

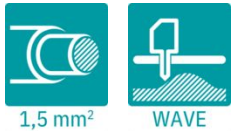
# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

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 mm<sup>2</sup>, color: light gray, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Sn, contact connection type: Pin, number of rows: 1, number of positions: 4, product range: MCO 1,5/..-G1L, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 2.75 mm, number of solder pins per potential: 1, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Orthogonal, locking: without, Fixed coding of the position: 1, item with lateral pin outlet on the left

## Your advantages

- Plug-in direction orthogonal to the PCB

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1288296                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 1,000 pc                       |
| Note                                 | Made to order (non-returnable) |
| Product key                          | ACHADB                         |
| GTIN                                 | 4063151513795                  |
| Weight per piece (including packing) | 2.364 g                        |
| Weight per piece (excluding packing) | 2.364 g                        |
| Country of origin                    | PL                             |

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

## Technical data

### Product properties

|                           |                                 |
|---------------------------|---------------------------------|
| Product type              | PCB headers                     |
| Product family            | MCO 1,5/..-G1L                  |
| Type                      | Header perpendicular to the PCB |
| Number of positions       | 4                               |
| Pitch                     | 3.5 mm                          |
| Number of rows            | 1                               |
| 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          | 1.6 m $\Omega$ |
| 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)        | 320 V          |
| Rated surge voltage (II/2)  | 2.5 kV         |

### Mounting

|               |                |
|---------------|----------------|
| Mounting type | Wave soldering |
| Pin layout    | Linear pinning |

### 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   |
| Surface characteristics                  | tin-plated   |
| Metal surface contact area (top layer)   | Tin (4 $\mu\text{m}$ - 8 $\mu\text{m}$ Sn)                                       |
| Metal surface soldering area (top layer) | Tin (4 $\mu\text{m}$ - 8 $\mu\text{m}$ Sn)                                       |

#### Material data - housing

|  |                   |
|--|-------------------|
| Color (Housing)                        | light gray (7035) |
| Insulating material                    | PA                |
| Insulating material group              | I                 |
| CTI according to IEC 60112             | 600               |
| Flammability rating according to UL 94 | V0                |

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

|   |        |
|---|--------|
| Glow wire flammability index GWFI according to EN 60695-2-12      | 850    |
| Glow wire ignition temperature GWIT according to EN 60695-2-13    | 775    |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

## Dimensions

|                       |              |
|-----------------------|--------------|
| Dimensional drawing   |              |
| Pitch                 | 3.5 mm       |
| Width [w]             | 14.95 mm     |
| Height [h]            | 15.3 mm      |
| Length [l]            | 14.55 mm     |
| Solder pin length [P] | 2.75 mm      |
| Pin dimensions        | 0.8 x 0.8 mm |

## PCB design

|               |        |
|---------------|--------|
| Hole diameter | 1.2 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

|               |                        |
|---------------|------------------------|
| 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            |

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

|                                     |     |
|-------------------------------------|-----|
| No. of cycles                       | 25  |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx.  | 4 N |

## Electrical tests

### Thermal test | Test group C

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

### Insulation resistance

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 M $\Omega$        |

### Air clearances and creepage distances |

|  |                     |
|--|---------------------|
| Specification  | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| 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 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)                      | 0.8 mm              |
| Rated insulation voltage (II/2)                        | 320 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)                       | 1.6 mm              |

## Environmental and real-life conditions

### Durability test

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level       | 2.95 kV               |
| Contact resistance R <sub>1</sub>            | 1.6 m $\Omega$        |
| Contact resistance R <sub>2</sub>            | 1.6 m $\Omega$        |
| Insertion/withdrawal cycles                  | 25                    |
| Insulation resistance, neighboring positions | > 5 M $\Omega$        |

### Climatic test

|                                   |   |
|-----------------------------------|---|
| Specification                     | ISO 6988:1985-02  |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 105 °C/168 h  |
| Power-frequency withstand voltage | 1.39 kV   |

