

FKC 2,5/13-ST-5,08 - PCB connector



1873168

<https://www.phoenixcontact.com/pc/products/1873168>

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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: Socket, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: FKC 2,5/.-ST, pitch: 5.08 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

Your advantages

- Time saving push-in connection, tools not required
- Intuitive use through colour coded actuation lever
- Quick and convenient testing using integrated test option
- Can be combined with the MSTB 2,5 range

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1873168 |
| Packing unit | 50 pc |
| Minimum order quantity | 1 pc |
| Product Key | AACFBD |
| Catalog Page | Page 274 (C-1-2013) |
| GTIN | 4017918142551 |
| Weight per Piece (including packing) | 23.93 g |
| Weight per Piece (excluding packing) | 21.707 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

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Technical Data

Product properties

| | |
|-----------------------|-----------------------|
| Type | Standard |
| Product line | COMBICON Connectors M |
| Product type | PCB connector |
| Product family | FKC 2,5/...-ST |
| Number of positions | 13 |
| Pitch | 5.08 mm |
| Number of connections | 13 |
| Number of rows | 1 |
| Mounting flange | without |
| Number of potentials | 13 |

Electrical properties

| | |
|-----------------------------|-------|
| Nominal current I_N | 12 A |
| Nominal voltage U_N | 320 V |
| Degree of pollution | 3 |
| Contact resistance | 1 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 |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (II/2) | 4 kV |

Connection data

Connection technology

| | |
|-----------------------|---------------------|
| Connector system | COMBICON MSTB 2,5 |
| Nominal cross section | 2.5 mm ² |
| Type of contact | Socket |

Interlock

| | |
|-----------------|---------|
| Locking type | without |
| Mounting flange | without |

Conductor connection

| | |
|----------------------------------------------------------------|----------------------------------------------|
| Connection method | Push-in spring connection |
| Connection direction of the conductor to plug-in direction | 0 ° |
| Conductor/PCB connection direction | 0 ° |
| Conductor cross section rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 12 |
| Conductor cross section flexible, with ferrule without plastic | 0.25 mm ² ... 2.5 mm ² |

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| | |
|-------------------------------------------------------------------------------------------|----------------------------------------------|
| sleeve | |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1.5 mm ² |
| Cylindrical gauge a x b / diameter | 2.8 mm x 2.0 mm / 2.4 mm |
| Stripping length | 10 mm |

Specifications for ferrules without insulating collar

| | |
|--------------------------------------------------------------|--------------------------------------------------------------|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
| ferrules without insulating collar, according to DIN 46228-1 | Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 2.5 mm ² ; Length: 10 mm |

Specifications for ferrules with insulating collar

| | |
|-----------------------------------------------------------|--------------------------------------------------------------|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
| ferrules with insulating collar, according to DIN 46228-4 | Cross section: 0.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 0.75 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 1.5 mm ² ; Length: 8 mm ... 10 mm |
| | Cross section: 2.5 mm ² ; Length: 10 mm |

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 | hot-dip tin-plated |
| Metal surface terminal point (top layer) | Tin (4 - 8 µm Sn) |
| Metal surface contact area (top layer) | Tin (4 - 8 µm Sn) |

Material data - housing

| | |
|-------------------------------------------------------------------|--------------|
| 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 |

Material data – actuating element

| | |
|---------------------|-----|
| Insulating material | PBT |
|---------------------|-----|

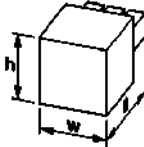
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| | |
|----------------------------------------|-----|
| Insulating material group | I |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |

Dimensions

| | |
|---------------------|------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch | 5.08 mm |
| Width [w] | 66.66 mm |
| Height [h] | 15 mm |
| Length [l] | 25.4 mm |

Mounting

| | |
|-------------------|---------------------------|
| Connection method | Push-in spring connection |
|-------------------|---------------------------|

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. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Mechanical tests

