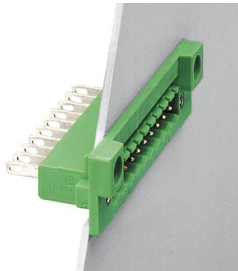


Feed-through header - DFK-MSTB 2,5/ 3-GF

0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

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Feed-through header, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: DFK-MSTB 2,5/..-GF, pitch: 5 mm, connection method: Solder/Slip-on connection, pin layout: Linear pinning, solder pin [P]: 9.3 mm, number of solder pins per potential: 1, plug-in system: COMBICON MSTB 2,5, Pin connector pattern alignment: Standard, locking: Screw locking, mounting: Threaded flange, type of packaging: packed in cardboard

Your advantages

- Cable connection on the inside of the device enables flexible positioning of the panel feed-through
- Free choice – permanent solder connection or standardized slip-on connection
- Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- Screwable flange for superior mechanical stability

Feed-through header - DFK-MSTB 2,5/ 3-GF



0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

Commercial Data

| | |
|--------------------------------------|---------------------------|
| Item number | 0710031 |
| Packing unit | 50 pc |
| Minimum order quantity | 50 pc |
| Sales Key | E1 - Leiterplattenanschl. |
| Product Key | AACWAB |
| Catalog Page | Page 353 (C-1-2013) |
| GTIN | 4017918005061 |
| Weight per Piece (including packing) | 4,8 g |
| Weight per Piece (excluding packing) | 4,219 g |
| Customs tariff number | 85366930 |
| Country of origin | DE |

Technical Data

Product properties

| | |
|-----------------------|-----------------------|
| Type | Feed-through header |
| Product line | COMBICON Connectors M |
| Product type | Feed-through header |
| Number of positions | 3 |
| Pitch | 5 mm |
| Number of connections | 3 |
| Number of rows | 1 |
| Mounting flange | Threaded flange |
| Number of potentials | 3 |
| Pin layout | Linear pinning |

Electrical properties

| | |
|-----------------------------|--------|
| Nominal current I_N | 12 A |
| Nominal voltage U_N | 320 V |
| Pollution degree | 3 |
| Contact resistance | 1.6 mΩ |
| Rated voltage (III/3) | 320 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated voltage (III/2) | 320 V |
| Rated surge voltage (III/2) | 4 kV |

Mounting

| | |
|-------------------------------|-----------------|
| Mounting type Direct mounting | Direct mounting |
| Mounting type | Direct mounting |

Flange

| | |
|-------------------|--------|
| Tightening torque | 0.3 Nm |
|-------------------|--------|

Flange

| | |
|-------------------|---|
| Tightening torque | 0.3 Nm |
| Screw | 0708263 DFK-MSTB SS for housing walls of up to 6 mm thick |

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) |

Feed-through header - DFK-MSTB 2,5/ 3-GF

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| | |
|---|----------------------|
| Metal surface soldering area (middle layer) | Nickel (2 - 3 µm Ni) |
|---|----------------------|

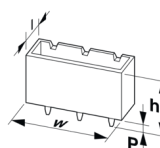
Material data - housing

| | |
|--|--------------|
| Housing color | green (6021) |
| Insulating material | PA |
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V2 |

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] | 35 mm |
| Height [h] | 29.5 mm |
| Length [l] | 17.5 mm |
| Installed height | 20.2 mm |
| Solder pin length [P] | 9.3 mm |

Mechanical tests

Test for conductor damage and slackening

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result | Test passed |

Pull-out test

| | |
|---|---|
| Specification | IEC 60999-1:1999-11 |
| Conductor cross section/conductor type/tractive force setpoint/actual value | 0.2 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 2.5 mm ² / solid / > 50 N |
| | 2.5 mm ² / flexible / > 50 N |

Insertion and withdrawal forces

| | |
|-------------------------------------|-------------|
| Result | Test passed |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 10 N |
| Withdraw strength per pos. approx. | 7 N |

Feed-through header - DFK-MSTB 2,5/ 3-GF



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Torque test

| | |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

Contact holder in insert

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

Visual inspection

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

Dimension check

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

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 16 |

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) | 320 V |
| Rated surge voltage (III/3) | 4 kV |
| minimum clearance value - non-homogenous field (III/3) | 3 mm |
| minimum creepage distance (III/3) | 4 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 |

