

Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



PCB headers, nominal current: 8 A, number of positions: 2, pitch: 3.81 mm, color: green, contact surface: Tin, mounting: Wave soldering, In combination with MCV plug components, both an MCVW and an MCVR plug must be used.

The figure shows a 10-pos. version with 20 contacts

Your advantages

- ✓ Well-known mounting principle allows worldwide use
- ✓ 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 | 50 pc |
| GTIN | |
| GTIN | 4017918110499 |

Technical data

Item properties

| | |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system | MINI COMBICON |
| Type of contact | Male connector |
| Range of articles | MCDV 1,5/..-G |
| Pitch | 3.81 mm |
| Number of positions | 2 |
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |
| Locking | without |
| Number of levels | 2 |
| Number of connections | 4 |
| Number of potentials | 4 |

Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Technical data

Electrical parameters

| | |
|-----------------------------|--------|
| Rated current | 8 A |
| Rated voltage (III/2) | 160 V |
| Rated surge voltage (III/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 (3 - 5 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1 - 3 µm Ni), |
| Metal surface soldering area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1 - 3 µm Ni) |

Material data - housing

| | |
|--|-----|
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |

Dimensions for the product

| | |
|-----------------------------|--------------|
| Length [l] | 22.7 mm |
| Width [w] | 9.01 mm |
| Height [h] | 25.3 mm |
| Pitch | 3.81 mm |
| Height (without solder pin) | 21.9 mm |
| Solder pin [P] | 3.4 mm |
| Pin spacing | 15.24 mm |
| Pin dimensions | 0.8 x 0.8 mm |
| Dimension a | 3.81 mm |

Dimensions for PCB design

| | |
|---------------|----------|
| Hole diameter | 1.2 mm |
| Pin spacing | 15.24 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) |

Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Technical data

Air clearances and creepage distances

| | |
|---|--------|
| Rated insulation voltage (III/3) | 160 V |
| Rated insulation voltage (III/2) | 160 V |
| Rated insulation 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 |
| 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 mm |
| Minimum creepage distance value (III/2) | 1.5 mm |
| Minimum creepage distance value (II/2) | 1.6 mm |

Mechanical tests (A)

| | |
|--|-------------|
| Insertion strength per pos. approx. | 7 N |
| Withdraw strength per pos. approx. | 5 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 | 4 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 4.4 mΩ |
| Impulse withstand voltage at sea level | 2.95 kV |
| Power-frequency withstand voltage | 1.39 kV |
| Insulation resistance, neighboring positions | 10 ¹¹ Ω |

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 ³ SO ₂ on 300 dm ³ /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 |

Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Technical data

Vibration test

| | |
|------------------------|------------------------|
| 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 |
| | CSA |
| Flammability rating according to UL 94 | V0 |

