

# DMCV 1,5/ 6-G1F-3,5-LR P35 - PCB header



1053977

<https://www.phoenixcontact.com/us/products/1053977>

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PCB headers, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, contact connection type: Pin, number of potentials: 12, number of rows: 2, number of positions: 6, number of connections: 12, product range: DMCV 1,5/...-G1F, pitch: 3.5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON DFMC 1,5, Pin connector pattern alignment: Standard, locking: Snap-in locking, mounting: Lock & release threaded flange, type of packaging: packed in cardboard

## Your advantages

- Automatic locking and intuitive release through Lock and Release operating lever in contrasting color
- Conductor connection on several levels enables higher contact density
- Small component size for applications where space is at a premium
- Vertical connection enables multi-row arrangement on the PCB

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1053977                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AA02                           |
| Product key                          | AABSJD                         |
| GTIN                                 | 4055626688305                  |
| Weight per piece (including packing) | 3.206 g                        |
| Weight per piece (excluding packing) | 3.206 g                        |
| Customs tariff number                | 85366930                       |
| Country of origin                    | CN                             |

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## Technical data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Product line              | COMBICON Connectors S |
| Product type              | PCB headers           |
| Product family            | DMCV 1,5/..-G1F       |
| Number of positions       | 6                     |
| Pitch                     | 3.5 mm                |
| Number of connections     | 12                    |
| Number of rows            | 2                     |
| Number of potentials      | 12                    |
| 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          | 2.3 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 | Wave soldering |
| Pin layout    | Linear pinning |

### Flange

|                   |        |
|-------------------|--------|
| Tightening torque | 0.2 Nm |
|-------------------|--------|

### 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 - 8 μm Sn)  |
| Metal surface contact area (middle layer)   | Nickel (1.5 - 4 μm Ni)   |
| Metal surface soldering area (top layer)    | Tin (4 - 8 μm Sn)  |
| Metal surface soldering area (middle layer) | Nickel (1.5 - 4 μm Ni)   |

# DMCV 1,5/ 6-G1F-3,5-LR P35 - PCB header

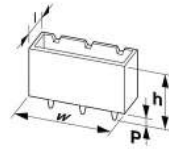
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## Material data - housing

|  |              |
|--|--------------|
| Color (Housing)                        | green (6021) |
| Insulating material                    | PBT          |
| Insulating material group              | IIIa         |
| CTI according to IEC 60112             | 225          |
| Flammability rating according to UL 94 | V0           |

## Dimensions

|                       |  |
|-----------------------|--|
| Dimensional drawing   |  |
| Pitch                 | 3.5 mm   |
| Width [w]             | 28 mm  |
| Height [h]            | 13.5 mm  |
| Length [l]            | 10.6 mm  |
| Installed height      | 10 mm  |
| Solder pin length [P] | 3.5 mm   |
| Pin dimensions        | 0.8 x 0.8 mm   |

## PCB design

|               |         |
|---------------|---------|
| Pin spacing   | 5.50 mm |
| 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 |
|---------------|------------------------|

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|  |             |
|--|-------------|
| Contact holder in insert<br>Requirements >20 N | Test passed |
|--|-------------|

## Insertion and withdrawal forces

|                                     |             |
|-------------------------------------|-------------|
| Result                              | Test passed |
| No. of cycles                       | 25          |
| Insertion strength per pos. approx. | 3 N         |
| Withdraw strength per pos. approx.  | 2 N         |

## Electrical tests

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 20                    |

### Air clearances and creepage distances |

|  |                     |
|--|---------------------|
| Specification  | IEC 60664-1:2007-04 |
| Insulating material group                              | IIIa                |
| Comparative tracking index (IEC 60112)                 | CTI 225             |
| 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

### 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 <sub>1</sub>      | 2.3 mΩ                |
| Contact resistance R <sub>2</sub>      | 2.6 mΩ                |

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|                             |    |
|-----------------------------|----|
| Insertion/withdrawal cycles | 25 |
|-----------------------------|----|

