

# DMC 1,5/16-G1F-3,5-LR P26AUTHR - PCB header



1874289

<https://www.phoenixcontact.com/us/products/1874289>

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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: Au, contact connection type: Pin, number of potentials: 32, number of rows: 2, number of positions: 16, number of connections: 32, product range: DMC 1,5/...-G1F-THR, pitch: 3.5 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: COMBICON DFMC 1,5, Pin connector pattern alignment: Standard, locking: Lock-and-release locking system, mounting method: Lock & Release, type of packaging: packed in cardboard

## Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Designed for integration into the SMT soldering process
- Screwable flange for superior mechanical stability
- Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- Conductor connection on several levels enables higher contact density

## Commercial data

Item number	1874289
Packing unit	50 pc
Minimum order quantity	50 pc
Product key	AABTJA
GTIN	4055626260129
Weight per piece (including packing)	8.3 g
Weight per piece (excluding packing)	8.28 g
Country of origin	DE

1874289

<https://www.phoenixcontact.com/us/products/1874289>

## Technical data

### Product properties

Product type	PCB headers
Product family	DMC 1,5/..-G1F-THR
Product line	COMBICON Connectors S
Number of positions	16
Pitch	3.5 mm
Number of connections	32
Number of rows	2
Number of potentials	32
Pin layout	Linear pinning
Solder pins per potential	1

### Electrical properties

#### Properties

Nominal current $I_N$	8 A
Nominal voltage $U_N$	160 V
Contact resistance	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 / wave soldering
Pin layout	Linear pinning

#### Flange

Tightening torque	0.2 Nm
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#### 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 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy

# DMC 1,5/16-G1F-3,5-LR P26AUTHR - PCB header



1874289

<https://www.phoenixcontact.com/us/products/1874289>

Surface characteristics	partially gold-plated
Metal surface contact area (top layer)	Gold (0.8 $\mu\text{m}$ - 1.4 $\mu\text{m}$ Au)
Metal surface contact area (middle layer)	Nickel (2 $\mu\text{m}$ - 4 $\mu\text{m}$ Ni)
Metal surface soldering area (top layer)	Gold (0.1 $\mu\text{m}$ - 0.8 $\mu\text{m}$ Au)
Metal surface soldering area (middle layer)	Nickel (2 $\mu\text{m}$ - 4 $\mu\text{m}$ 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]	13.4 mm
Length [l]	11.6 mm
Installed height	10.8 mm
Solder pin length [P]	2.6 mm
Pin dimensions	0.8 x 0.8 mm

## PCB design

Pin spacing	2.50 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

1874289

<https://www.phoenixcontact.com/us/products/1874289>

Specification	IEC 60512-13-5:2006-02
Result	Test passed

#### Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

#### Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	100
Insertion strength per pos. approx.	2.6 N
Withdraw strength per pos. approx.	1.4 N

### Electrical tests

#### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	9

#### 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

#### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	2.95 kV

# DMC 1,5/16-G1F-3,5-LR P26AUTHR - PCB header



1874289

<https://www.phoenixcontact.com/us/products/1874289>

Contact resistance R <sub>1</sub>	2 mΩ
Contact resistance R <sub>2</sub>	1.8 mΩ
Contact resistance R <sub>2</sub> 2nd level	1.9 mΩ
Insertion/withdrawal cycles	100
Insulation resistance, neighboring positions	> 5 MΩ

## Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	1.0 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

## Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 500 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 500 Hz)
Test duration per axis	2 h
Test directions	X-, Y- and Z-axis

## Ambient conditions

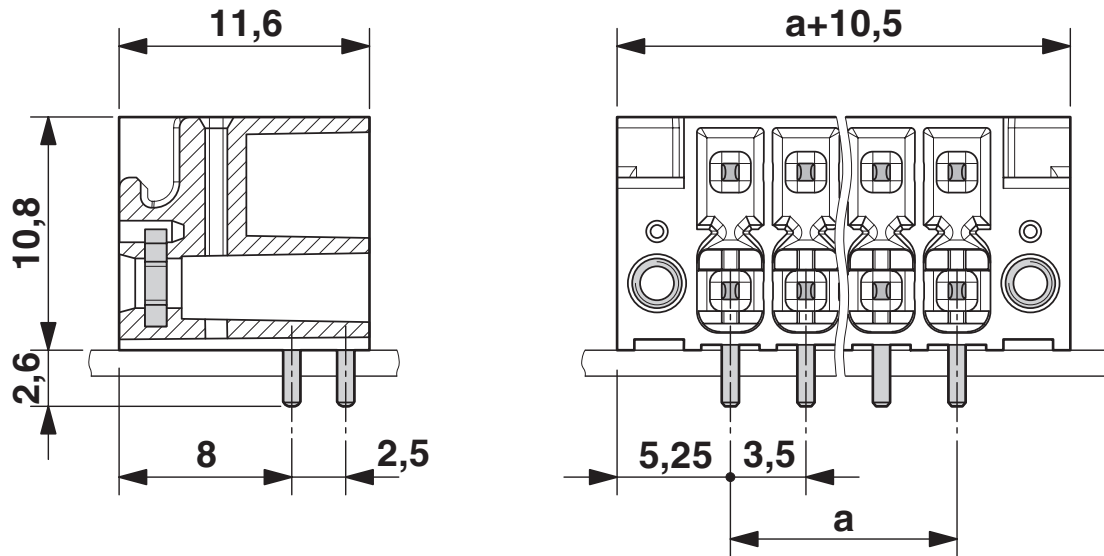
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