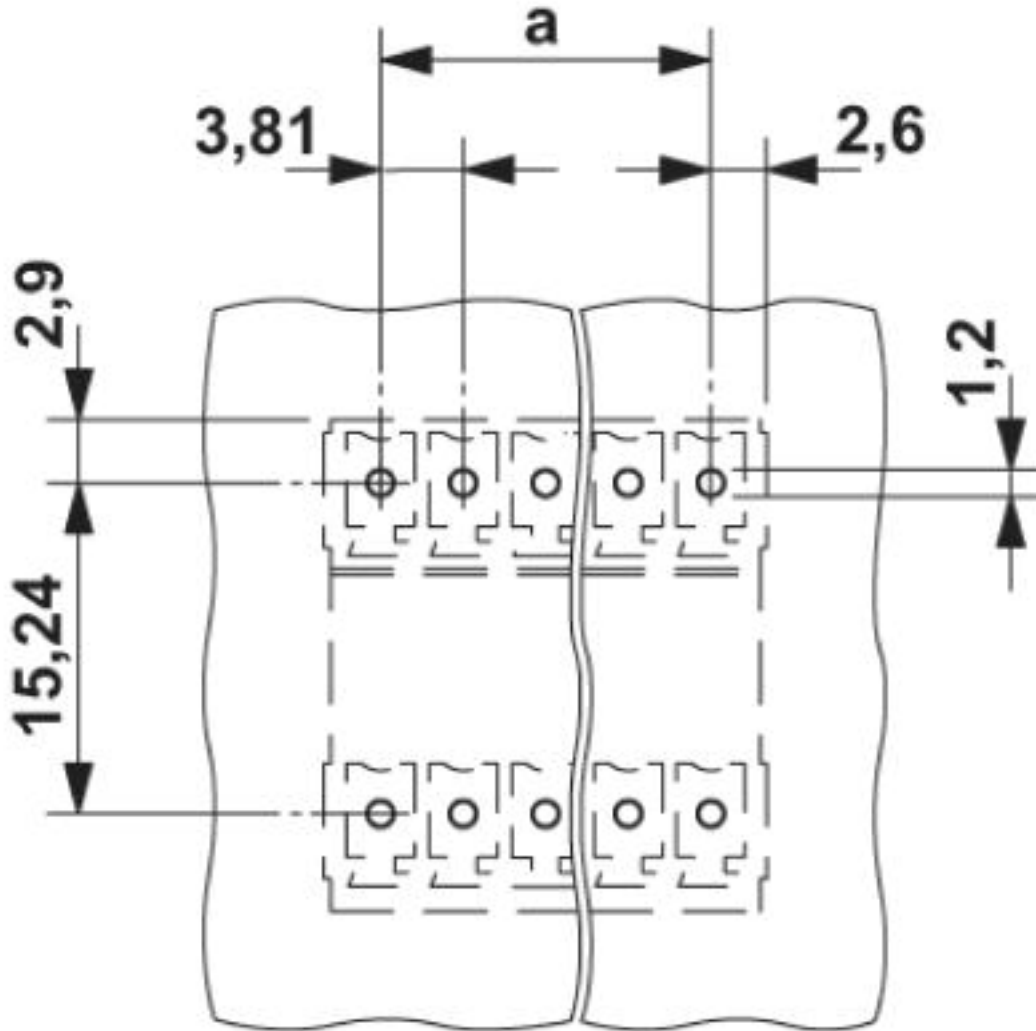
Environmental Product Compliance

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

Drawings

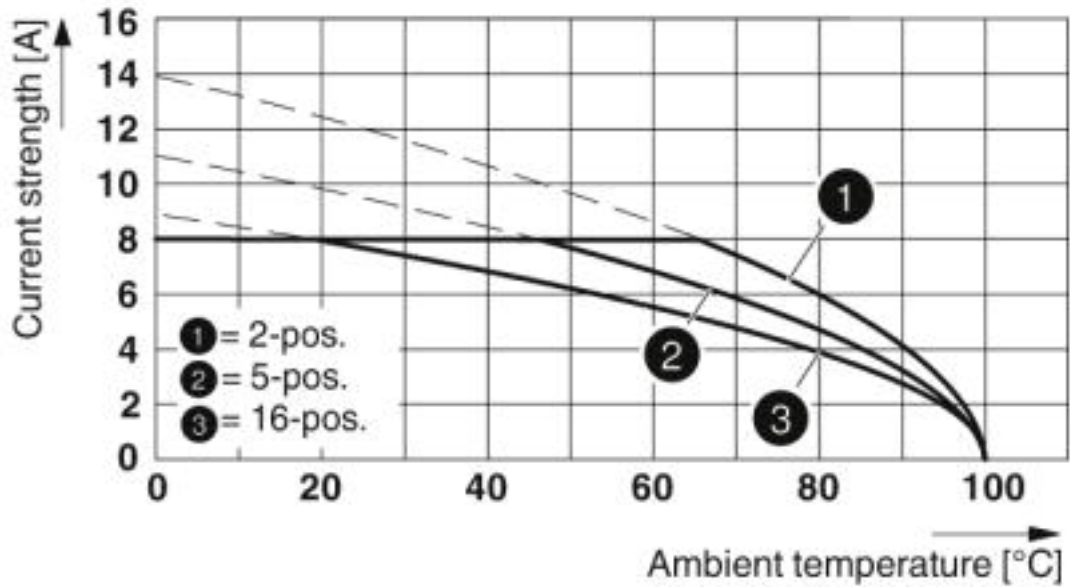
Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Drilling diagram