Feed-through header - DFK-MSTB 2,5/ 3-GF



0710031

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| | |
|---|--------|
| 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 - 60.1 Hz) |
| Sweep speed | 5g (60.1 - 150 Hz) |
| 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 | 1.6 mΩ |
| Contact resistance R ₂ | 1.7 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

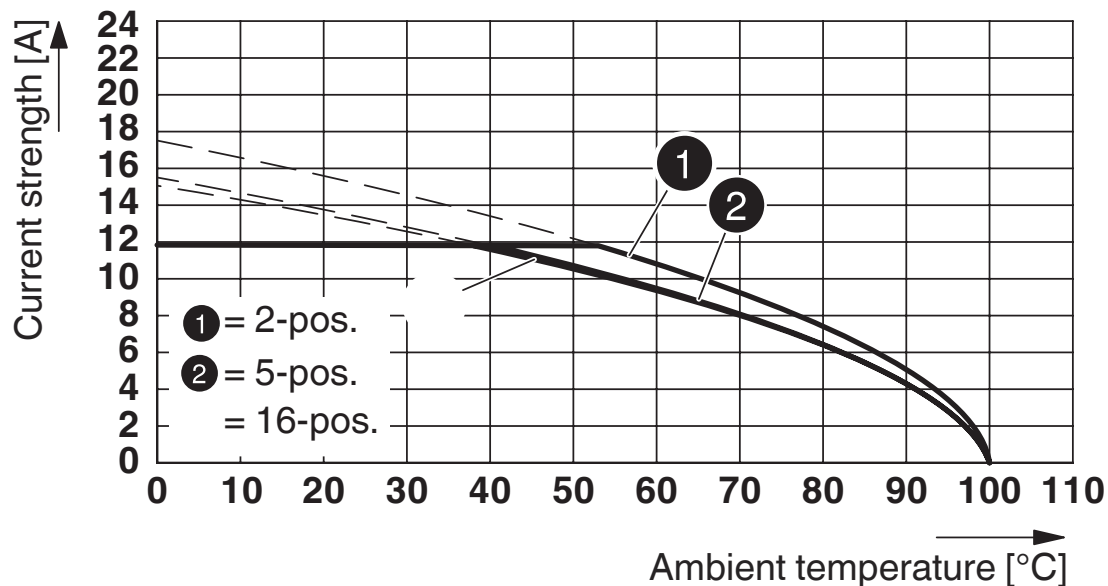
| | |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

