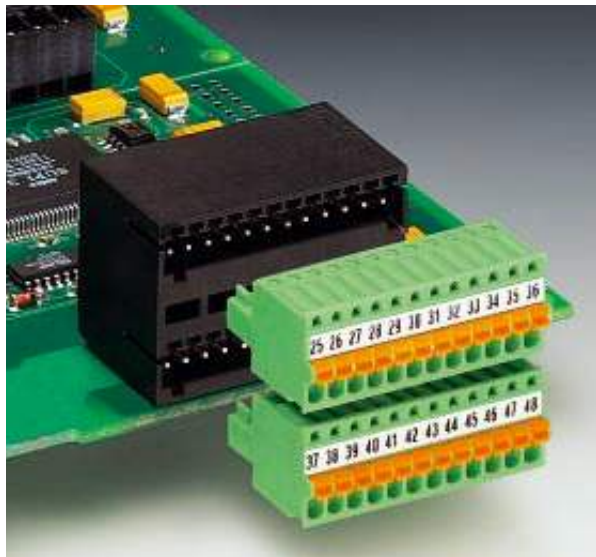


COMBICON Headers for Through Hole Reflow Applications MCD(V) 0,5/...G1-2,5 HT BK and MCD(V) 1,5/...G1-3,81 HT BK 2.5 or 3.81 mm Pitch

The double-level headers of the MINI and MICRO-COMBICON series are characterized by their low space requirement and high contact density. The new high-temperature resistant versions, MCD(V) 0,5-HT and MCD(V) 1,5-HT, extend the performance spectrum of these components – they are suitable for use with the PIN AND PASTE process and can be reflow soldered. In line with the advantages of the Through Hole method, it is thus possible to process SMD components at the same time. Subsequent processes previously necessary, such as wave soldering, are thus unnecessary.

The housing dimensions are not generally common to the THR method, and the double-level HT headers are thus a particular challenge to the SMT process.

Further details on how to optimize the process parameters are available on request.



COMBICON Select

The COMBICON search engine with CAD downloading



COMBICON Select – the printed circuit board connection software supports your workflow from the PCB and housing layout to the ordering process with:

- Systematic and fast selection of products
- Universal Internet aided engineering with extensive CAD downloading
- Easy-to-use e-shopping functions.

<http://select.phoenixcontact.com>

MCD 0,5/...-G...-2,5 HT BK 2.5 mm Pitch



Note:

COMBICON plug connectors may only be actuated in the no-load condition. If smaller loads need to be switched for operational reasons, experimental values are available on request.

| Description | No. of pos. | Dim. a [mm] | Type | Order No. | Pcs./Pkt. |
|--|-------------|-------------|-------------------------|------------|-----------|
| Double-level headers, plug-in direction parallel to the conductor axis, 2.5 mm pitch, color: black, | 2 | 2.5 | MCD 0,5/2-G1-2,5 HT BK | 19 61 14 8 | 50 |
| | 3 | 5 | MCD 0,5/3-G1-2,5 HT BK | 19 61 15 1 | |
| | 4 | 7.5 | MCD 0,5/4-G1-2,5 HT BK | 19 61 16 4 | |
| | 5 | 10 | MCD 0,5/5-G1-2,5 HT BK | 19 61 17 7 | |
| | 6 | 12.5 | MCD 0,5/6-G1-2,5 HT BK | 19 61 18 0 | |
| | 7 | 15 | MCD 0,5/7-G1-2,5 HT BK | 19 61 19 3 | |
| | 8 | 17.5 | MCD 0,5/8-G1-2,5 HT BK | 19 61 20 3 | |
| | 9 | 20 | MCD 0,5/9-G1-2,5 HT BK | 19 61 21 6 | |
| | 10 | 22.5 | MCD 0,5/10-G1-2,5 HT BK | 19 61 22 9 | |
| | 11 | 25 | MCD 0,5/11-G1-2,5 HT BK | 19 61 23 2 | |
| | 12 | 27.5 | MCD 0,5/12-G1-2,5 HT BK | 19 55 14 1 | |