Conductor connection

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

Test for conductor damage and slackening

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

Repeated connection and disconnection

| | |
|---------------|---------------------|
| 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 |

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| | |
|-------------------------------------|-----|
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |

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 |

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) |
| 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 m Ω |
| Contact resistance R_2 | 1.1 m Ω |
| Insertion/withdrawal cycles | 25 |
| Insulation resistance, neighboring positions | > 5 M Ω |

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 |

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Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Tested number of positions | 12 |

Insulation resistance

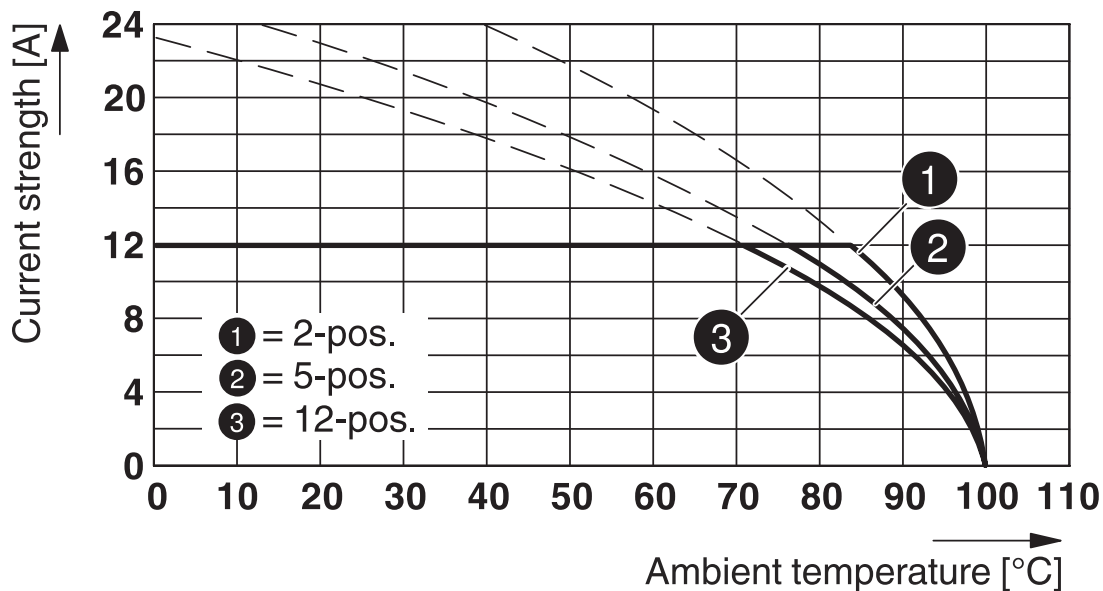
| | |
|----------------------------------------------|-----------------------|
| Specification | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ |

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 |
| minimum clearance value - non-homogenous field (II/2) | 3 mm |
| minimum creepage distance (II/2) | 3.2 mm |

