

# Feed-through header - IMC 1,5/ 6-G-3,5 P20 THR - 1830456

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PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm<sup>2</sup>, number of positions: 6, pitch: 3.5 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear double pinning, solder pin [P]: 2 mm



The figure shows a 10-position version of the product

## Your advantages

- Designed for integration into the SMT soldering process
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections



## Key Commercial Data

|                        |               |
|------------------------|---------------|
| Packing unit           | 50 pc         |
| Minimum order quantity | 50 pc         |
| GTIN                   |               |
| GTIN                   | 4046356886949 |

## Technical data

### Item properties

|                           |                       |
|---------------------------|-----------------------|
| Brief article description | Feed-through header   |
| Plug-in system            | MINI COMBICON         |
| Type of contact           | Female connector      |
| Range of articles         | IMC 1,5/..-G-THR      |
| Pitch                     | 3.5 mm                |
| Number of positions       | 6                     |
| Mounting type             | THR soldering         |
| Pin layout                | Linear double pinning |
| Locking                   | without               |
| Number of levels          | 1                     |
| Number of connections     | 6                     |
| Number of potentials      | 6                     |

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## Technical data

### Electrical parameters

|                             |        |
|-----------------------------|--------|
| Nominal current             | 8 A    |
| Nom. voltage                | 160 V  |
| Rated voltage               | 160 V  |
| Rated voltage (III/2)       | 160 V  |
| Rated voltage (II/2)        | 320 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                  | hot-dip tin-plated  |
| Metal surface contact area (top layer)   | Tin (2 - 4 µm Sn)   |
| Metal surface soldering area (top layer) | Tin (2 - 4 µm Sn)   |

### Material data - housing

|  |              |
|--|--------------|
| Housing color                          | black (9005) |
| Insulating material                    | LCP          |
| Insulating material group              | IIIa         |
| CTI according to IEC 60112             | 175          |
| Flammability rating according to UL 94 | V0           |

### Dimensions for the product

|                             |         |
|-----------------------------|---------|
| Length [ l ]                | 14.5 mm |
| Width [ w ]                 | 21.8 mm |
| Height [ h ]                | 8.3 mm  |
| Pitch                       | 3.5 mm  |
| Height (without solder pin) | 6.3 mm  |
| Solder pin [P]              | 2 mm    |
| Pin spacing                 | 2.54 mm |
| Pin dimensions              | 1.12 mm |

### Dimensions for PCB design

|               |         |
|---------------|---------|
| Hole diameter | 1.2 mm  |
| Pin spacing   | 2.54 mm |

### Packaging information

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

### Processing notes

# Feed-through header - IMC 1,5/ 6-G-3,5 P20 THR - 1830456

## Technical data

### Processing notes

|                                  |  |
|----------------------------------|--|
| Process                          | Reflow/wave soldering                    |
| Specification                    | Following IPC/JEDEC J-STD-020D.1:2008-03 |
|                                  | Following IEC 61760-1:2006-04            |
|                                  | Following IEC 60068-2-58:2005-02         |
| Moisture Sensitive Level         | MSL 1                                    |
| Classification temperature $T_c$ | 260 °C                                   |
| Solder cycles in the reflow      | 3  |

### 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)          | 3.2 mm              |

### Mechanical tests (A)

|  |             |
|--|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 3 N         |
| Withdraw strength per pos. approx.           | 3 N         |
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N  | Test passed |

### Durability tests (B)

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Contact resistance $R_1$                     | 2.1 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Contact resistance $R_2$                     | 2.3 mΩ                |
| Impulse withstand voltage at sea level       | 2.95 kV               |
| Power-frequency withstand voltage            | 1.39 kV               |
| Insulation resistance, neighboring positions | > 5 TΩ                |

### Thermal tests (C)

|                         |                       |
|-------------------------|-----------------------|
| Specification           | IEC 60512-5-1:2002-02 |
| Number of positions     | 12                    |
| Conductor cross section | 1.5 mm <sup>2</sup>   |

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### Technical data

#### Thermal tests (C)

|   |             |
|---|-------------|
| Test current                                    | 8 A AC      |
| Upper limiting temperature requirements <100 °C | Test passed |

#### Climatic tests (D)

|  |   |
|--|---|
| Specification                          | ISO 6988:1985-02  |
| Cold stress                            | -40 °C/2 h  |
| Thermal stress                         | 100 °C/168 h  |
| Corrosive stress                       | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 2.95 kV   |
| Power-frequency withstand voltage      | 1.39 kV   |

#### Environmental and durability tests (E)

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Specification                         | IEC 61984:2008-10                   |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

#### Vibration test

|                        |                        |
|------------------------|------------------------|
| Specification          | IEC 60068-2-6:2007-12  |
| Result                 | Test passed            |
| Frequency              | 10 - 150 - 10 Hz       |
| Sweep speed            | 1 octave/min           |
| Amplitude              | 0.35 mm (10 - 60.1 Hz) |
| Acceleration           | 5 g (60.1 - 150 Hz)    |
| Test duration per axis | 2.5 h                  |