(1) **Coding profile**, is inserted into the groove on the header **after** reflow-soldering, made of red plastic

Technical data

| | |
|----------------|------|
| Dimensions | |
| Pitch | [mm] |
| Hole diameter | [mm] |
| Pin dimensions | [mm] |

Technical data in accordance with IEC/ DIN VDE

| | |
|--|-----------|
| Insulating material group | - |
| Surge voltage category / contamination class | -/- |
| Rated voltage | [V] |
| Rated surge voltage | [kV] |
| Nominal current / cross section | [A]/[mm²] |
| Maximum load current / cross section | [A]/[mm²] |

Insulating material

Inflammability class in acc. with UL 94

Approval data (UL/CUL and CSA)

| | |
|---|---|
| Nominal voltage / current / conductor sizes | UL/CUL: [V]/[A]/AWG CSA: [V]/[A]/AWG |
|---|---|

| | | |
|------------------|-------------------|-----|
| CP-MC 0,5 | 18 81 43 5 | 100 |
|------------------|-------------------|-----|

see description

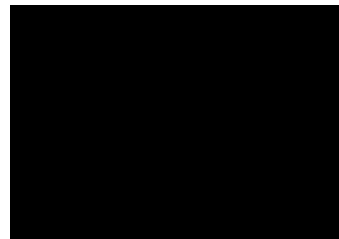
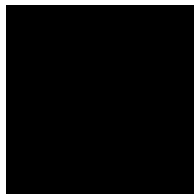
2.5

*) ≤ 8-pos. = 1.3 / > 8-pos. = 1.4

0.8 x 0.8

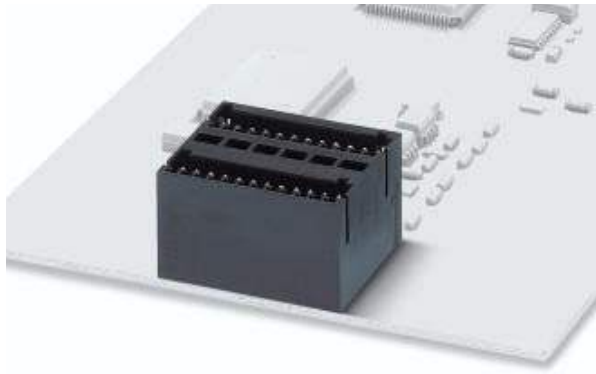
| | | | |
|---------|-----------------------|---------|--------|
| | IIIa | III / 2 | II / 2 |
| III / 3 | 32 | 160 | 160 |
| 1.5 | 2.5 | 2.5 | 2.5 |
| | 4 / - | 4 / - | 4 / - |
| | PA | PA | PA |
| | V0 | V0 | V0 |
| | 125 / 4 ¹⁾ | | |
| | - | | |

¹⁾ applied for



MCDV 0,5/...-G...-2,5 HT BK

2.5 mm Pitch



Note:

COMBICON plug connectors may only be actuated in the no-load condition. If smaller loads need to be switched for operational reasons, experimental values are available on request.

| Description | No. of pos. | Dim. a [mm] | Type | Order No. | Pcs./Pkt. |
|--|------------------|-------------|--------------------------|------------|-----------|
| Double-level headers, plug-in direction vertical to the conductor axis, 2.5 mm pitch, color: black, | 2 | 2.5 | MCDV 0,5/2-G1-2,5 HT BK | 19 61 24 5 | 50 |
| | 3 | 5 | MCDV 0,5/3-G1-2,5 HT BK | 19 61 25 8 | |
| | 4 | 7.5 | MCDV 0,5/4-G1-2,5 HT BK | 19 61 26 1 | |
| | 5 | 10 | MCDV 0,5/5-G1-2,5 HT BK | 19 61 27 4 | |
| | 6 | 12.5 | MCDV 0,5/6-G1-2,5 HT BK | 19 61 28 7 | |
| | 7 | 15 | MCDV 0,5/7-G1-2,5 HT BK | 19 61 29 0 | |
| | 8 | 17.5 | MCDV 0,5/8-G1-2,5 HT BK | 19 61 30 0 | |
| | 9 | 20 | MCDV 0,5/9-G1-2,5 HT BK | 19 61 31 3 | |
| | 10 | 22.5 | MCDV 0,5/10-G1-2,5 HT BK | 19 61 32 6 | |
| | 11 | 25 | MCDV 0,5/11-G1-2,5 HT BK | 19 61 33 9 | |
| | 12 | 27.5 | MCDV 0,5/12-G1-2,5 HT BK | 19 61 34 2 | |
| | CP-MC 0,5 | | | | |