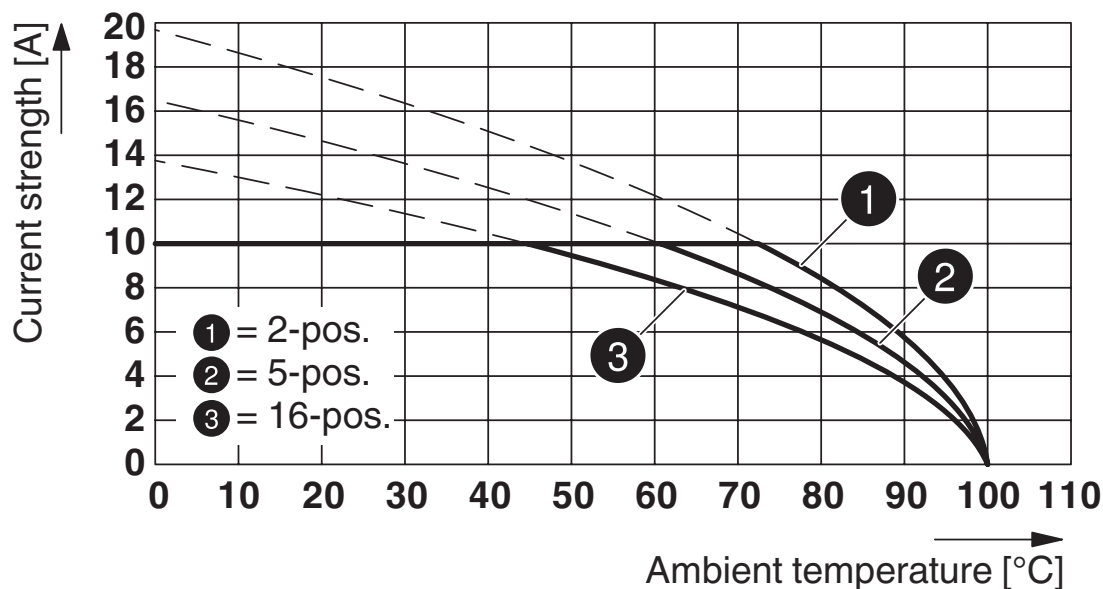
Drawings

Diagram



Type: FKC 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR

Diagram



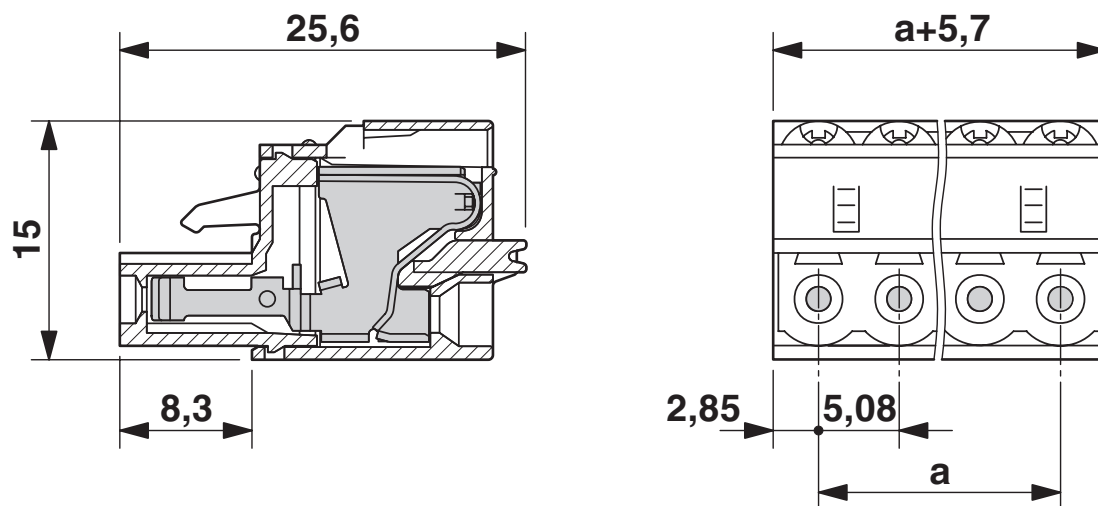
Type: FKC 2,5/...-ST-5,08 with MDSTBVA 2,5/...-G-5,08

