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Product version 00
Document revision 0

Data sheet

Order No.: 1788589

Type: MC 1,5/ 6-G-3,5 P26 THR

Header, Reflow/wave soldering



The figure shows a 10-position version of the product

1 Main features



- No. of pos. 6
- Nominal cross section 1.5 mm²
- Color black
- Pitch 3.5 mm
- Mounting type THR soldering
- Nominal current 8 A
- Nominal voltage 160 V
- Connection direction 0 °
- Type of packaging packed in cardboard

2 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

Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1788589

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



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5 item properties

Order No.	1788589
Type	MC 1,5/ 6-G-3,5 P26 THR
Type of contact	Male connector
Range of articles	MC 1,5/..-G-THR
Pitch	3.5 mm
Number of positions	6
Locking	without
Mounting type	THR soldering
Pin layout	Linear pinning

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 µm ... 3 µm , Sn 3 µm ... 5 µm
Soldering area surface	Ni 1 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	9.2 mm
Width	22.39 mm
Height (without solder pin)	6.9 mm
Total height	9.5 mm
Solder pin [P]	2.6 mm
Dimension a	17.5 mm

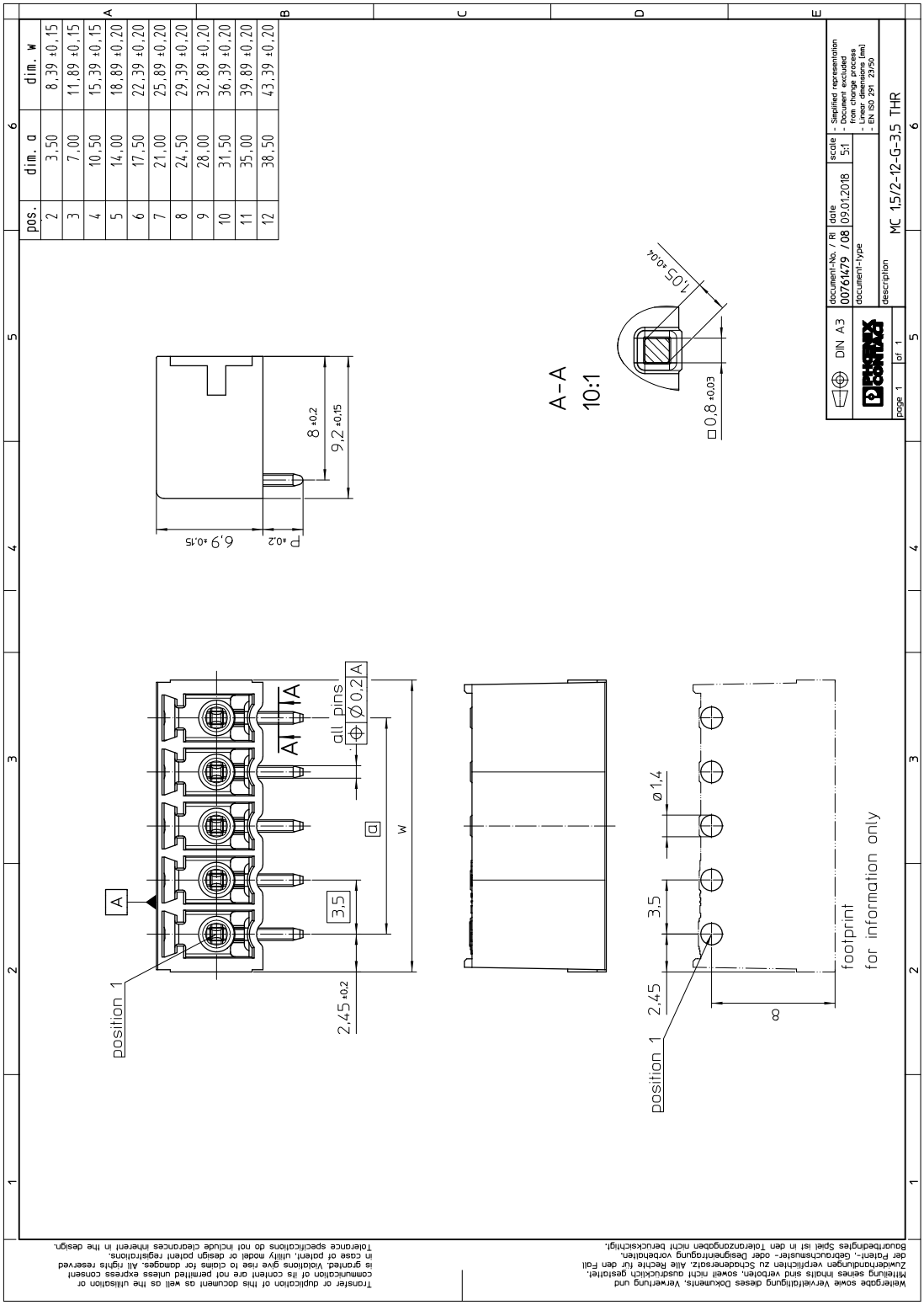
6.2 Dimensions for PCB design

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

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1788589 MC 1,5/ 6-G-3,5 P26 THR

7 Series drawing



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8 Packaging information

Type of packaging	packed in cardboard
Pieces per package	50