#### Standards and Regulations

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

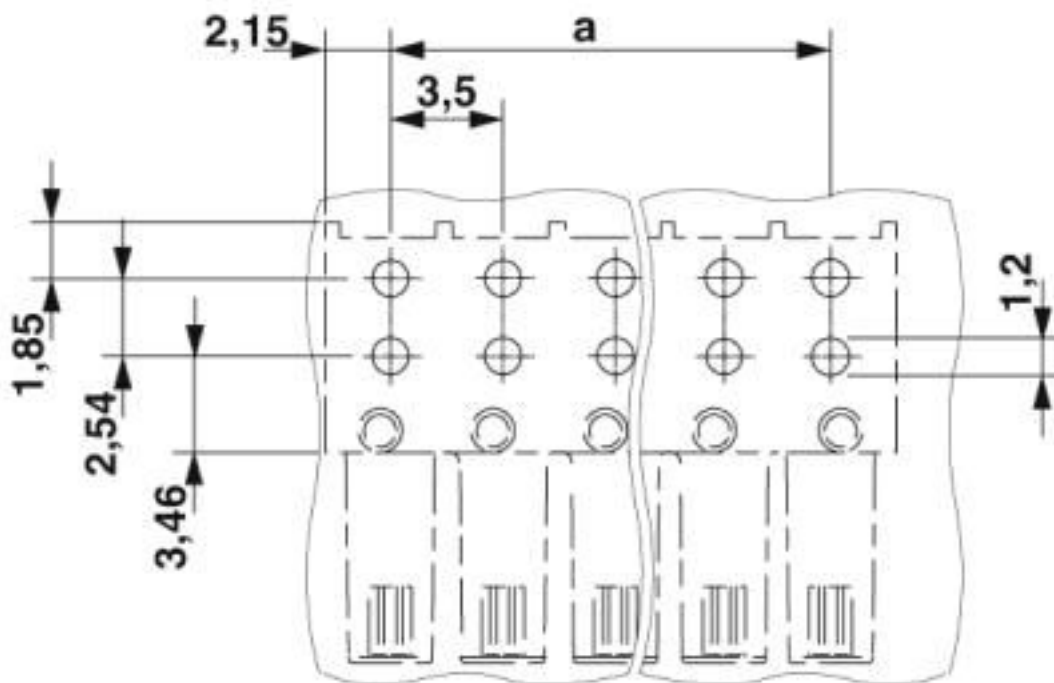
#### Environmental Product Compliance

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

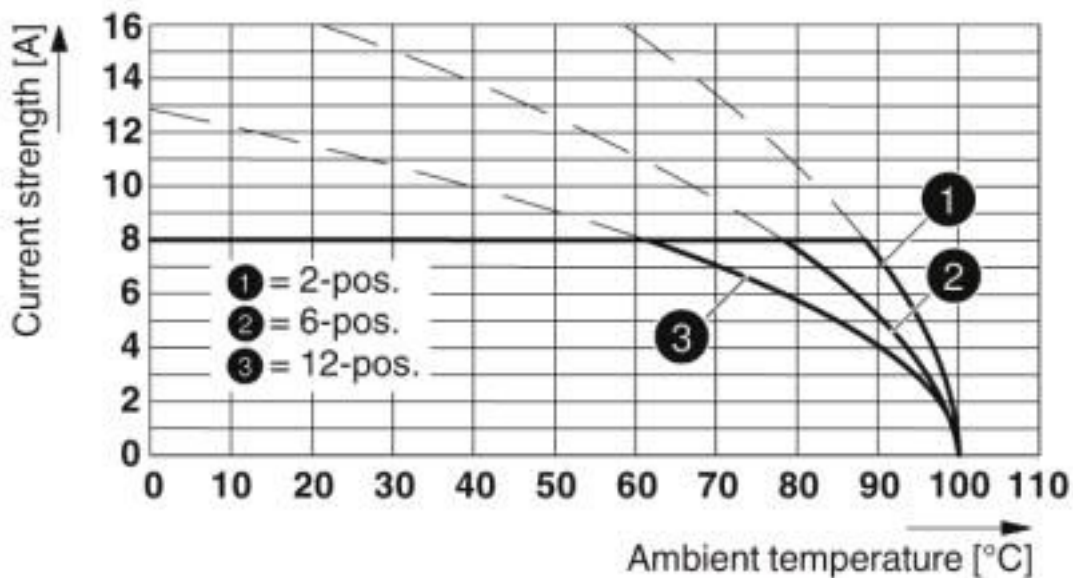
### Drawings

# Feed-through header - IMC 1,5/ 6-G-3,5 P20 THR - 1830456

Drilling diagram



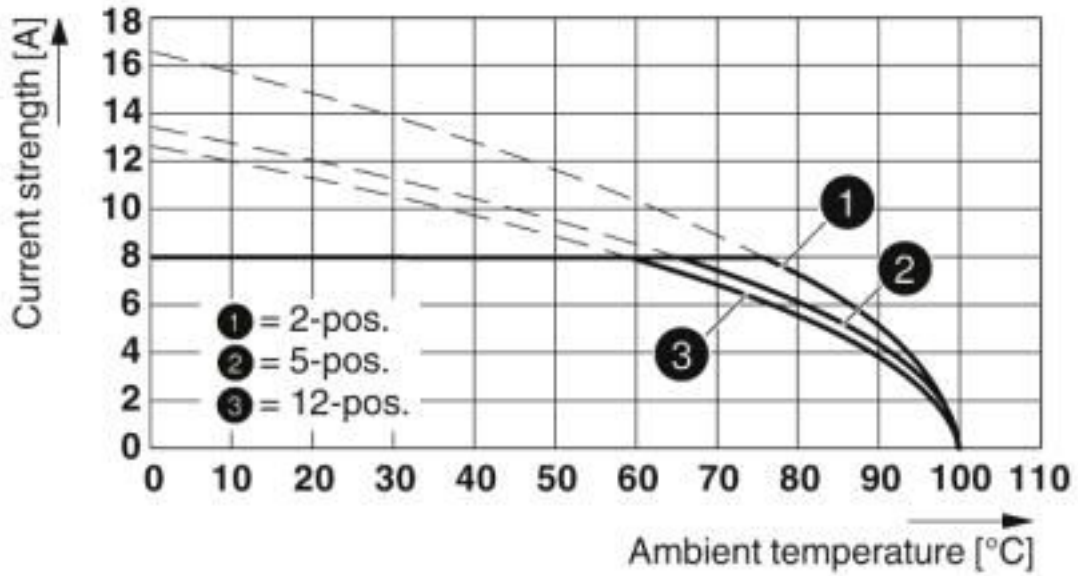
Diagram



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

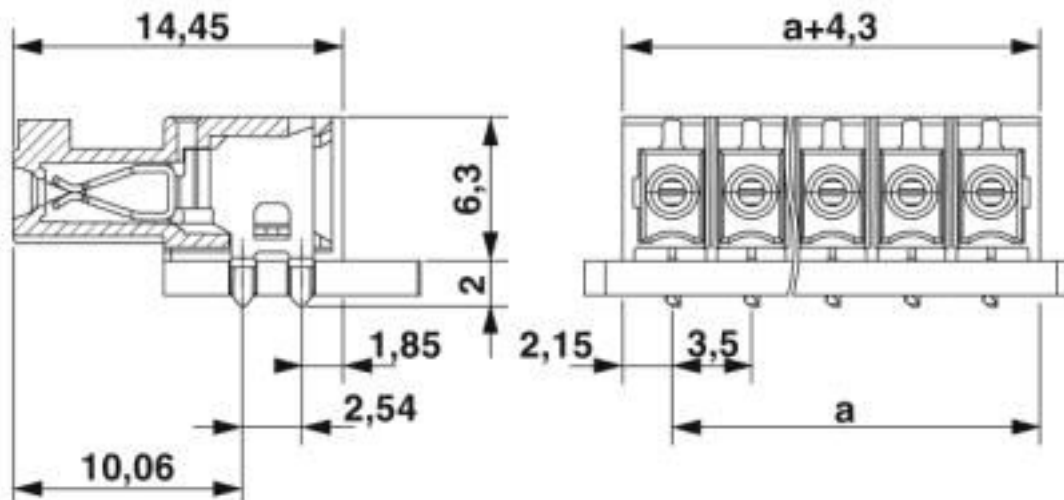
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Diagram



Type: IFMC 1,5/...-ST-3,5 with IMC 1,5/...-G-3,5 P20 THR

Dimensional drawing



## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| 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 |

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 7.0 | 27440402 |
| eCl@ss 8.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC002637 |
| ETIM 5.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11     | 39121409 |
| UNSPSC 12.01  | 39121409 |
| UNSPSC 13.2   | 39121409 |
| UNSPSC 18.0   | 39121409 |
| UNSPSC 19.0   | 39121409 |
| UNSPSC 20.0   | 39121409 |
| UNSPSC 21.0   | 39121409 |

## Approvals


### Approvals

#### Approvals

IECEE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

#### Ex Approvals

### Approval details

|                    |   |   |                |
|--------------------|---|---|----------------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-60987-B1B2 |
| Nominal voltage UN | 160 V   |   |                |
| Nominal current IN | 8 A   |   |                |

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## Approvals

|  |  |  |          |
|--|--|--|----------|
| VDE Gutachten mit<br>Fertigungsüberwachung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/<br/>VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40011723 |
| Nominal voltage UN                         |  | 160 V  |          |
| Nominal current IN                         |  | 8 A  |          |

|     |  |         |
|-----|--|---------|
| 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 |
| Nominal voltage UN |  | 300 V   | 300 V           |
| Nominal current IN |  | 8 A   | 8 A             |

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