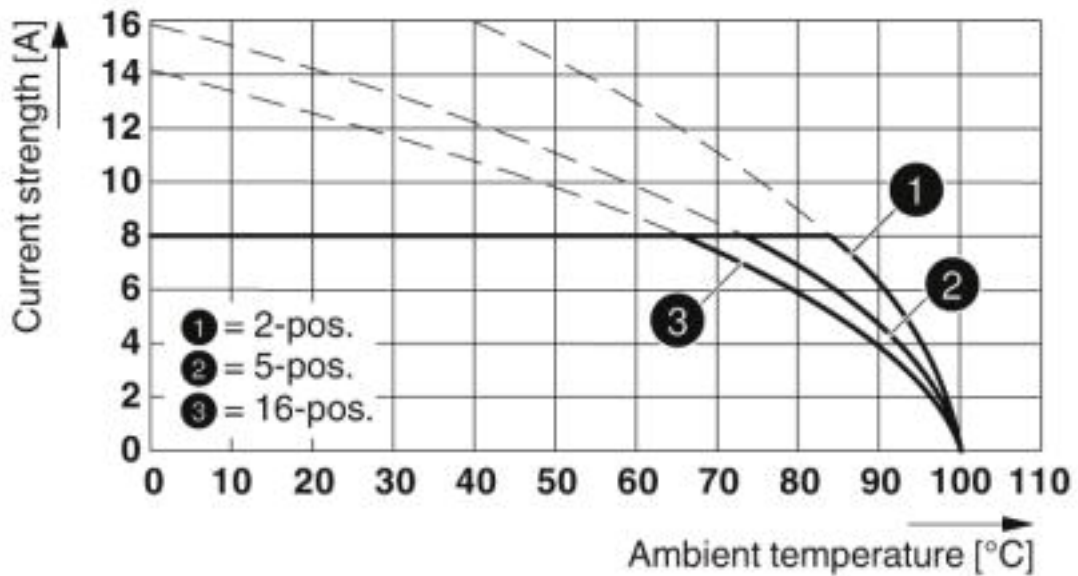
Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Diagram



