

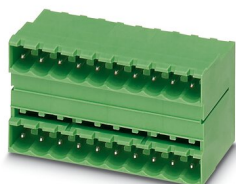
MDSTB 2,5/10-G1 - PCB header



1762774

<https://www.phoenixcontact.com/us/products/1762774>

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PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Pin, number of potentials: 20, number of rows: 2, number of positions: 10, number of connections: 20, product range: MDSTB 2,5/...-G1, pitch: 5 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: without, mounting: without, type of packaging: packed in cardboard, In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Your advantages

- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Easy PCB replacement thanks to plug-in modules
- Well-known mounting principle allows worldwide use
- Conductor connection on several levels enables higher contact density

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 1762774 |
| Packing unit | 1 pc |
| Minimum order quantity | 50 pc |
| Sales key | AA03 |
| Product key | AACSEA |
| Catalog page | Page 329 (C-1-2013) |
| GTIN | 4017918031350 |
| Weight per piece (including packing) | 17.538 g |
| Weight per piece (excluding packing) | 17.1 g |
| Customs tariff number | 85366930 |
| Country of origin | GR |

MDSTB 2,5/10-G1 - PCB header



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Technical data

Product properties

| | |
|---------------------------|-----------------------|
| Type | Standard |
| Product line | COMBICON Connectors M |
| Product type | PCB headers |
| Product family | MDSTB 2,5/..-G1 |
| Number of positions | 10 |
| Pitch | 5 mm |
| Number of connections | 20 |
| Number of rows | 2 |
| Mounting flange | without |
| Number of potentials | 20 |
| Pin layout | Linear pinning |
| Solder pins per potential | 1 |

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 10 A |
| Nominal voltage U_N | 320 V |
| Degree of pollution | 3 |
| Contact resistance | 2.2 mΩ |
| Rated voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |

Mounting

| | |
|---------------|----------------|
| Mounting type | 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 | Tin-plated |
| Metal surface contact area (top layer) | Tin (5 - 7 μm Sn) |
| Metal surface contact area (middle layer) | Nickel (2 - 3 μm Ni) |
| Metal surface soldering area (top layer) | Tin (5 - 7 μm Sn) |
| Metal surface soldering area (middle layer) | Nickel (2 - 3 μm Ni) |

Material data - housing

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1762774

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| | |
|---|--------------|
| Color (Housing) | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |
| Glow wire flammability index GWFI according to EN 60695-2-12 | 850 |
| Glow wire ignition temperature GWIT according to EN 60695-2-13 | 775 |
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

Notes

| | |
|--------------------|--|
| Notes on operation | In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load. |
|--------------------|--|

Dimensions

| | |
|-----------------------|----------|
| Dimensional drawing | |
| Pitch | 5 mm |
| Width [w] | 51.56 mm |
| Height [h] | 32.5 mm |
| Length [l] | 22 mm |
| Installed height | 29 mm |
| Solder pin length [P] | 3.5 mm |
| Pin dimensions | 1 x 1 mm |

Mechanical tests

Visual inspection

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result | Test passed |

Dimension check

| | |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result | Test passed |

Resistance of inscriptions

| | |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result | Test passed |

Polarization and coding

| | |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result | Test passed |

MDSTB 2,5/10-G1 - PCB header



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Contact holder in insert

| | |
|--|------------------------|
| Specification | IEC 60512-15-1:2008-05 |
| Contact holder in insert Requirements >20 N | Test passed |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 20 |

Insulation resistance

| | |
|--|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Air clearances and creepage distances |

| | |
|--|---------------------|
| Specification | IEC 60664-1:2007-04 |
| Insulating material group | I |
| Comparative tracking index (IEC 60112) | CTI 600 |
| Rated insulation voltage (III/3) | 250 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 3.2 mm |
| Rated insulation voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |
| minimum clearance value - non-homogenous field (III/2) | 3 mm |
| minimum creepage distance (III/2) | 3 mm |
| Rated insulation voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |
| minimum clearance value - non-homogenous field (II/2) | 3 mm |
| minimum creepage distance (II/2) | 3.2 mm |

