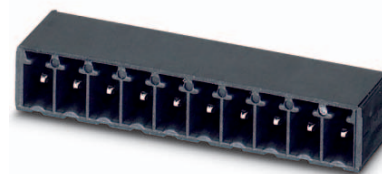


Order No.: 1788589

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 current | 8 A |
| • Nominal cross section | 1.5 mm ² | • Nominal voltage | 160 V |
| • Color | black | • Connection direction | 0 ° |
| • 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
- ✓ 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

1788589 MC 1,5/ 6-G-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	6
9	Application.....	6
	9.1 Processing notes	6
	9.2 Temperature limit values	6
10	Mechanical tests.....	7
11	Electrical tests	8
	11.1 Electrical data	8
	11.2 Air and creepage distances	8
12	Current carrying capacity/derating curves	9
13	Environmental and durability tests	10
	13.1 Vibration test	10
14	Classification for connectors.....	10
15	Approvals	10
16	Commercial Data.....	11
17	corresponding plugs	11
18	Accessories.....	11
19	Combination tests.....	12

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

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



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

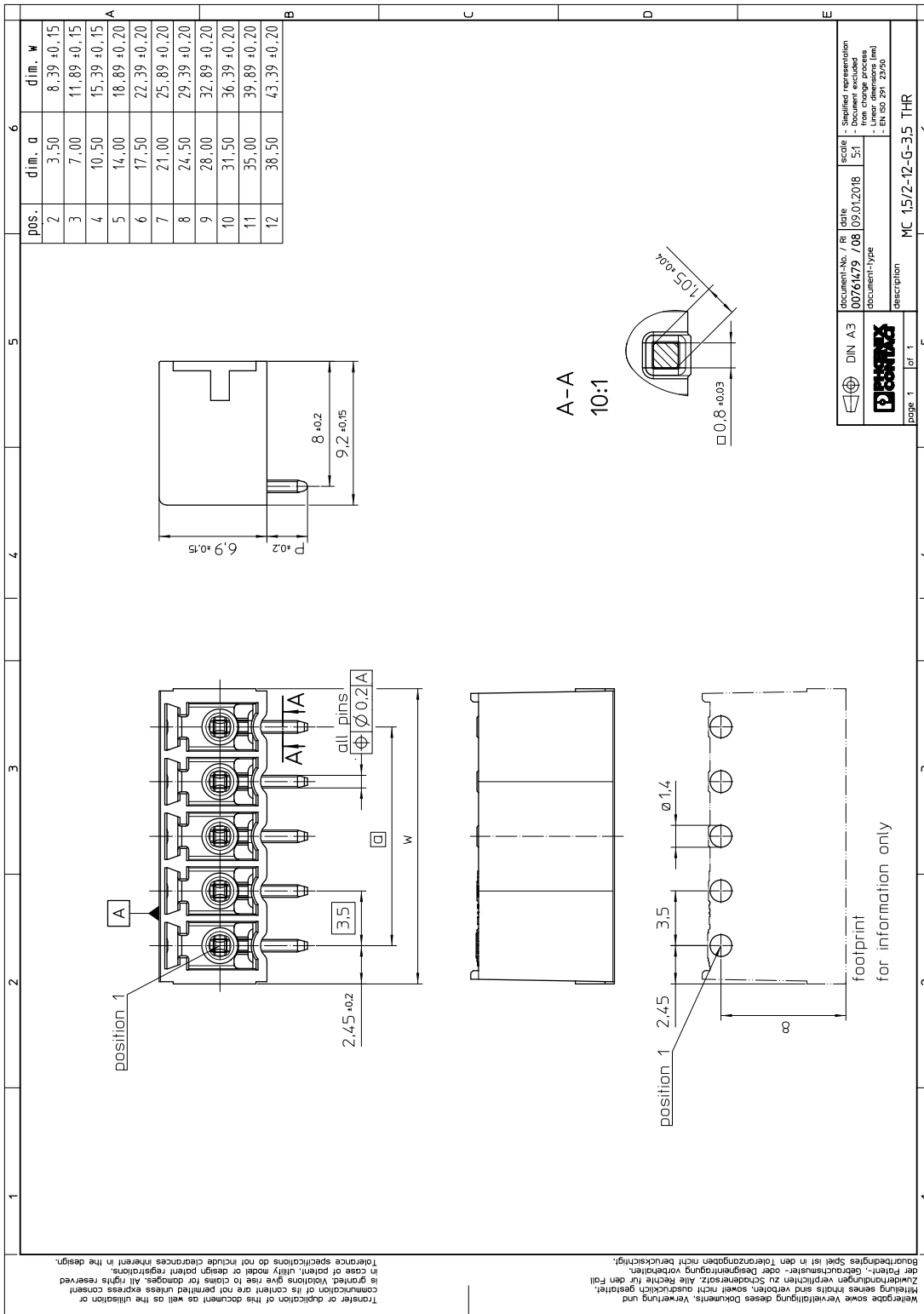
Length	9.2 mm
Width	22.39 mm
Height (without solder pin)	6.9 mm
Total height	9.5 mm
Solder pin [P]	2.6 mm
Dimension a	17.5 mm