## Packaging specifications

Type of packaging	packed in cardboard
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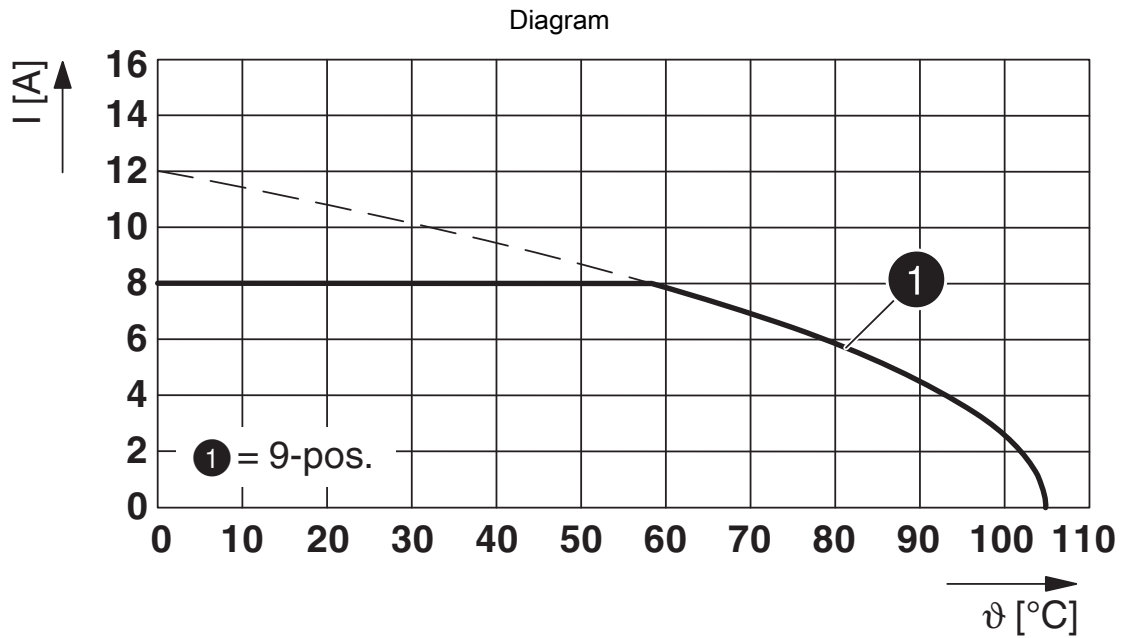
## Drawings

Dimensional drawing



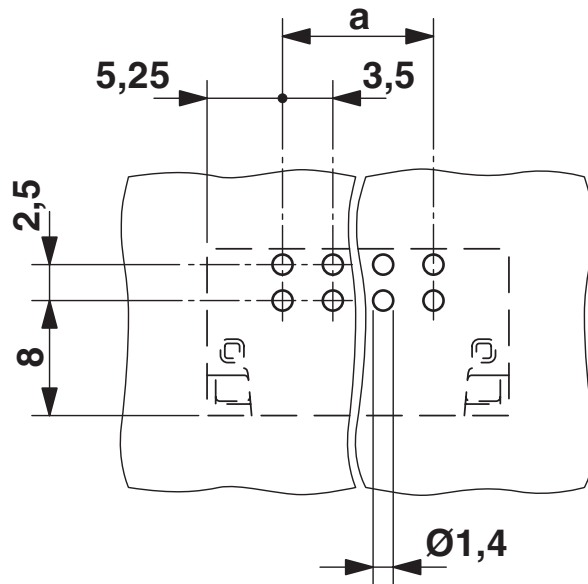
Schematic diagram





Type: DFMC 1,5/...-ST-3,5-LR AU with DMC 1,5/...-G1F-3,5-LRP...AUTHR

Drilling plan/solder pad geometry



1874289

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## Approvals

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 <b>cULus Recognized</b> Approval ID: E60425-20110128				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
B	300 V	8 A	-	-
C	50 V	8 A	-	-
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 $mm^2$
keine	160 V	8 A	-	-

1874289

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## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

ETIM 10.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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%
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### EF3.1 Climate Change

CO2e kg	0.136 kg CO2e
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