Environmental and real-life conditions

Vibration test

| | |
|---------------|-----------------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 150 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm (10 Hz ... 60.1 Hz) |
| Sweep speed | 5g (60.1 Hz ... 150 Hz) |

MDSTB 2,5/10-G1 - PCB header



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| | |
|------------------------|-------|
| Test duration per axis | 2.5 h |
|------------------------|-------|

Durability test

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level | 4.8 kV |
| Contact resistance R ₁ | 2.2 mΩ |
| Contact resistance R ₂ | 2.3 mΩ |
| Contact resistance R ₂ 2nd level | 3 mΩ |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 MΩ |

Climatic test

| | |
|-----------------------------------|---|
| Specification | ISO 6988:1985-02 |
| Corrosive stress | 0.2 dm ³ SO ₂ on 300 dm ³ /40 °C/1 cycle |
| Thermal stress | 100 °C/168 h |
| Power-frequency withstand voltage | 2.21 kV |

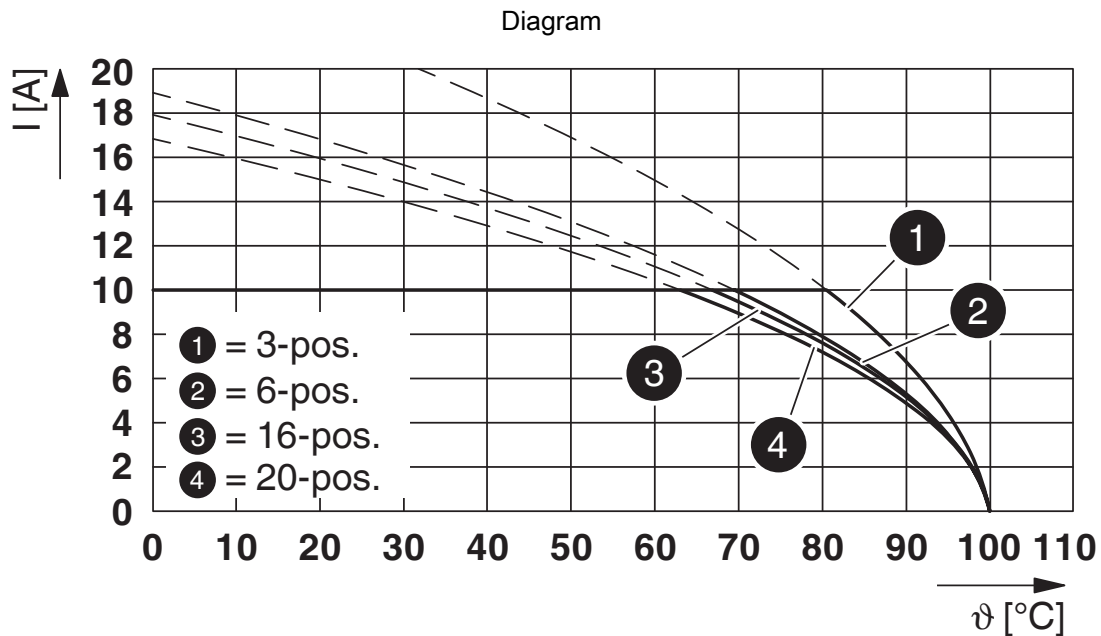
Ambient conditions

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

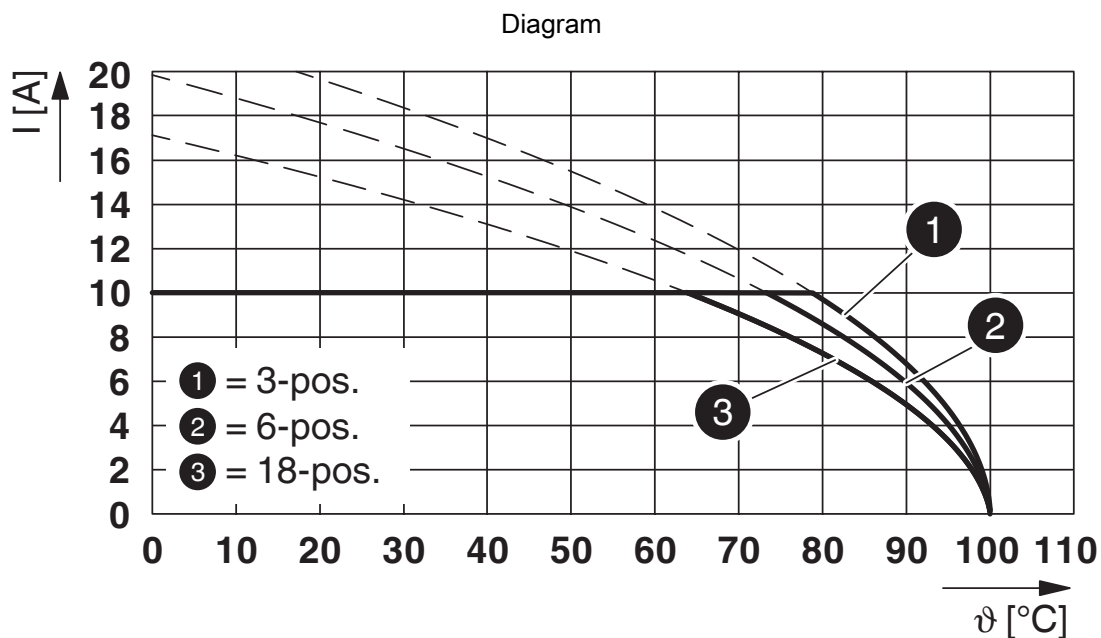
Packaging specifications

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

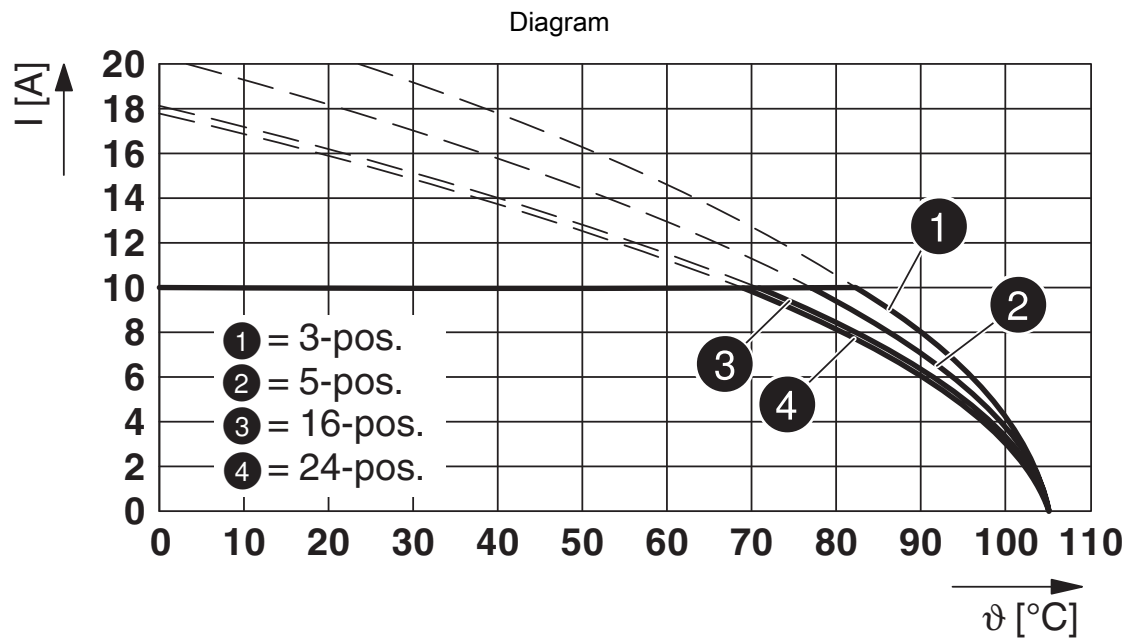
Drawings



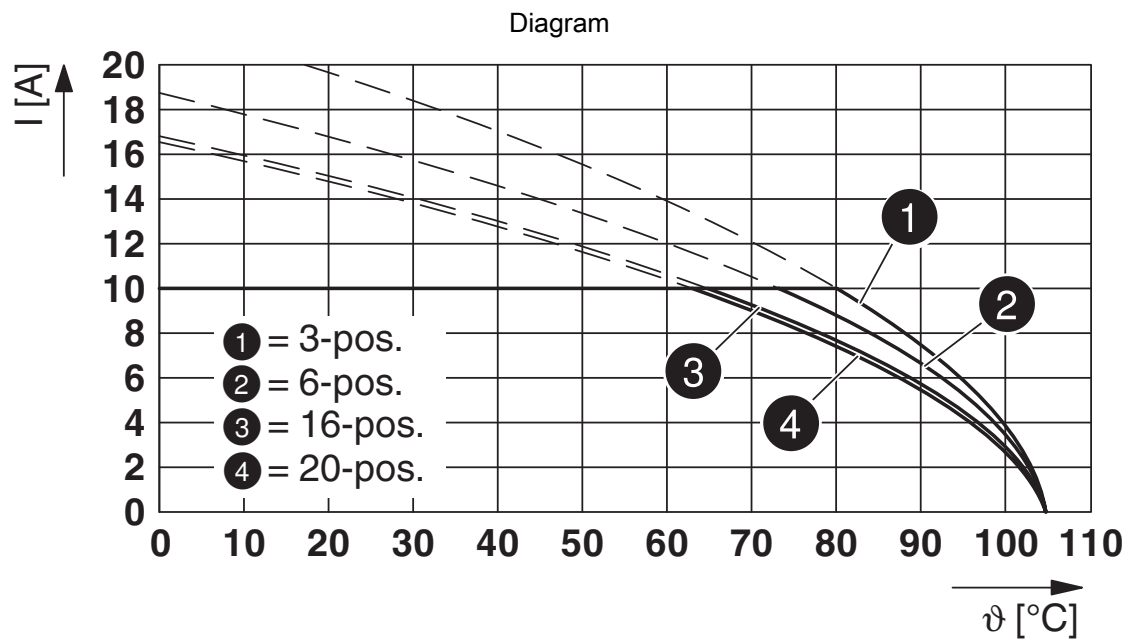
Type: MSTB 2,5/...-ST with MDSTB 2,5/...-G1



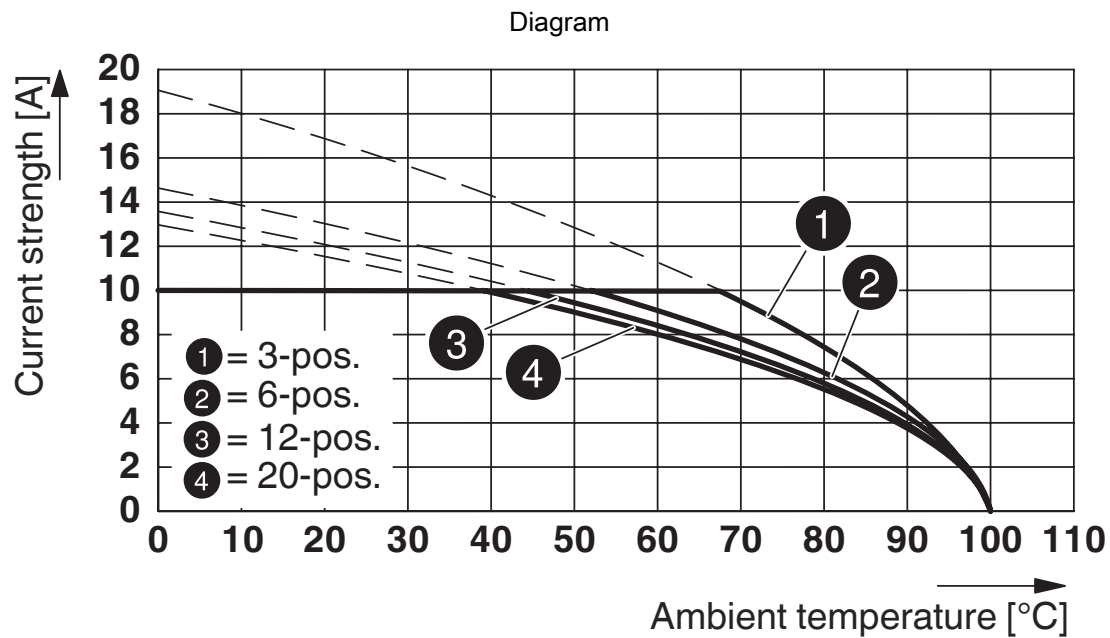
Type: FKCS 2,5/...-ST with MDSTB 2,5/...-G1



