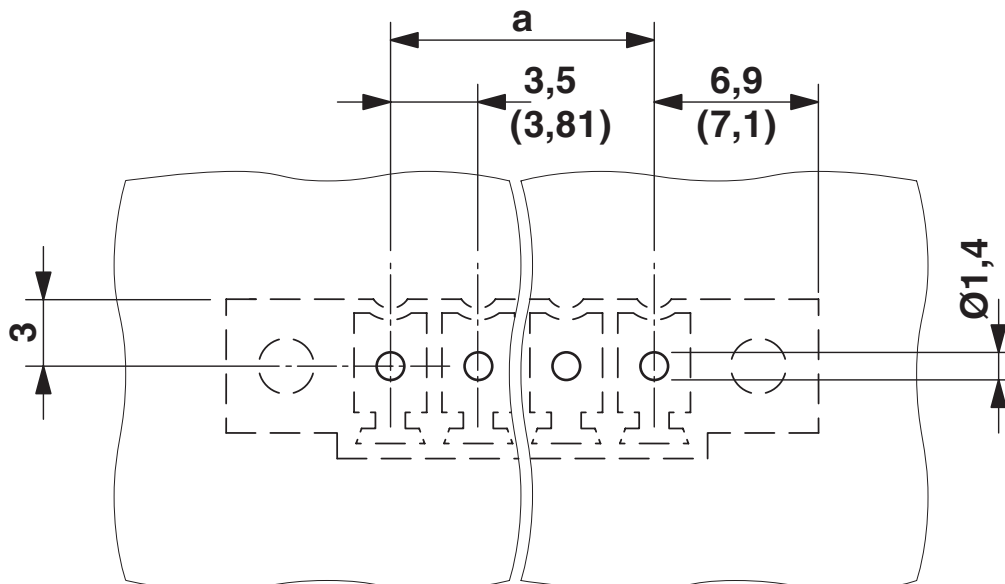
Dimensional drawing

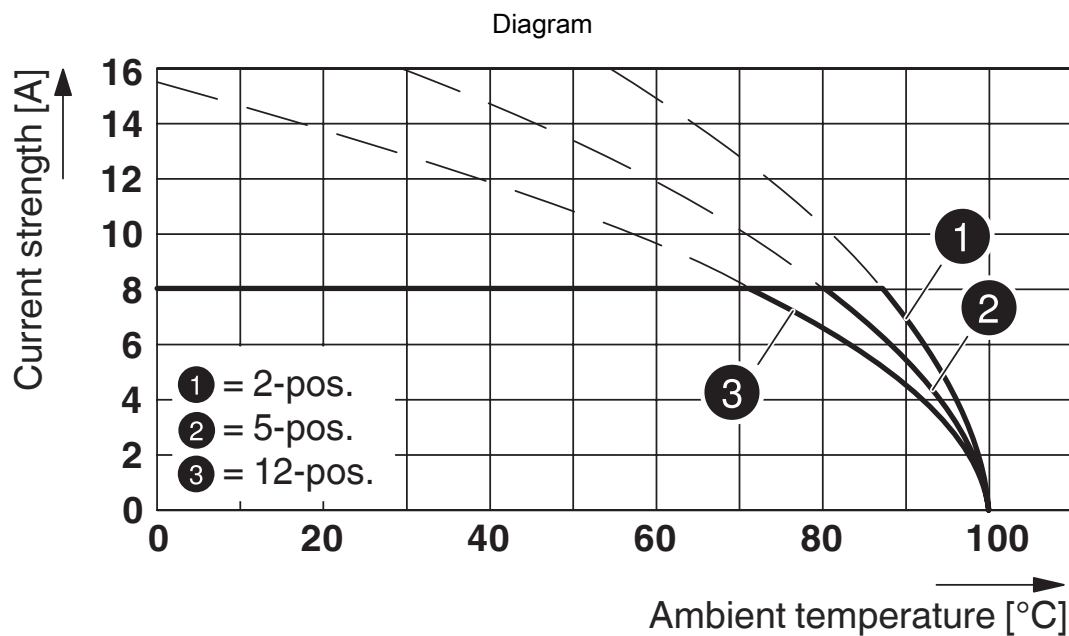




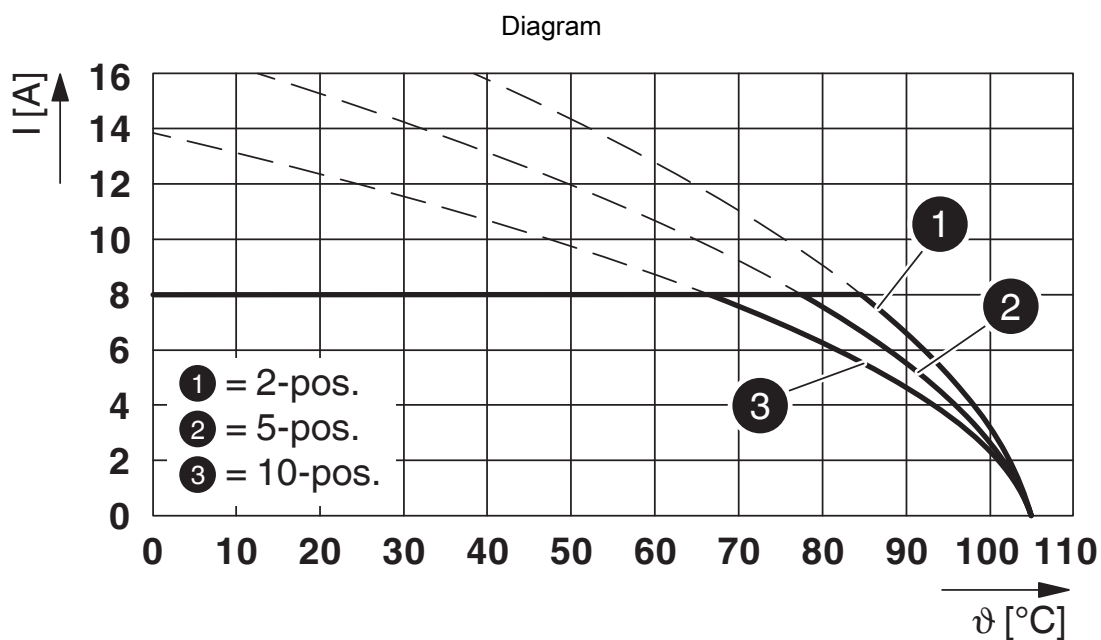
Type: MCV(W/R) 1,5/...-STF-3,81 with MCV 1,5/...-GF-3,5 P... THR

Drilling plan/solder pad geometry





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



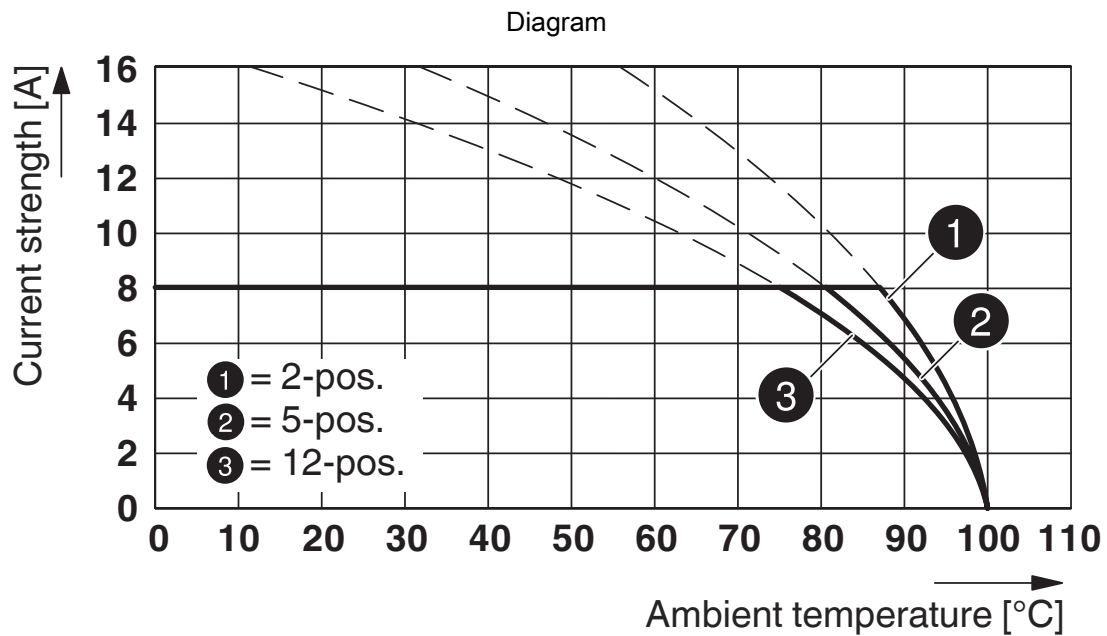
Type: TFMC 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5 P... THR

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>



Type: FK-MCP 1,5/...-STF-3,5 with MCV 1,5/...-GF-3,5 P...THR

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

Approvals

	IECEE CB Scheme			
	Approval ID: DE1-60987-B1B2			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
		160 V	8 A	-
				Cross Section mm ²
				-

	EAC
	Approval ID: B.01687

	cULus Recognized			
	Approval ID: E60425-20110128			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
Use group B				Cross Section mm ²
		300 V	8 A	-
Use group D				-
		300 V	8 A	-

	VDE Zeichengenehmigung			
	Approval ID: 40011723			
		Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG
		160 V	8 A	Cross Section mm ²
				-

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

Classifications

ECLASS

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

ETIM

ETIM 8.0	EC002637
----------	----------

UNSPSC

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

MCV 1,5/ 4-GF-3,5 P26 THRR56 - PCB header



1779116

<https://www.phoenixcontact.com/us/products/1779116>

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Phoenix Contact 2023 © - 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