(1) **Coding profile**, is inserted into the groove on the header **after** reflow-soldering, made of red plastic

Technical data

| | |
|----------------|------|
| Dimensions | |
| Pitch | [mm] |
| Hole diameter | [mm] |
| Pin dimensions | [mm] |

Technical data in accordance with IEC/ DIN VDE

| | |
|--|-----------|
| Insulating material group | - |
| Surge voltage category / contamination class | -/- |
| Rated voltage | [V] |
| Rated surge voltage | [kV] |
| Nominal current / cross section | [A]/[mm²] |
| Maximum load current / cross section | [A]/[mm²] |

Insulating material

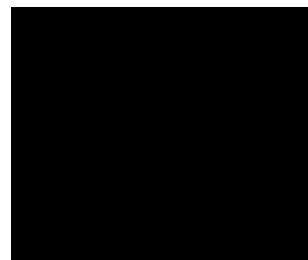
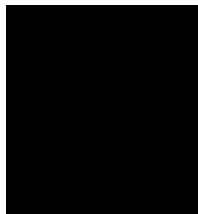
Inflammability class in acc. with UL 94

Approval data (UL/CUL and CSA)

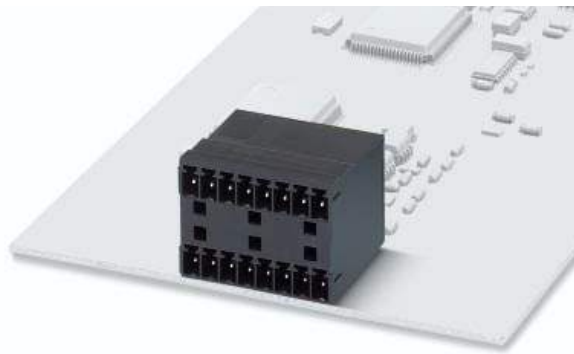
| | |
|---|---|
| Nominal voltage / current / conductor sizes | UL/CUL: [V]/[A]/AWG CSA: [V]/[A]/AWG |
|---|---|

| | | | |
|------------------------------------|---------|-----------------------|--------|
| see description | | | |
| 2.5 | | | |
| *) ≤ 8-pos. = 1.3 / > 8-pos. = 1.4 | | | |
| 0.8 x 0.8 | | | |
| | III / 3 | IIIa | II / 2 |
| | 32 | 160 | 160 |
| | 1.5 | 2.5 | 2.5 |
| | | 4 / - | |
| | | 4 / - | |
| | | PA | |
| | | V0 | |
| | | 125 / 4 ¹⁾ | |
| | | - | |

¹⁾ applied for



MCD 1,5/...-G1-3,81 HT BK 3.81 mm Pitch



Note:

COMBICON plug connectors may only be actuated in the no-load condition. If smaller loads need to be switched for operational reasons, experimental values are available on request.