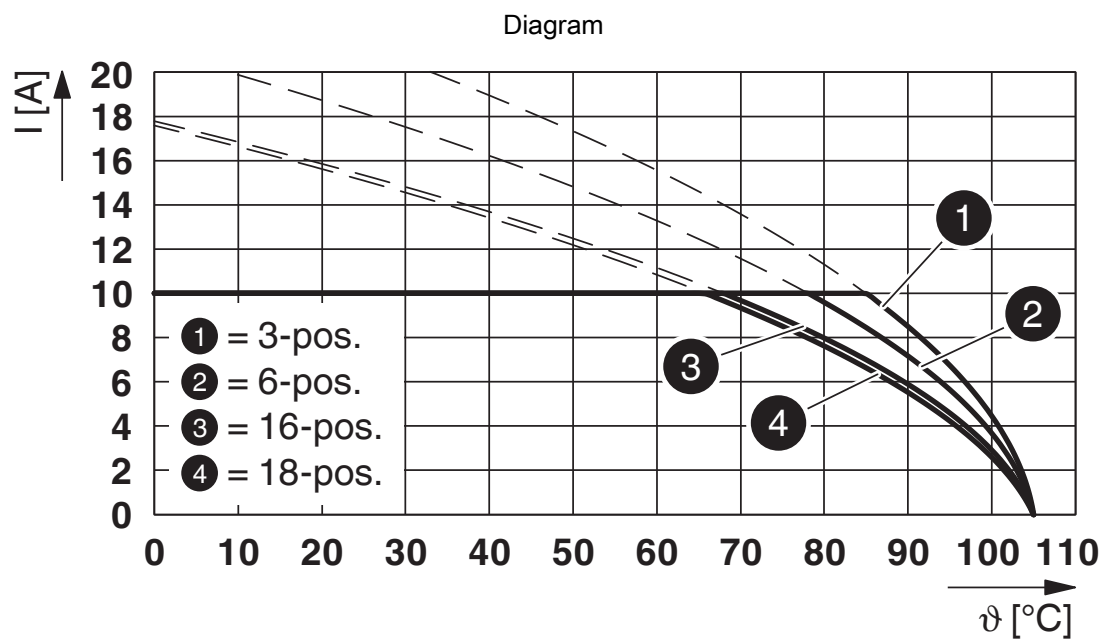
Type: FKCVR 2,5/...-ST with MDSTB 2,5/...-G1



Type: FKCT 2,5/...-ST with MDSTB 2,5/...-G1



Type: MVSTB(R/W) 2,5/...-ST with MDSTB 2,5/...-G1



Type: FKCN 2,5/...-ST with MDSTB 2,5/...-G1

MDSTB 2,5/10-G1 - PCB header



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1762774>



EAC

Approval ID: B.01687



cULus Recognized

Approval ID: E60425-19931011

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B | | | | |
| | 300 V | 15 A | - | - |
| Use group D | | | | |
| | 300 V | 10 A | - | - |



VDE Zeichengenehmigung

Approval ID: 40050648

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 250 V | 10 A | - | - |



CSA

Approval ID: 13631

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|-------------|-----------------------|-----------------------|-------------------|-----------------------------|
| Use group B | | | | |
| | 300 V | 15 A | - | - |
| Use group D | | | | |
| | 300 V | 15 A | - | - |

MDSTB 2,5/10-G1 - PCB header



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27460201 |
| ECLASS-12.0 | 27460201 |
| ECLASS-13.0 | 27460201 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

UNSPSC

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

MDSTB 2,5/10-G1 - PCB header



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Environmental product compliance

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

MDSTB 2,5/10-G1 - PCB header



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Accessories

MSTB-BL - Accessories

1755477

<https://www.phoenixcontact.com/us/products/1755477>



Keying cap, for forming sections, plugs onto header pin, green insulating material

CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/us/products/1734401>



Coding section, inserted into the recess in the header or the inverted plug, red insulating material