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	Follwing 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)

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10 Mechanical tests

Mechanical test group A	
Specification	IEC 61984:2008-10
Visual examination	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.	8 N
Withdraw strength per pos. approx.	5 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 N

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11 Electrical tests

11.1 Electrical data

Rated current / conductor cross section	8 A / 1.5 mm²
Rated insulation voltage (III/2)	160 V
Rated surge voltage (III/2)	2.5 kV
Contact resistance	1.3 mΩ
Degree of pollution	2

11.2 Air and creepage distances

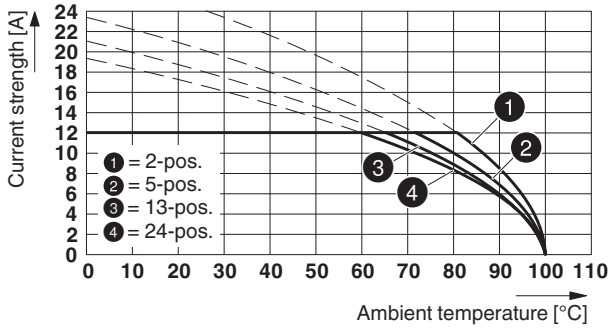
Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	IIIa		
Comparative tracking index (IEC 60112:2003-01)	CTI 225		
Rated insulation voltage	160 V	160 V	250 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category	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

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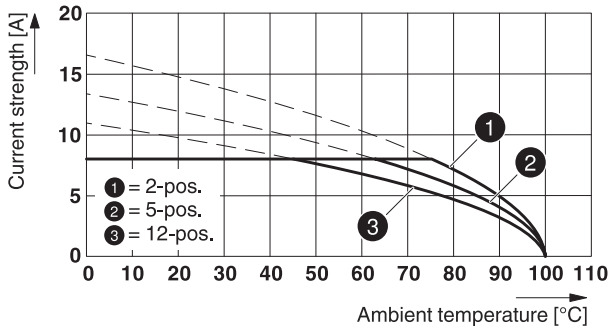
12 Current carrying capacity/derating curves

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	

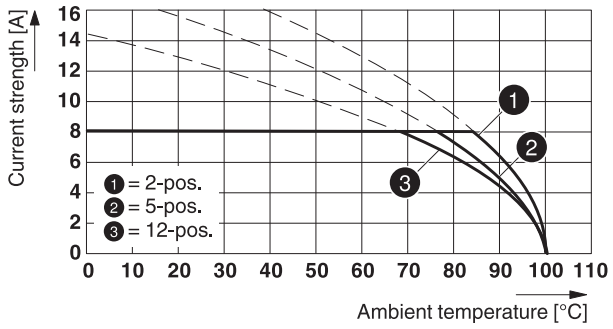
Type: MC 1,5/...-ST(F)-3,5 with MC 1,5/...-G(F)-3,5 P... THR



Type: MCVR 1,5/...-ST-3,5 with MC 1,5/...-G-3,5 P...THR



Type: FMC 1,5/...-ST-3,5 with MC 1,5/...-G-3,5 P26 THR



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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		
mm²/AWG/kcmil				
Voltage	300 V	300 V		
Current	8 A	8 A		