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

## Vibration test

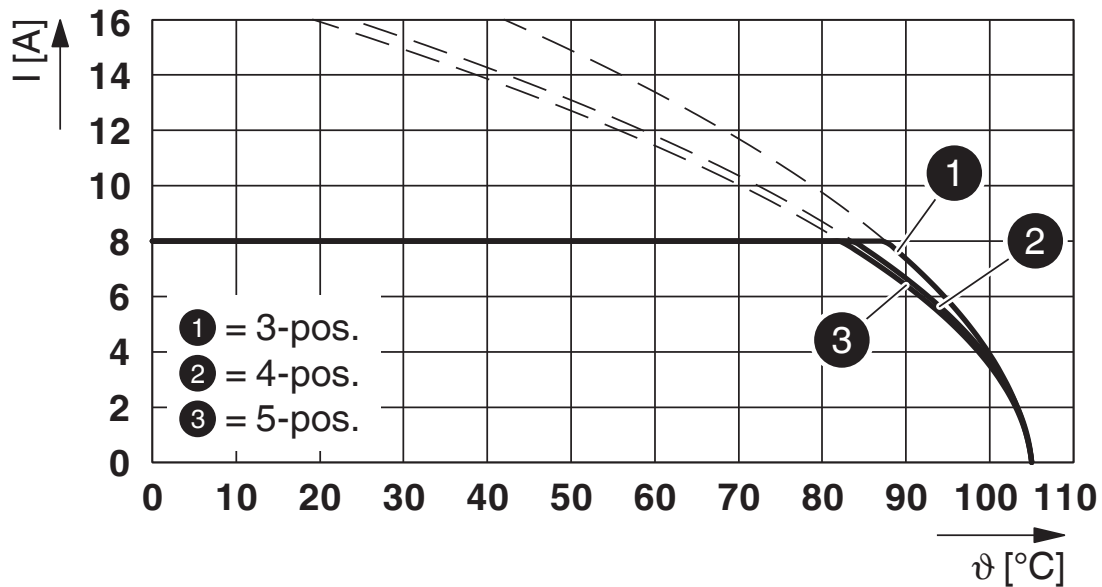
|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:2007-12       |
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |
| Test directions        | X-, Y- and Z-axis           |

## Ambient conditions

|   |   |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 55 °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) |