| Description | No. of pos. | Dim. a [mm] | Type | Order No. | Pcs./Pkt. |
|---|-------------|-------------|--------------------------|------------|-----------|
| Double-level headers, plug-in direction parallel to the conductor axis, 3.81 mm pitch, color: black, | 2 | 3.81 | MCD 1,5/2-G1-3,81 HT BK | 19 60 95 8 | 50 |
| | 3 | 7.62 | MCD 1,5/3-G1-3,81 HT BK | 19 60 96 1 | |
| | 4 | 11.43 | MCD 1,5/4-G1-3,81 HT BK | 19 38 75 7 | |
| | 5 | 15.24 | MCD 1,5/5-G1-3,81 HT BK | 19 60 97 4 | |
| | 6 | 19.05 | MCD 1,5/6-G1-3,81 HT BK | 19 58 36 8 | |
| | 7 | 22.86 | MCD 1,5/7-G1-3,81 HT BK | 19 60 98 7 | |
| | 8 | 26.67 | MCD 1,5/8-G1-3,81 HT BK | 19 48 08 0 | |
| | 9 | 30.48 | MCD 1,5/9-G1-3,81 HT BK | 19 60 99 0 | |
| | 10 | 34.29 | MCD 1,5/10-G1-3,81 HT BK | 19 61 00 9 | |
| | 11 | 38.10 | MCD 1,5/11-G1-3,81 HT BK | 19 61 01 2 | |
| | 12 | 41.91 | MCD 1,5/12-G1-3,81 HT BK | 19 61 02 5 | |

(1) **Coding profile**, is inserted into the groove on the header **after** reflow-soldering, made of red plastic

(2) **Coding profile**, is inserted into the groove on the header **before** reflow-soldering, made of high-temperature resistant beige plastic

(3) **Marker card**, with 14 pcs. 10-section marker strips, white, self-adhesive, for 140 terminal blocks

Technical data

| | |
|----------------|------|
| Dimensions | |
| Pitch | [mm] |
| Hole diameter | [mm] |
| Pin dimensions | [mm] |

Technical data in accordance with IEC/ DIN VDE

| | |
|--|-----------|
| Insulating material group | - |
| Surge voltage category / contamination class | -/- |
| Rated voltage | [V] |
| Rated surge voltage | [kV] |
| Nominal current / cross section | [A]/[mm²] |
| Maximum load current / cross section | [A]/[mm²] |

Insulating material

Inflammability class in acc. with UL 94

Approval data (UL/CUL and CSA)

| | |
|---|---|
| Nominal voltage / current / conductor sizes | UL/CUL: [V]/[A]/AWG CSA: [V]/[A]/AWG |
|---|---|

1) applied for

| | | |
|--|-------------------|-----|
| CP-MSTB | 17 34 63 4 | 100 |
| CP-MSTB NAT HT | 19 54 35 9 | 100 |
| SK 3,81/2,8 (see COMBICON catalog) | | |

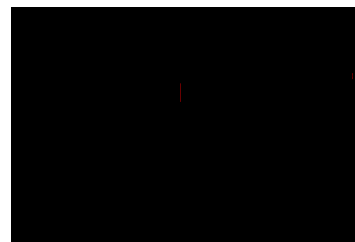
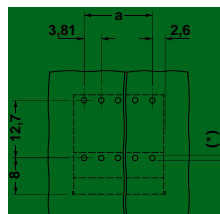
see description

3.81

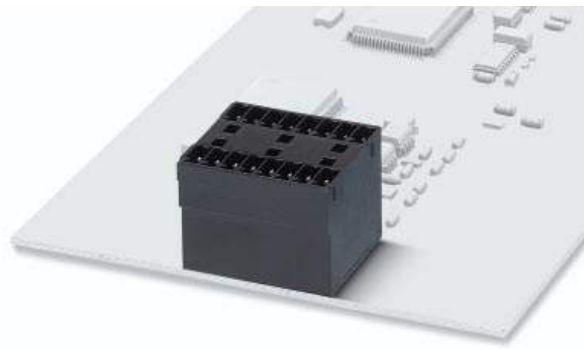
*) ≤ 8-pos. = 1.3 / > 8-pos. = 1.4

0.8 x 0.8

| | | | |
|---------|-----------------------|-----------------------|-----------------------|
| | IIIa | III / 2 | II / 2 |
| III / 3 | 160 | 160 | 250 |
| 2.5 | 2.5 | 2.5 | 2.5 |
| | 8 / - | 8 / - | 8 / - |
| | PA | PA | PA |
| | V0 | V0 | V0 |
| | 300 / 8 ¹⁾ | 300 / 8 ¹⁾ | 300 / 8 ¹⁾ |
| | - | - | - |