Type: MCVR 1,5/...-ST-3,81 with MCDV 1,5/...-G-3,81

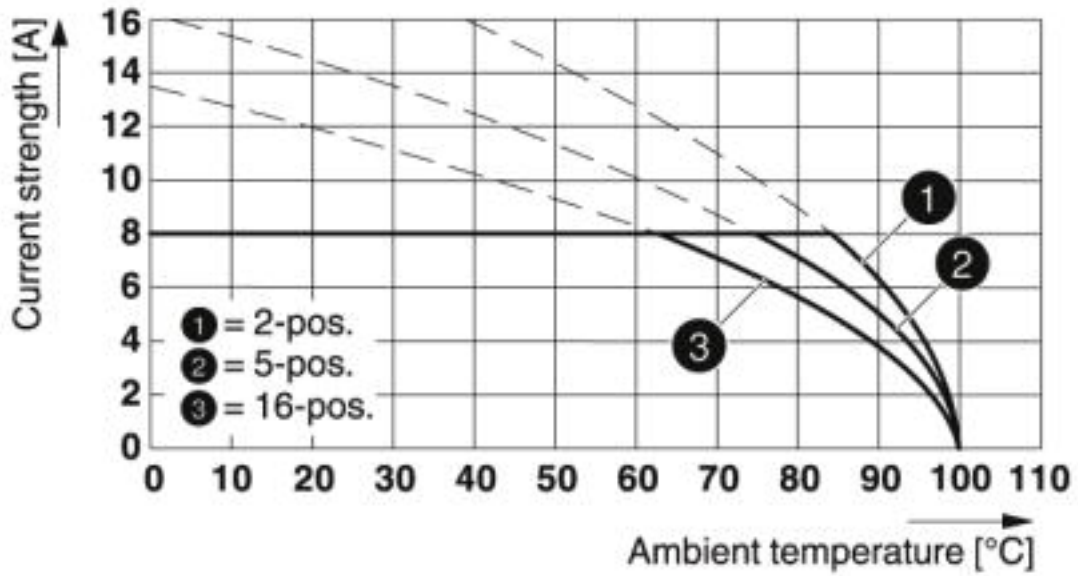
Diagram



Type: FK-MCP 1,5/...-ST-3,81 with MCDV 1,5/...-G-3,81

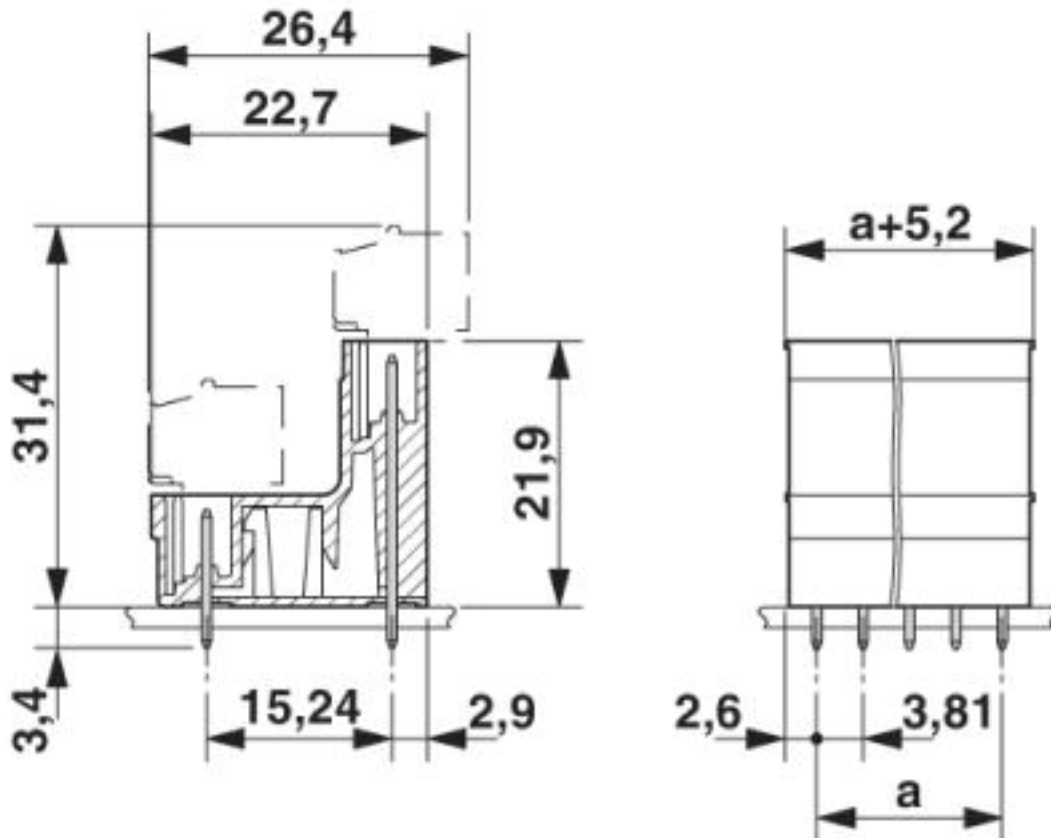
Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Diagram



Type: FMC 1,5/...-ST-3,81 with MCDV 1,5/...-G-3,81

Dimensional drawing



Feed-through header - MCDV 1,5/ 2-G-3,81 - 1830402

Approvals

Approvals

Approvals

CSA / IEC/CE CB Scheme / VDE Gutachten mit Fertigungsüberwachung / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|--------------------|--|---|-------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| | | B | D |
| Nominal voltage UN | | 300 V | 300 V |
| Nominal current IN | | 8 A | 8 A |

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

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

| | | | |
|-----|--|--|---------|
| EAC | | | B.01742 |
|-----|--|--|---------|

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

Phoenix Contact 2019 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>