

1830883

<https://www.phoenixcontact.com/gb/products/1830883>

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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: Sn, contact connection type: Socket, number of potentials: 4, number of rows: 1, number of positions: 4, number of connections: 4, product range: IMCV 1,5/-G-RN-THR, pitch: 3.5 mm, mounting: THR soldering / wave soldering, pin layout: Linear pinning, solder pin [P]: 1.9 mm, number of solder pins per potential: 2, plug-in system: COMBICON MC 1,5, Pin connector pattern alignment: Standard, locking: Snap-in locking, mounting method: Engagement nose, type of packaging: packed in cardboard

Your advantages

- Designed for integration into the SMT soldering process
- Intuitive locking mechanism prevents accidental disconnection
- Vertical connection enables multi-row arrangement on the PCB
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections

Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1830883                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | AABTIC                         |
| Product key                          | AABTIC                         |
| Catalog page                         | Page 17 (NTK-2014)             |
| GTIN                                 | 4046356888493                  |
| Weight per piece (including packing) | 1.528 g                        |
| Weight per piece (excluding packing) | 1.508 g                        |
| Customs tariff number                | 85366990                       |
| Country of origin                    | DE                             |

## Technical data

### Product properties

|                           |                       |
|---------------------------|-----------------------|
| Product type              | PCB headers           |
| Product family            | IMCV 1,5/...-G-RN-THR |
| Product line              | COMBICON Connectors S |
| Type                      | Inverted              |
| Number of positions       | 4                     |
| Pitch                     | 3.5 mm                |
| Number of connections     | 4                     |
| Number of rows            | 1                     |
| Number of potentials      | 4                     |
| Mounting flange           | Engagement nose       |
| Pin layout                | Linear pinning        |
| Solder pins per potential | 2                     |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 8 A    |
| Nominal voltage $U_N$       | 160 V  |
| 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 | THR soldering / 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                  | hot-dip tin-plated                                                               |
| Metal surface contact area (top layer)   | Tin (2 - 4 $\mu\text{m}$ Sn)                                                     |
| Metal surface soldering area (top layer) | Tin (2 - 4 $\mu\text{m}$ Sn)                                                     |

#### Material data - housing

|                     |              |
|---------------------|--------------|
| Color (Housing)     | black (9005) |
| Insulating material | LCP          |

# IMCV 1,5/ 4-G-3,5 RN P20 THR - PCB header

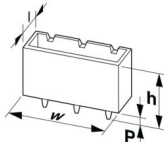


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|                                        |      |
|----------------------------------------|------|
| Insulating material group              | IIIa |
| CTI according to IEC 60112             | 175  |
| Flammability rating according to UL 94 | V0   |

## Dimensions

|                       |                                                                                    |
|-----------------------|------------------------------------------------------------------------------------|
| Dimensional drawing   |  |
| Pitch                 | 3.5 mm                                                                             |
| Width [w]             | 14.8 mm                                                                            |
| Height [h]            | 16.35 mm                                                                           |
| Length [l]            | 6.3 mm                                                                             |
| Installed height      | 14.45 mm                                                                           |
| Solder pin length [P] | 1.9 mm                                                                             |
| Pin dimensions        | 0.62 x 1.12 mm                                                                     |

## PCB design

|               |         |
|---------------|---------|
| Pin spacing   | 3.81 mm |
| Hole diameter | 1.2 mm  |

## Electrical tests

### 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)                        | 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)                       | 3.2 mm              |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                                                     |
|---------------------------------|-----------------------------------------------------|
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |
|---------------------------------|-----------------------------------------------------|