6.2 Dimensions for PCB design

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

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

7 Series drawing



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

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

1788589 MC 1,5/ 6-G-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	1.3 mΩ
Degree of pollution	2

11.2 Air and creepage distances

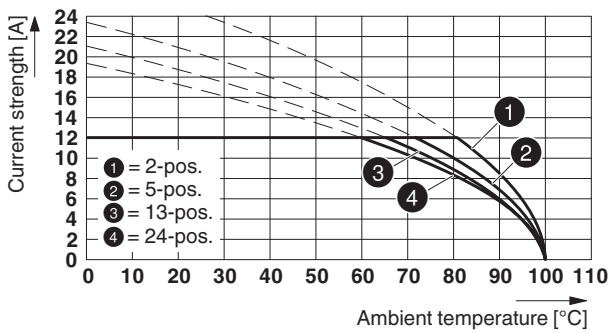
Component	Header		
Specification	IEC 60664-1:2007-04		
Mains type	unearthed mains		
Insulating material group	IIIa		
Comparative tracking index (IEC 60112:2003-01)	CTI 225		
Rated insulation voltage	160 V	160 V	250 V
Rated surge voltage	2.5 kV	2.5 kV	2.5 kV
Degree of pollution	3	2	2
Overvoltage category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

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

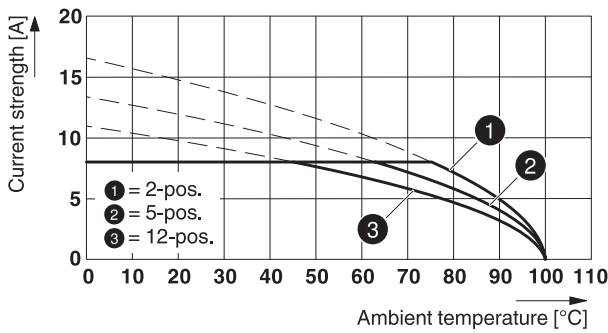
12 Current carrying capacity/derating curves

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 mm ²
Note	

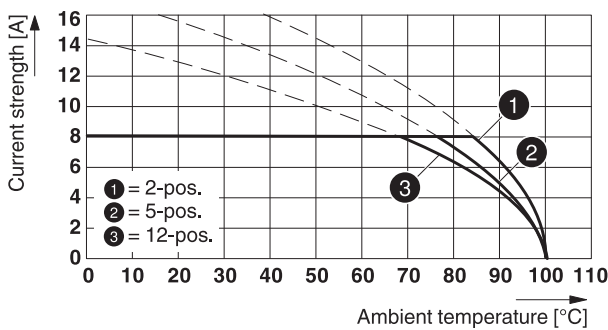
Type: MC 1,5/...-ST(F)-3,5 with MC 1,5/...-G(F)-3,5 P... THR



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



1788589 MC 1,5/ 6-G-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 **

mm ² /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 

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

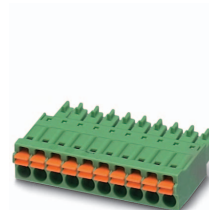
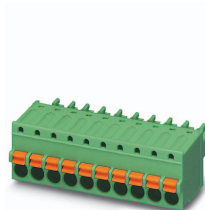
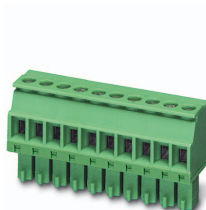
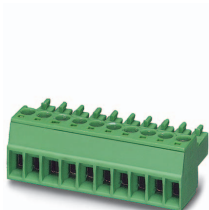
Order No.	Type
1772650	TFMC 1,5/ 6-ST-3,5
1840405	MC 1,5/ 6-ST-3,5
1862894	MCVW 1,5/ 6-ST-3,5
1863194	MCVR 1,5/ 6-ST-3,5
1939950	FK-MCP 1,5/ 6-ST-3,5
1952306	FMC 1,5/ 6-ST-3,5

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

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

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 mm ²	1.5 mm ²	1.5 mm ²	0.5 mm ²
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