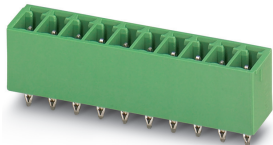


## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

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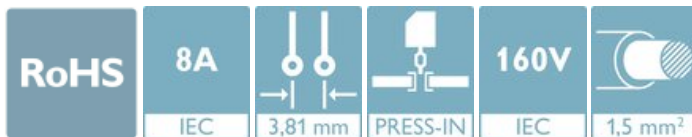


The figure shows a 10-position version of the product

PCB header, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Male connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: EMCV 1,5/...-G, pitch: 3.81 mm, mounting: Press-in technology, pin layout: Linear pinning, solder pin [P]: 3.8 mm, plug-in system: MINI COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard

### Your advantages

- ✓ Long-term stable press-in connection ensures high holding force without thermal load
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| Minimum order quantity               | 50 pc                                                                                                   |
| GTIN                                 | <br>4 017918 133276 |
| GTIN                                 | 4017918133276                                                                                           |
| Weight per Piece (excluding packing) | 1.880 g                                                                                                 |
| Custom tariff number                 | 85366930                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Item properties

|                           |                |
|---------------------------|----------------|
| Brief article description | PCB header     |
| Connector system          | MINI COMBICON  |
| Type of contact           | Male connector |
| Range of articles         | EMCV 1,5/...-G |

## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

### Technical data

#### Item properties

|                                 |                     |
|---------------------------------|---------------------|
| Pitch                           | 3.81 mm             |
| Number of positions             | 6                   |
| Mounting type                   | Press-in technology |
| Pin layout                      | Linear pinning      |
| Locking                         | without             |
| Number of rows                  | 1                   |
| Number of connections           | 6                   |
| Number of potentials            | 6                   |
| Pin connector pattern alignment | Standard            |

#### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 8 A    |
| Nom. voltage                | 160 V  |
| Rated voltage (III/3)       | 160 V  |
| Rated voltage (III/2)       | 160 V  |
| Rated voltage (II/2)        | 250 V  |
| Rated surge voltage (III/3) | 2.5 kV |
| Rated surge voltage (III/2) | 2.5 kV |
| Rated surge voltage (II/2)  | 2.5 kV |

#### 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 (1 - 2 µm Sn)                                                                 |
| Metal surface contact area (middle layer)   | Nickel (2 - 3 µm Ni)                                                              |
| Metal surface soldering area (top layer)    | Tin (1 - 2 µm Sn)                                                                 |
| Metal surface soldering area (middle layer) | Nickel (2 - 3 µm Ni)                                                              |

#### Material data - housing

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

#### Dimensions for the product

|         |                                                                                            |
|---------|--------------------------------------------------------------------------------------------|
| Caption | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
|---------|--------------------------------------------------------------------------------------------|

# PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

## Technical data

### Dimensions for the product

|                             |              |
|-----------------------------|--------------|
| Length [ l ]                | 7.25 mm      |
| Width [ w ]                 | 24.25 mm     |
| Height [ h ]                | 13 mm        |
| Pitch                       | 3.81 mm      |
| Height (without solder pin) | 10 mm        |
| Solder pin [P]              | 3.8 mm       |
| Pin dimensions              | 0.8 x 0.8 mm |

### Dimensions for PCB design

|               |         |
|---------------|---------|
| Hole diameter | 1.45 mm |
|---------------|---------|

### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |

### Air clearances and creepage distances

|                                                 |                     |
|-------------------------------------------------|---------------------|
| Clearances and creepage distances               | IEC 60664-1:2007-04 |
| Specification                                   | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 1.5 mm              |
| Minimum clearance - inhomogeneous field (III/2) | 1.5 mm              |
| Minimum clearance - inhomogeneous field (II/2)  | 1.5 mm              |
| Minimum creepage distance value (III/3)         | 2.5 mm              |
| Minimum creepage distance value (III/2)         | 1.6 mm              |
| Minimum creepage distance value (II/2)          | 2.5 mm              |

### Standards and Regulations

|                                        |        |
|----------------------------------------|--------|
| Connection in acc. with standard       | EN-VDE |
|                                        | CUL    |
| Flammability rating according to UL 94 | V0     |