# IMCV 1,5/ 4-G-3,5 RN P20 THR - PCB header



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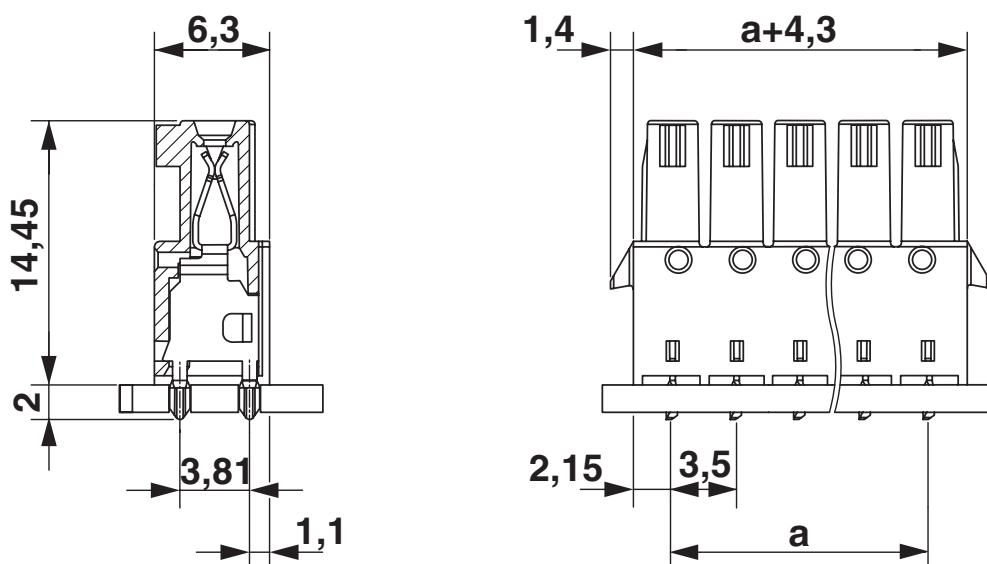
|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport)   | 30 % ... 70 %    |
| Ambient temperature (assembly)          | -5 °C ... 100 °C |

## Packaging specifications

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

## Drawings

Dimensional drawing



Diagram



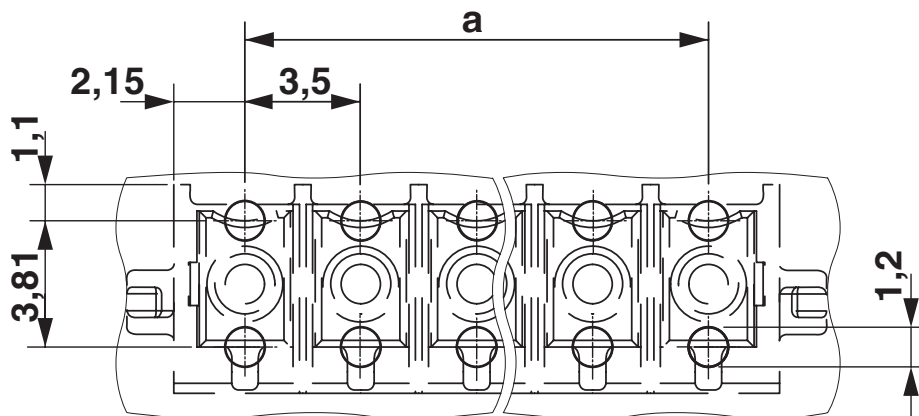
Type: IMC(V) 1,5/...-G-3,5 THR with MC(V) 1,5/...-G-3,5 THR

# IMCV 1,5/ 4-G-3,5 RN P20 THR - PCB header

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Drilling plan/solder pad geometry



# IMCV 1,5/ 4-G-3,5 RN P20 THR - PCB header

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1830883>

|                                                                                                                                           |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|  <b>cULus Recognized</b><br>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                   | -                 | -                           |
|                                                                                                                                           |                       |                       |                   |                             |

**VDE approval of drawings**  
Approval ID: 40011723

**VDE approval of drawings**  
Approval ID: 40011723

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002637 |
|----------|----------|

### UNSPSC

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

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%               |
| EF3.0 Climate Change                    |                                          |
| CO2e kg                                 | 0.037 kg CO2e                            |