MDSTB 2,5/10-G1 - PCB header

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SK 5/3,8:FORTL.ZAHLEN - Marker card

0804183

<https://www.phoenixcontact.com/us/products/0804183>

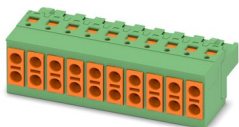


Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: 5 x 3.8 mm

TVFKC 1,5/10-ST - PCB connector

1713910

<https://www.phoenixcontact.com/us/products/1713910>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 20, product range: TVFKC 1,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header

1762774

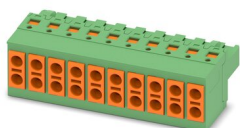
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TVFKCL 1,5/10-ST - PCB connector

1716001

<https://www.phoenixcontact.com/us/products/1716001>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 10 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 20, product range: TVFKCL 1,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

QC 1,5/10-ST - PCB connector

1718041

<https://www.phoenixcontact.com/us/products/1718041>



PCB connector, nominal cross section: 1.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 630 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: QC 1,5/...-ST, pitch: 5 mm, connection method: Displacement connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header

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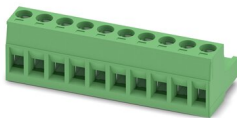
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MSTB 2,5/10-ST - PCB connector

1754601

<https://www.phoenixcontact.com/us/products/1754601>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MSTB 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MSTB 2,5/10-STZ - PCB connector

1759004

<https://www.phoenixcontact.com/us/products/1759004>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MSTB 2,5/...-STZ, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header

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MSTBP 2,5/10-ST - PCB connector

1765852

<https://www.phoenixcontact.com/us/products/1765852>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MSTBP 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

SMSTB 2,5/10-ST - PCB connector

1768833

<https://www.phoenixcontact.com/us/products/1768833>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: SMSTB 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -45 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header



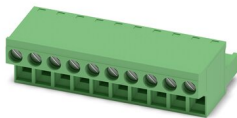
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FRONT-MSTB 2,5/10-ST - PCB connector

1779495

<https://www.phoenixcontact.com/us/products/1779495>

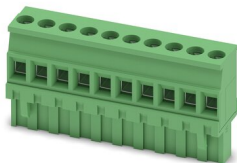


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: FRONT-MSTB 2,5/...-ST, pitch: 5 mm, connection method: Front screw connection, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MVSTBR 2,5/10-ST - PCB connector

1792090

<https://www.phoenixcontact.com/us/products/1792090>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MVSTBR 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header

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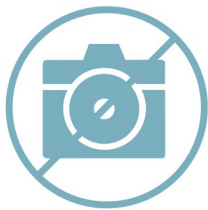
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MVSTBW 2,5/10-ST - PCB connector

1792605

<https://www.phoenixcontact.com/us/products/1792605>

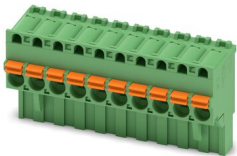


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: MVSTBW 2,5/..-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

FKCVR 2,5/10-ST - PCB connector

1909799

<https://www.phoenixcontact.com/us/products/1909799>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: FKCVR 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header

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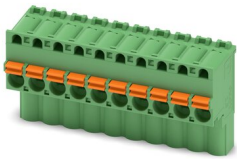
<https://www.phoenixcontact.com/us/products/1762774>



FKCVW 2,5/10-ST - PCB connector

1910115

<https://www.phoenixcontact.com/us/products/1910115>

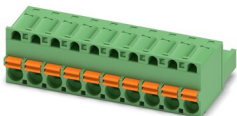


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: FKCVW 2,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: -90 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

FKC 2,5/10-ST - PCB connector

1910432

<https://www.phoenixcontact.com/us/products/1910432>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: FKC 2,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

MDSTB 2,5/10-G1 - PCB header

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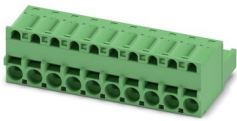
<https://www.phoenixcontact.com/us/products/1762774>



FKCS 2,5/10-ST - PCB connector

1974818

<https://www.phoenixcontact.com/us/products/1974818>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 10, number of rows: 1, number of positions: 10, number of connections: 10, product range: FKCS 2,5/...-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

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