## 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   |

## 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                                    |

## Packaging specifications

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

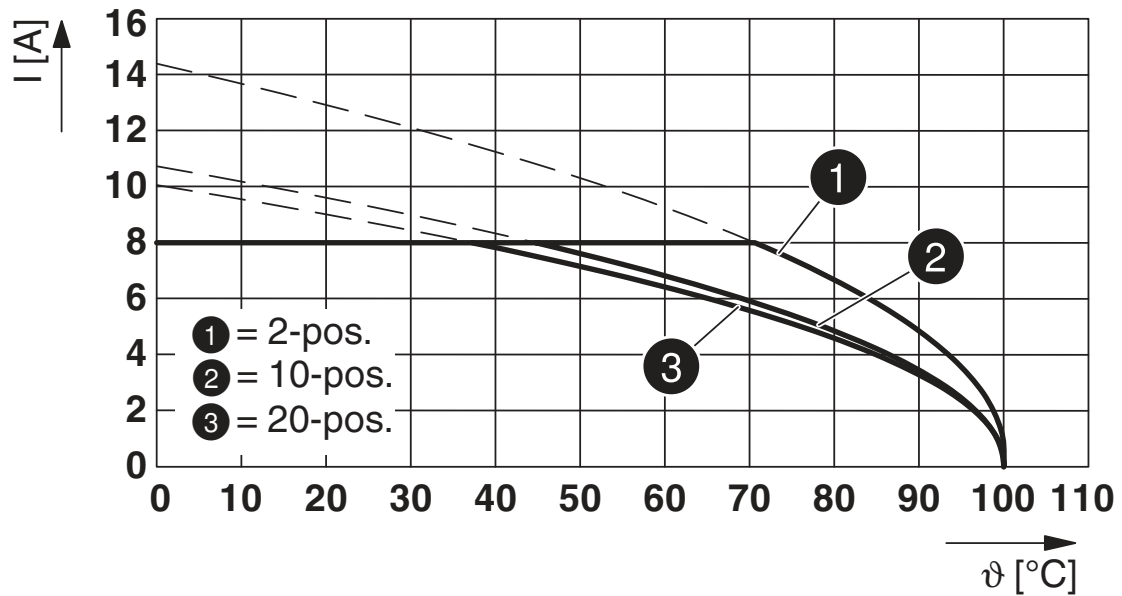
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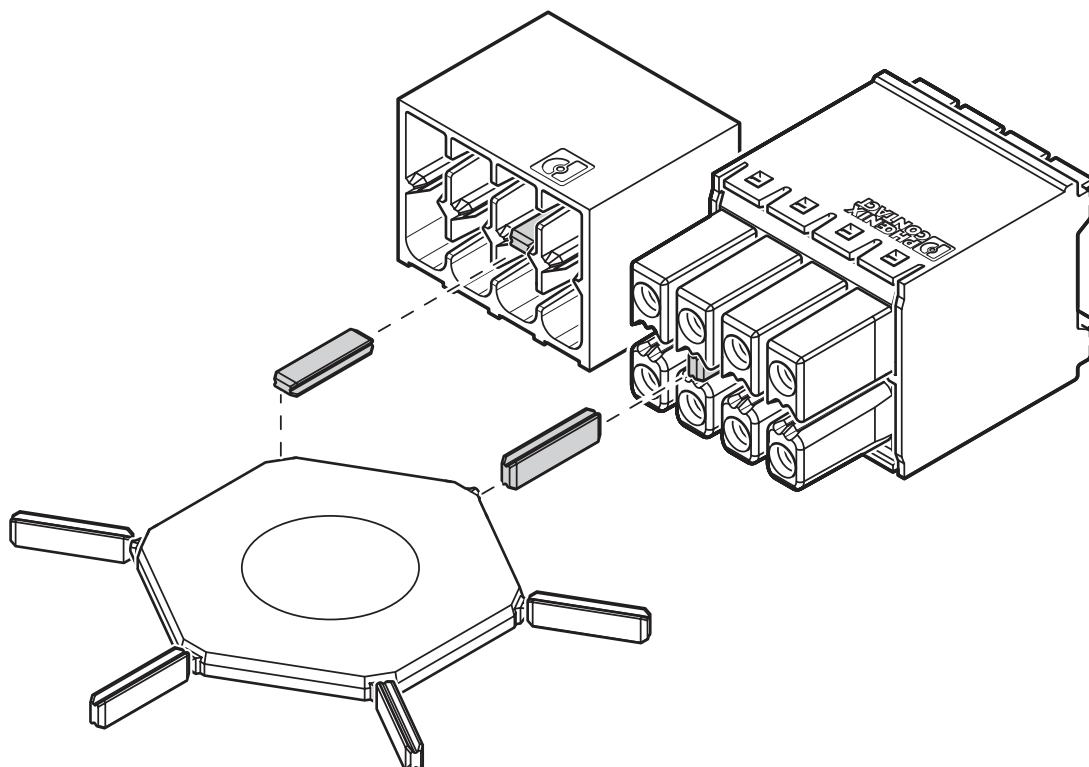
## Drawings

Diagram



Type: DFMC 1,5/...-ST-3,5-LR with DMCV 1,5/...-G1F-3,5-LR P35

Schematic diagram



Use of the CP-DMC... coding profile

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1053977>

 **EAC**  
Approval ID: B.01687

 **cULus Recognized**  
Approval ID: E60425-20110128

|             | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B | 300 V                 | 8 A                   | -                 | -                           |
| Use group D | 300 V                 | 8 A                   | -                 | -                           |

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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



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## Environmental product compliance

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

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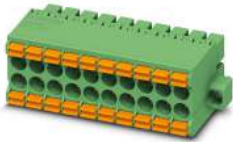
## Accessories

### DFMC 1,5/ 6-STF-3,5 - PCB connector

1790331

<https://www.phoenixcontact.com/us/products/1790331>

Plug, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 6 with 12 contacts, pitch: 3.5 mm, connection method: spring-cage connection, color: green, contact surface: tin



### DFMC 1,5/ 6-ST-3,5-LR - PCB connector

1790522

<https://www.phoenixcontact.com/us/products/1790522>

Plug, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 6 with 12 contacts, pitch: 3.5 mm, connection method: spring-cage connection, color: green, contact surface: tin



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