

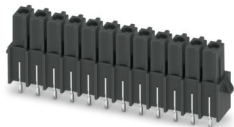
# IMCV 1,5/12-G-3,5 RN P20 THR - PCB header



1830964

<https://www.phoenixcontact.com/us/products/1830964>

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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: 12, number of rows: 1, number of positions: 12, number of connections: 12, 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 FMC 1,5 - MCDN 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	1830964
Packing unit	50 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA02
Product key	AABTIC
GTIN	4046356888578
Weight per piece (including packing)	4.21 g
Weight per piece (excluding packing)	4.17 g
Customs tariff number	85366930
Country of origin	DE

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## 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	12
Pitch	3.5 mm
Number of connections	12
Number of rows	1
Number of potentials	12
Mounting type	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 $\mu$ m - 4 $\mu$ m Sn)
Metal surface soldering area (top layer)	Tin (2 $\mu$ m - 4 $\mu$ m Sn)

#### Material data - housing

Color (Housing)	black (9005)
Insulating material	LCP

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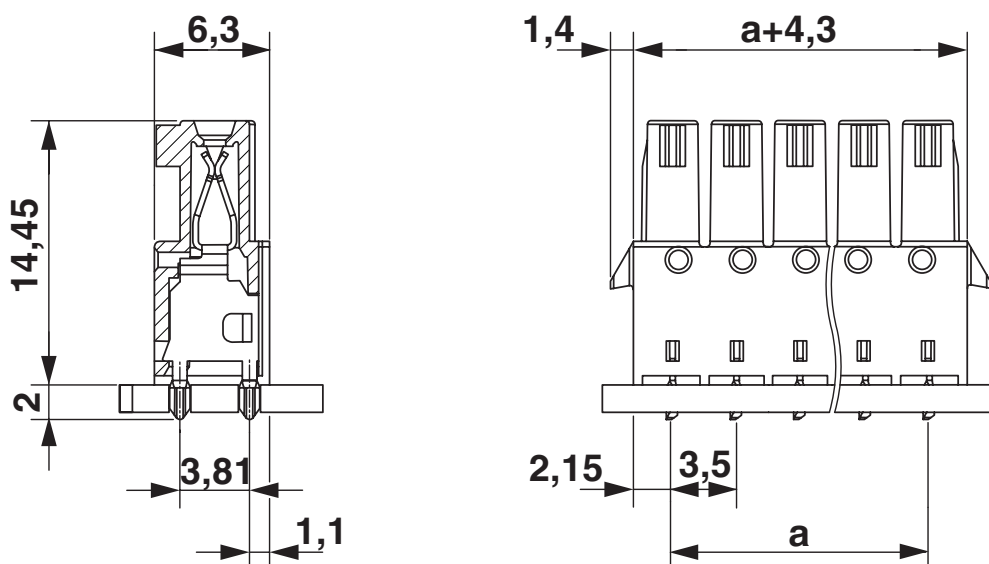
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

## Packaging specifications

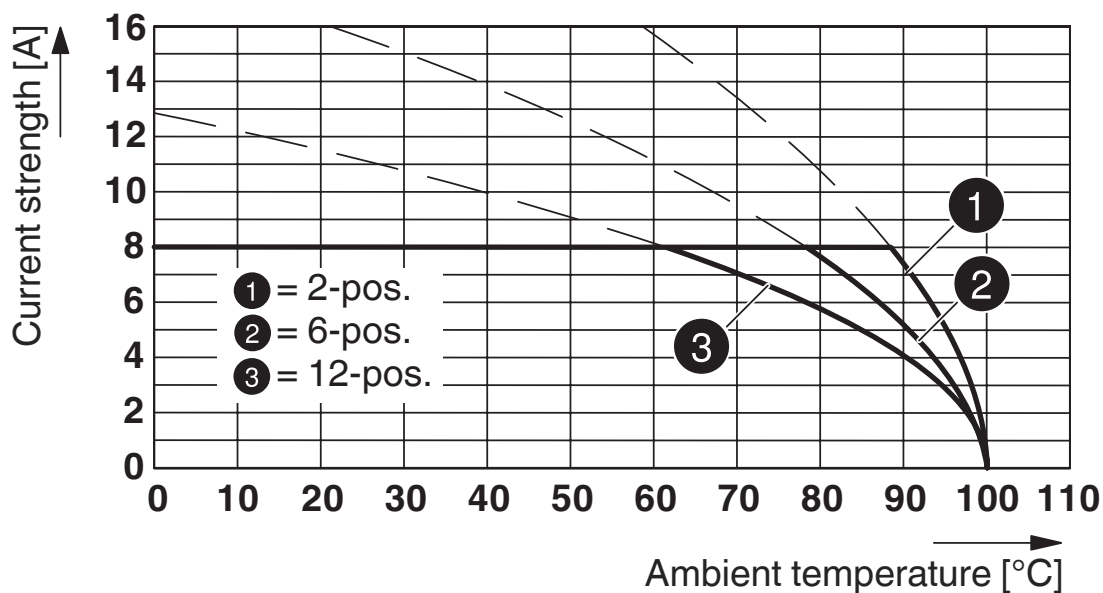
Type of packaging	packed in cardboard
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Drawings

Dimensional drawing



Diagram



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

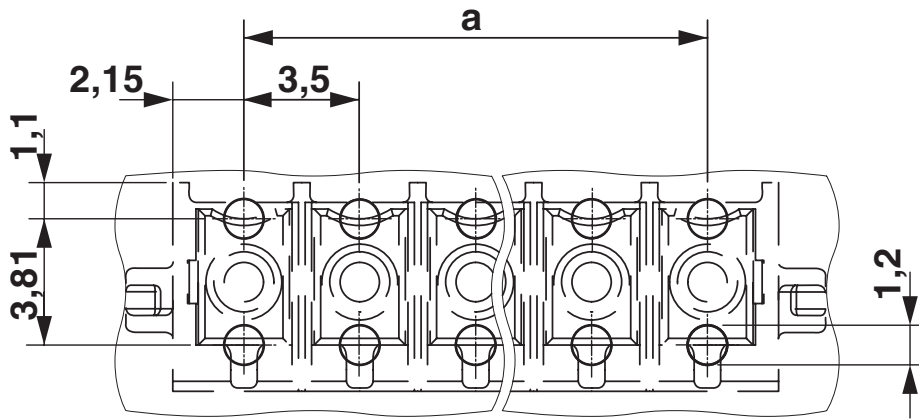
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Drilling plan/solder pad geometry



# IMCV 1,5/12-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/us/products/1830964>

 <b>cULus Recognized</b> Approval ID: E60425-20110128				
	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	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40011723				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	160 V	8 A	-	-

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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	0.051 kg CO2e
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