MCD(V)1,5/...-G1-3,81 HT BK 3.81 mm Pitch



| Description | No. of pos. | Dim. a [mm] | Type | Order No. | Pcs./Pkt. |
|---|-------------|-------------|---------------------------|------------|-----------|
| Double-level headers, plug-in direction vertical to the conductor axis, 3.81 mm pitch, color: black, | 2 | 3.81 | MCDV 1,5/2-G1-3,81 HT BK | 19 61 03 8 | 50 |
| | 3 | 7.62 | MCDV 1,5/3-G1-3,81 HT BK | 19 61 04 1 | |
| | 4 | 11.43 | MCDV 1,5/4-G1-3,81 HT BK | 19 61 05 4 | |
| | 5 | 15.24 | MCDV 1,5/5-G1-3,81 HT BK | 19 61 06 7 | |
| | 6 | 19.05 | MCDV 1,5/6-G1-3,81 HT BK | 19 61 07 0 | |
| | 7 | 22.86 | MCDV 1,5/7-G1-3,81 HT BK | 19 61 08 3 | |
| | 8 | 26.67 | MCDV 1,5/8-G1-3,81 HT BK | 19 61 09 6 | |
| | 9 | 30.48 | MCDV 1,5/9-G1-3,81 HT BK | 19 61 10 6 | |
| | 10 | 34.29 | MCDV 1,5/10-G1-3,81 HT BK | 19 61 11 9 | |
| | 11 | 38.10 | MCDV 1,5/11-G1-3,81 HT BK | 19 61 12 2 | |
| | 12 | 41.91 | MCDV 1,5/12-G1-3,81 HT BK | 19 61 13 5 | |

(1) **Coding profile**, is inserted into the groove on the header **after** reflow-soldering, made of red plastic

(2) **Coding profile**, is inserted into the groove on the header **before** reflow-soldering, made of high-temperature resistant beige plastic

(3) **Marker card**, with 14 pcs. 10-section marker strips, white, self-adhesive, for 140 terminal blocks

Technical data

| | |
|---|---|
| Dimensions | |
| Pitch | [mm] |
| Hole diameter | [mm] |
| Pin dimensions | [mm] |
| Technical data in accordance with IEC/ DIN VDE | |
| Insulating material group | - |
| Surge voltage category / contamination class | -/- |
| Rated voltage | [V] |
| Rated surge voltage | [kV] |
| Nominal current / cross section | [A]/[mm ²] |
| Maximum load current / cross section | [A]/[mm ²] |
| Insulating material | |
| Inflammability class in acc. with UL 94 | |
| Approval data (UL/CUL and CSA) | |
| Nominal voltage / current / conductor sizes | UL/CUL: [V]/[A]/AWG CSA: [V]/[A]/AWG |

¹⁾ applied for

| | | |
|--|-------------------|-----|
| CP-MSTB | 17 34 63 4 | 100 |
| CP-MSTB NAT HT | 19 54 35 9 | 100 |
| SK 3,81/2,8 (see COMBICON catalog) | | |

see description

3.81

*) ≤ 8-pos. = 1.3 / > 8-pos. = 1.4

0.8 x 0.8

| | | | |
|---------|-----------------------|-----------------------|-----------------------|
| | IIIa | III / 2 | II / 2 |
| III / 3 | 160 | 160 | 250 |
| 2.5 | 2.5 | 2.5 | 2.5 |
| | 8 / - | 8 / - | 8 / - |
| | 8 / - | 8 / - | 8 / - |
| | PA | PA | PA |
| | V0 | V0 | V0 |
| | - | - | - |
| | 300 / 8 ¹⁾ | 300 / 8 ¹⁾ | 300 / 8 ¹⁾ |