Packaging specifications

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

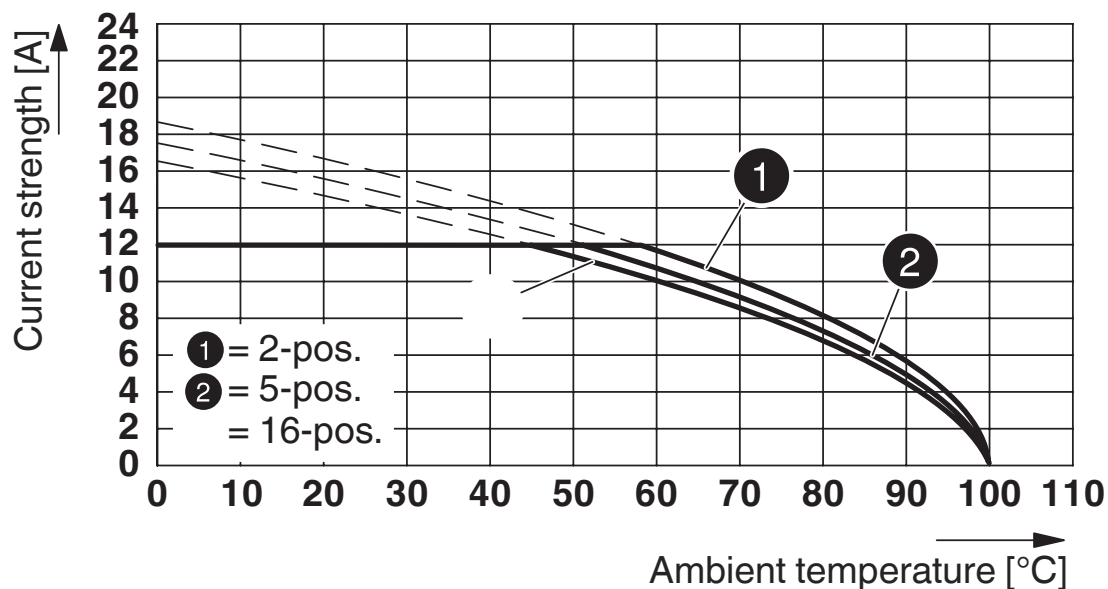
Drawings

Diagram



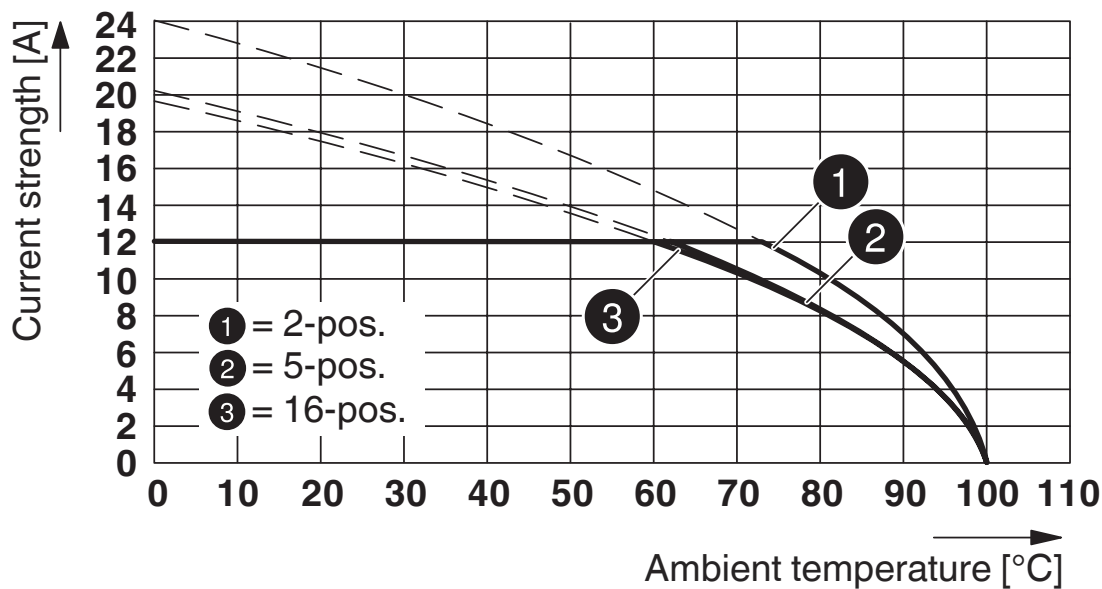
Type: MVSTB(RW) 2,5/...-STF with DFK-MSTB/...-GF

Diagram



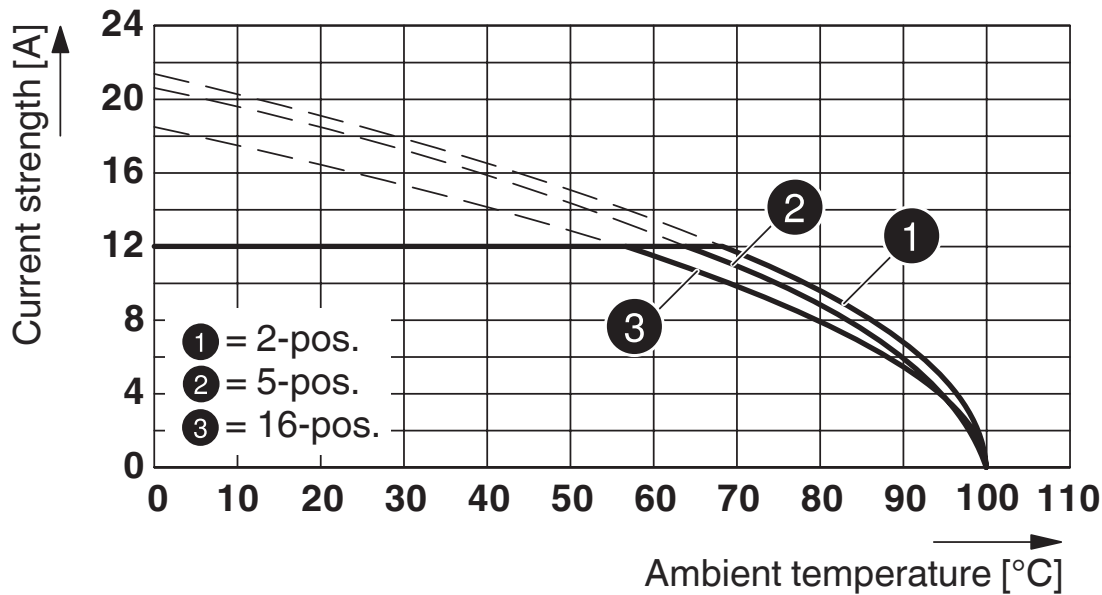
Type: SMSTB 2,5/...-STF with DFK-MSTB 2,5/...-GF