IECEE CB Scheme				
mm²/AWG/kcmil				
Voltage	160 V			
Current	8 A			

EAC

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16 Commercial Data

Order No.	1788589
Type	MC 1,5/ 6-G-3,5 P26 THR
Pieces per package	50
Net weight	1.6 g
GTIN	4046356611688
	Information that applies locally, see link on page 1
Country of origin	Information that applies locally, see link on page 1

17 corresponding plugs

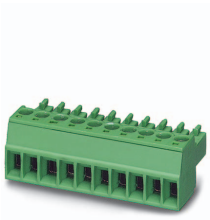
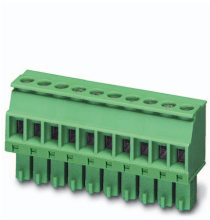
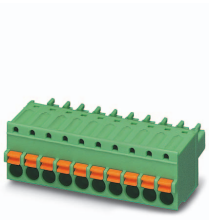
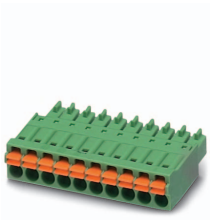
Order No.	Type
1772650	TFMC 1,5/ 6-ST-3,5
1840405	MC 1,5/ 6-ST-3,5
1862894	MCVW 1,5/ 6-ST-3,5
1863194	MCVR 1,5/ 6-ST-3,5
1939950	FK-MCP 1,5/ 6-ST-3,5
1952306	FMC 1,5/ 6-ST-3,5

18 Accessories

Description	Order No.	Type
	1841161	MC 1,5/10-LWL 1,5-3,5
	1841187	MC 1,5/10-LWL 2,3-3,5
	1841200	MC 1,5/10-LWL 4-3,5

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19 Combination tests

					
	MC 1,5/..-G-THR	**MC 1,5/..-ST**	**MCVR 1,5/..-ST**	**FK-MCP 1,5/..-ST**	**FMC 1,5/..-ST**
Mechanical tests (A)					
Insertion/withdrawal force per position	approx. 8 N / 5 N	approx. 8 N / 6 N	approx. 12 N / 9 N	approx. 8 N / 6 N	
Polarization when inserted Requirement >20 N	Test passed	Test passed	Test passed	Test passed	
Contact holder in insert Requirements >20 N	Test passed	Test passed	Test passed	Test passed	
Durability tests (B)					
Contact resistance R_1	1.3 mΩ	3.6 mΩ	1.6 mΩ	2 mΩ	
Insertion/withdrawal cycles	25	25	25		
Contact resistance R_2	1.3 mΩ	3.7 mΩ	1.6 mΩ		
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	2.95 kV	2.95 kV	2.95 kV	2.95 kV	
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.39 kV	1.39 kV	1.39 kV	1.39 kV	
Insulation resistance Requirements > 5 MΩ	> 4 TΩ	> 0.5 TΩ	> 0.2 TΩ		
Thermal tests (C)					
Tested number of positions	20	12	12	12	
Tested conductor cross section	1.5 mm²	1.5 mm²	1.5 mm²	0.5 mm²	
Test current	8 A	8 A	8 A	8 A	
Upper limiting temperature Requirements < 100°C	Test passed	Test passed	Test passed	Test passed	
Climatic tests (D)					
Test sequence 1: low temperature storage	-40 °C/2 h	-40 °C/2 h	-40 °C/2 h	-40 °C/2 h	
Test sequence 2: heat storage	100 °C/168 h	100 °C/168 h	100 °C/168 h	100 °C/168 h	
Test sequence 3: noxious gas storage (ISO 6988)	0.2 dm^3 SO_2 on 300 dm^3/ 40 °C/1 cycle	0.2 dm^3 SO_2 on 300 dm^3/ 40 °C/1 cycle	0.2 dm^3 SO_2 on 300 dm^3/ 40 °C/1 cycle	0.2 dm^3 SO_2 on 300 dm^3/ 40 °C/1 cycle	
Rated impulse voltage at sea level Voltage waveform ≥ (1.2/50 µs)	2.95 kV	2.95 kV	2.95 kV	2.95 kV	
Power-frequency withstand voltage Voltage waveform ≥ (50/60 Hz)	1.39 kV	1.39 kV	1.39 kV	1.39 kV	
Environmental and endurance tests (E)					
Specification	IEC 61984:2008-10	IEC 61984:2008-10	IEC 61984:2008-10		
Degree of protection	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger	Finger safety with IP20 test finger	

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