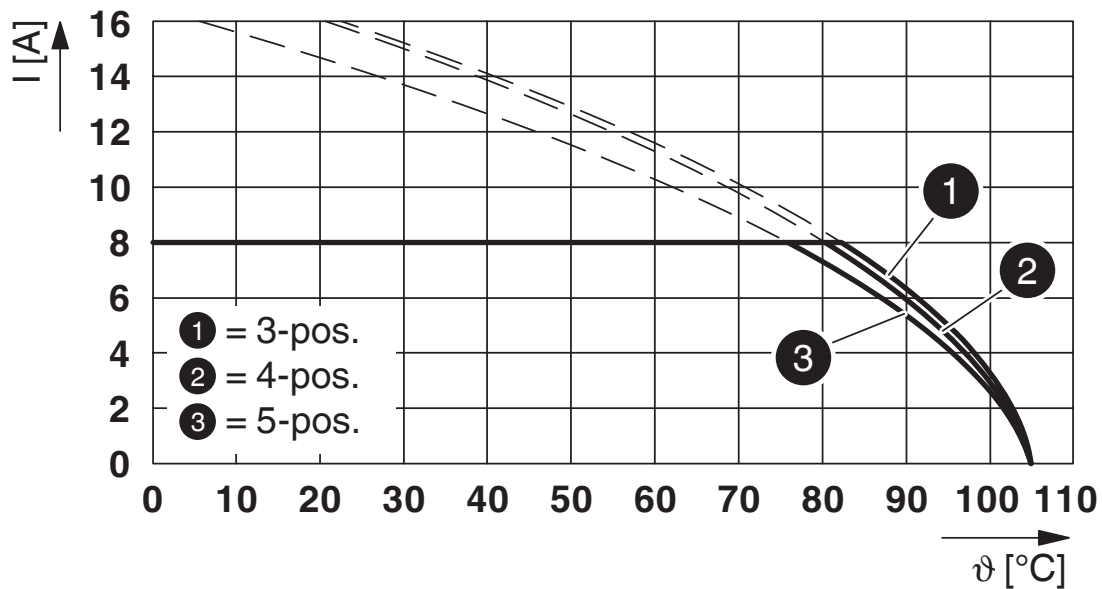
Drawings

Diagram



Type: MC 1,5/...-ST-3,5 with MCO 1,5/...-G1L(R)-3,5 KMGY

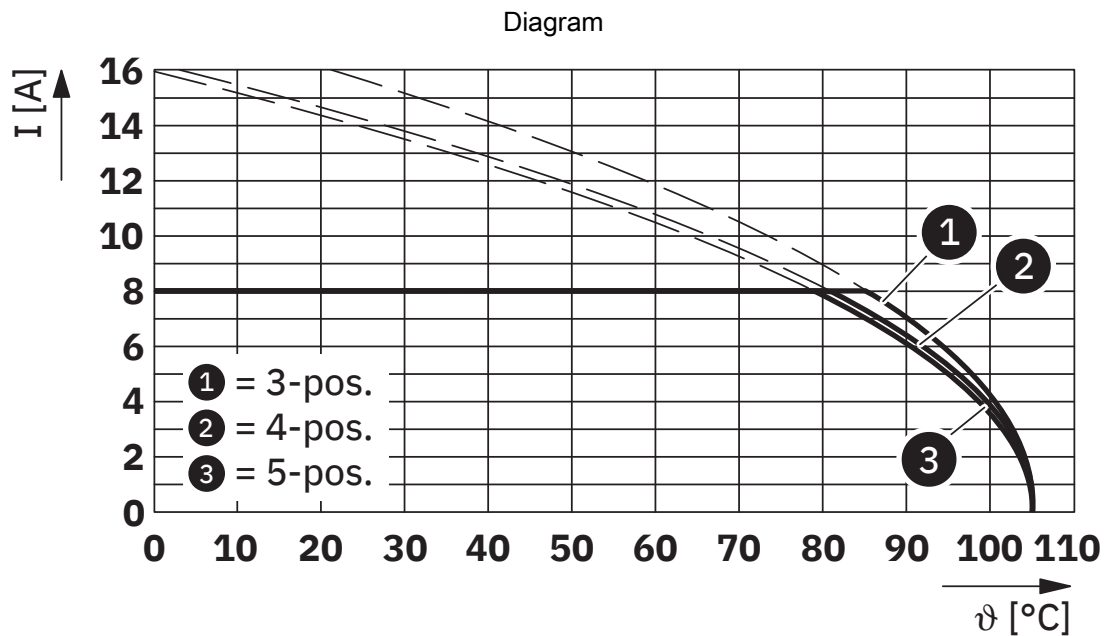
Diagram



Type: FMC 1,5/...-ST-3,5 with MCO 1,5/...-G1L-3,5 KMGY

1288296

<https://www.phoenixcontact.com/us/products/1288296>



Type: TFMC 1,5/...-ST-3,5 with MCO 1,5/...-G1L-3,5 KMGY



Type: MCVW 1,5/...-ST-3,5 with MCO 1,5/...-G1L-3,5 KMGY

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header




1288296

<https://www.phoenixcontact.com/us/products/1288296>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1288296>

|  <b>cULus Recognized</b><br>Approval ID: E60425-20050718 |  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|---|--|-----------------------|-----------------------|-------------------|-----------------------------|
| B   |  | 300 V                 | 8 A                   | -                 | -                           |
| D   |  | 300 V                 | 8 A                   | -                 | -                           |

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002637 |
|-----------|----------|

### UNSPSC

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

# MCO 1,5/ 4-G1L-3,5 KMGY CD:1 - PCB header



1288296

<https://www.phoenixcontact.com/us/products/1288296>

## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### 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% |
|-------------------------------------|----------------------------|

Phoenix Contact 2026 © - 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](mailto:info@phoenixcon.com)