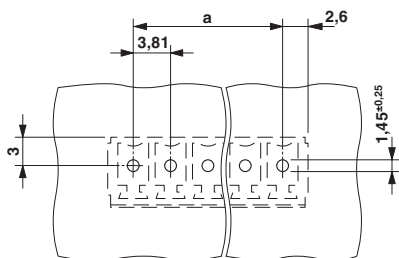
### Environmental Product Compliance

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

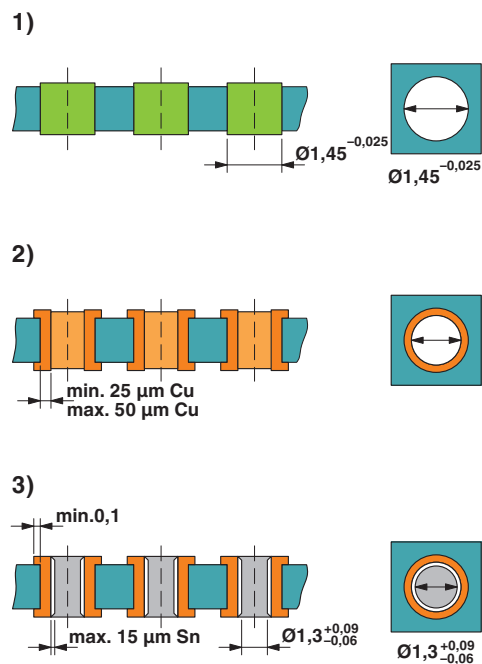
## Drawings

## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

Drilling diagram



Drilling diagram



Drill hole layout in FR4 or EP-GC basic material

### Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 6.01 | 30211810 |
|-------------|----------|

## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

### Classifications

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11     | 39121409 |
| UNSPSC 12.01  | 39121409 |
| UNSPSC 13.2   | 39121409 |
| UNSPSC 19.0   | 39121409 |

### Approvals

#### Approvals

Approvals

EAC / cULus Recognized

Ex Approvals

#### Approval details

|     |                                                                                     |         |
|-----|-------------------------------------------------------------------------------------|---------|
| EAC |  | B.01687 |
|-----|-------------------------------------------------------------------------------------|---------|

|                    |                                                                                     |                                                                                                                                                       |                 |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| cULus Recognized   |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-20110128 |
|                    | B                                                                                   | D                                                                                                                                                     |                 |
| Nominal voltage UN | 300 V                                                                               | 300 V                                                                                                                                                 |                 |
| Nominal current IN | 8 A                                                                                 | 8 A                                                                                                                                                   |                 |

### Accessories

Accessories

Coding element

## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

### Accessories

Coding profile - CP-MSTB - 1734634



Coding profile, is inserted into the slot on the plug or inverted header, red insulating material

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### Labeled terminal marker

Marker card - SK 3,81/2,8:FORTL.ZAHLEN - 0804109



Marker card, Card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 3.81 mm, lettering field size: 3.81 x 2.8 mm

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Assembly adapters - EMC 1,5-SH - 1877258



Stamp holder, for upper and lower stamp

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### Additional products

Printed-circuit board connector - FMC 1,5/ 6-ST-3,81 - 1748011



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: FMC 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

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Printed-circuit board connector - MC 1,5/ 6-ST-3,81 - 1803617



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: MC 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

### Accessories

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#### Printed-circuit board connector - MCVW 1,5/ 6-ST-3,81 - 1827017



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: MCVW 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MCVR 1,5/ 6-ST-3,81 - 1827169



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: MCVR 1,5/...-ST, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - FRONT-MC 1,5/ 6-ST-3,81 - 1850709



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: FRONT-MC 1,5/...-ST, pitch: 3.81 mm, connection method: Front screw connection, screw head form: L Slotted, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - FK-MCP 1,5/ 6-ST-3,81 - 1851083



PCB connector, nominal cross section: 1.5 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: FK-MCP 1,5/...-ST, pitch: 3.81 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard

#### Printed-circuit board connector - MCC 1/ 6-STZ-3,81 - 1852215



PCB connector, nominal cross section: 1 mm<sup>2</sup>, color: green, nominal current: 8 A, rated voltage (III/2): 160 V, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: MCC 1/...-STZ, pitch: 3.81 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] data: 5A/MCC-MT 0,2-0,35 (1859988); 8A/MCC-MT 0,5-1,0 (1859991)

## PCB header - EMCV 1,5/ 6-G-3,81 - 1860689

### Accessories

Printed-circuit board connector - QC 0,5/ 6-ST-3,81 - 1897432



PCB connector, nominal cross section: 0.5 mm<sup>2</sup>, color: green, nominal current: 6 A, rated voltage (III/2): 200 V, contact surface: Tin, type of contact: Female connector, number of potentials: 6, Number of rows: 1, Number of positions per row: 6, number of connections: 6, product range: QC 0,5/...-ST, pitch: 3.81 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, plug-in system: MINI COMBICON, Locking: without, mounting: without, type of packaging: packed in cardboard