Diagram

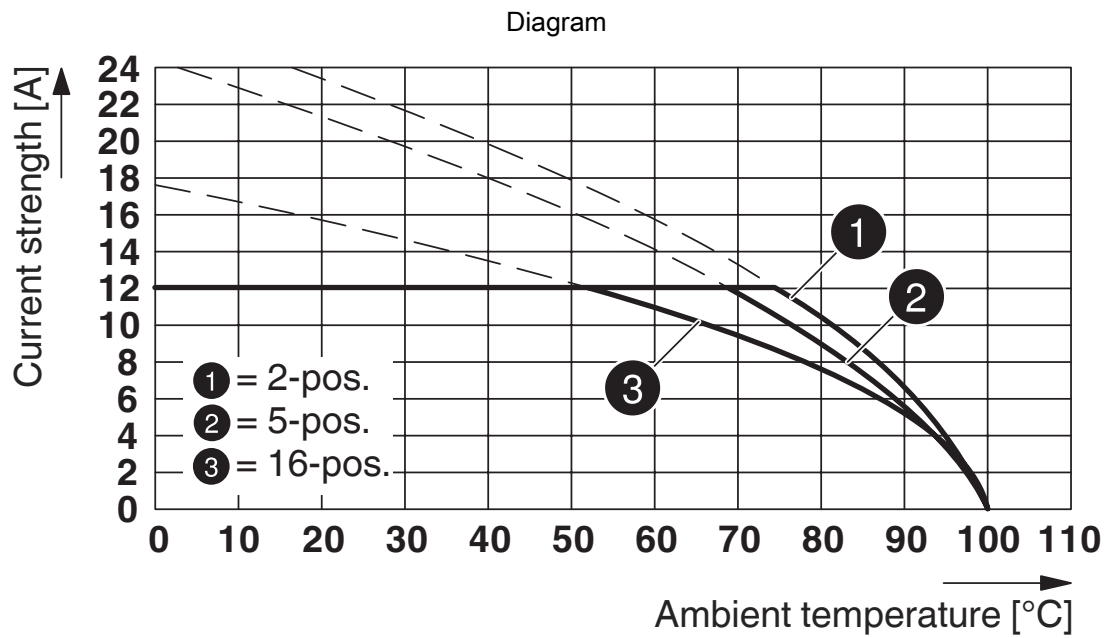


Type: MSTBT 2,5/...-STF with DFK-MSTB 2,5/...-GF

Diagram



Type: MSTB 2,5/...-STF with DFK-MSTB 2,5/...-GF



Type: FRONT-MSTB 2,5/...-STF with DFK-MSTB 2,5/...-GF


Feed-through header - DFK-MSTB 2,5/ 3-GF



0710031


<https://www.phoenixcontact.com/de/produkte/0710031>

Approvals

|  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 | 10 A | - | - |

|  IECEE CB Scheme Approval ID: DE1-60988-B1B2 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 250 V | 12 A | - | - |

|  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 | 12 A | - | - |

Feed-through header - DFK-MSTB 2,5/ 3-GF



0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27440402 |
| ECLASS-10.0.1 | 27440402 |
| ECLASS-11.0 | 27460201 |

ETIM

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

UNSPSC

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

Feed-through header - DFK-MSTB 2,5/ 3-GF



0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

Environmental Product Compliance

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

Feed-through header - DFK-MSTB 2,5/ 3-GF

0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

Accessories

Screw set

Screw set - DFK-MSTB-SS - 0708263

<https://www.phoenixcontact.com/de/produkte/0708263>



Screw set, for securing the header to the device wall, consists of an M3 x 10 screw, with a spring washer and a nut

Coding section

Coding section - CR-MSTB - 1734401

<https://www.phoenixcontact.com/de/produkte/1734401>



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

Feed-through header - DFK-MSTB 2,5/ 3-GF

0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

Accessories

Accessories - MSTB-BL - 1755477

<https://www.phoenixcontact.com/de/produkte/1755477>



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

Connector

Connector - C-SCF 1/2,8X0,8 - 3240153

<https://www.phoenixcontact.com/de/produkte/3240153>



Slip-on sleeve, non-insulated, 0.5 ... 1 mm², 2.8 x 0.8

Feed-through header - DFK-MSTB 2,5/ 3-GF

0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

Connector

Connector - C-SCFI 1,5/2,8X0,8 - 3240049

<https://www.phoenixcontact.com/de/produkte/3240049>



Slip-on sleeve, red, 0.5 ... 1.5 mm², 2.8 x 0.8

Connector

Connector - C-SCFFI 1,5/2,8X0,8 - 3240535

<https://www.phoenixcontact.com/de/produkte/3240535>



Slip-on sleeve, fully isolated, red, 0.5 ... 1.5 mm², for plug 2.8 x 0.8 mm

Feed-through header - DFK-MSTB 2,5/ 3-GF

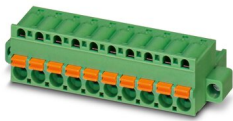
0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

PCB connector

PCB connector - FKC 2,5/ 3-STF - 1910539

<https://www.phoenixcontact.com/de/produkte/1910539>

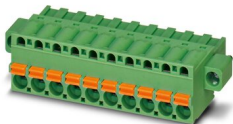


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKC 2,5/..-STF, pitch: 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - FKCT 2,5/ 3-STF - 1909414

<https://www.phoenixcontact.com/de/produkte/1909414>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCT 2,5/..-STF, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Feed-through header - DFK-MSTB 2,5/ 3-GF

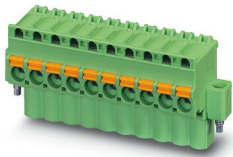
0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

PCB connector

PCB connector - FKCVW 2,5/ 3-STF - 1910212

<https://www.phoenixcontact.com/de/produkte/1910212>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCVW 2,5/..-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - MSTB 2,5/ 3-STF - 1786844

<https://www.phoenixcontact.com/de/produkte/1786844>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: MSTB 2,5/..-STF, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Feed-through header - DFK-MSTB 2,5/ 3-GF

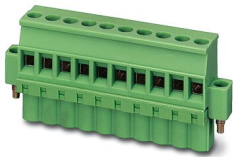
0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

PCB connector

PCB connector - MVSTBW 2,5/ 3-STF - 1835290

<https://www.phoenixcontact.com/de/produkte/1835290>

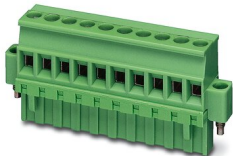


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: MVSTBW 2,5/...-STF, pitch: 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - MVSTBR 2,5/ 3-STF - 1835481

<https://www.phoenixcontact.com/de/produkte/1835481>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: MVSTBR 2,5/...-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

Feed-through header - DFK-MSTB 2,5/ 3-GF

0710031

<https://www.phoenixcontact.com/de/produkte/0710031>

PCB connector

PCB connector - FRONT-MSTB 2,5/ 3-STF - 1779657

<https://www.phoenixcontact.com/de/produkte/1779657>

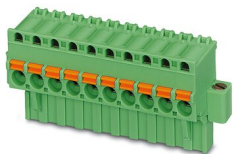


PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FRONT-MSTB 2,5/...-STF, pitch: 5 mm, connection method: Front screw connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

PCB connector

PCB connector - FKCVR 2,5/ 3-STF - 1909896

<https://www.phoenixcontact.com/de/produkte/1909896>



PCB connector, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCVR 2,5/...-STF, 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: Screw locking, mounting: Screw flange, type of packaging: packed in cardboard

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