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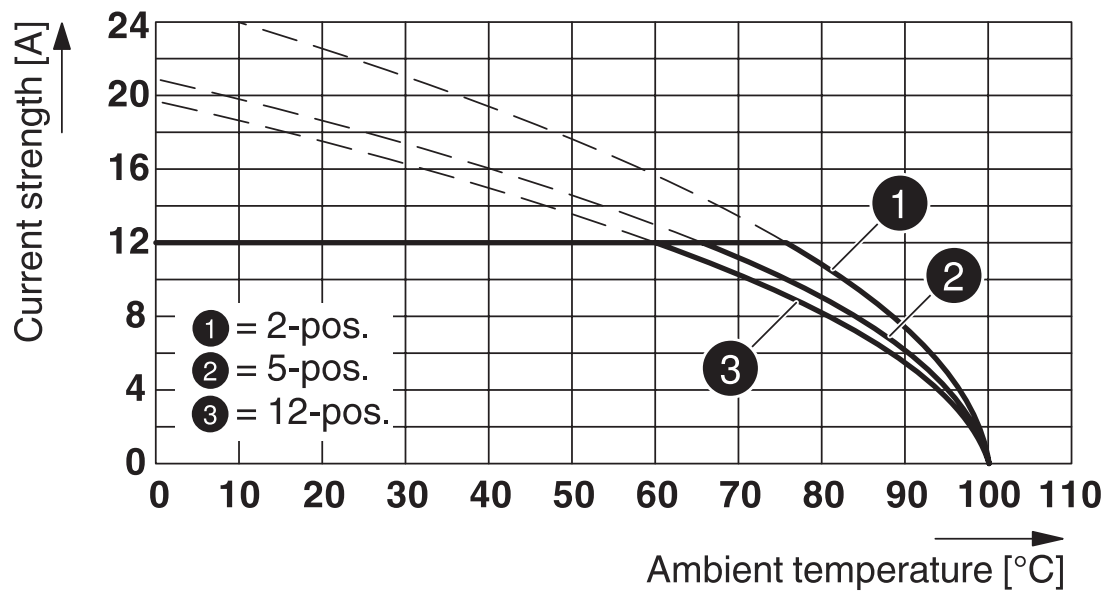
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Dimensional drawing



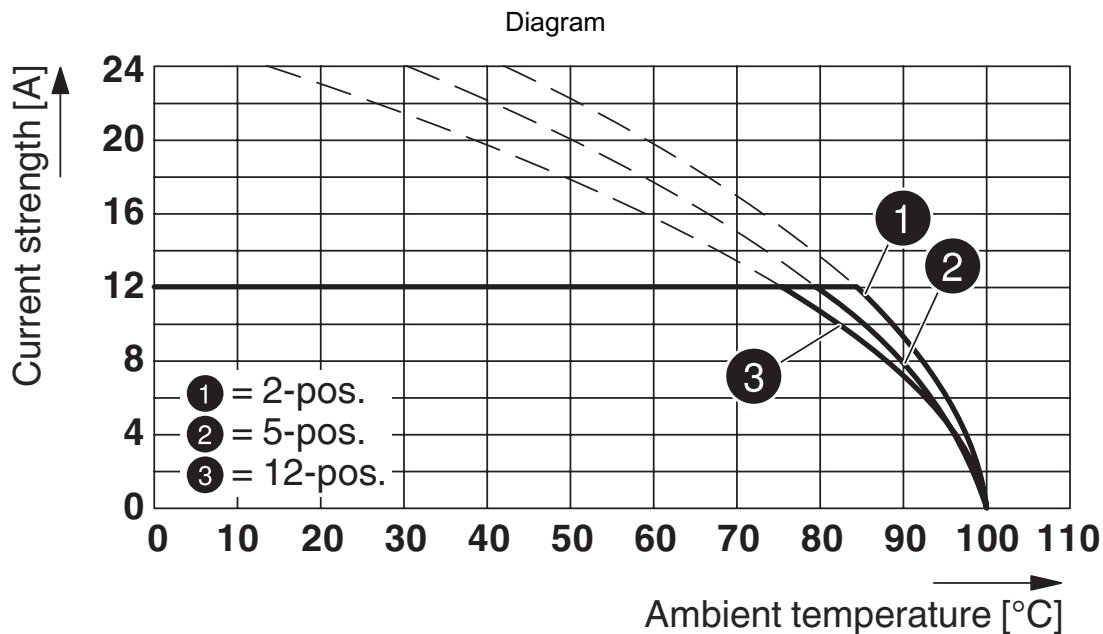
Diagram



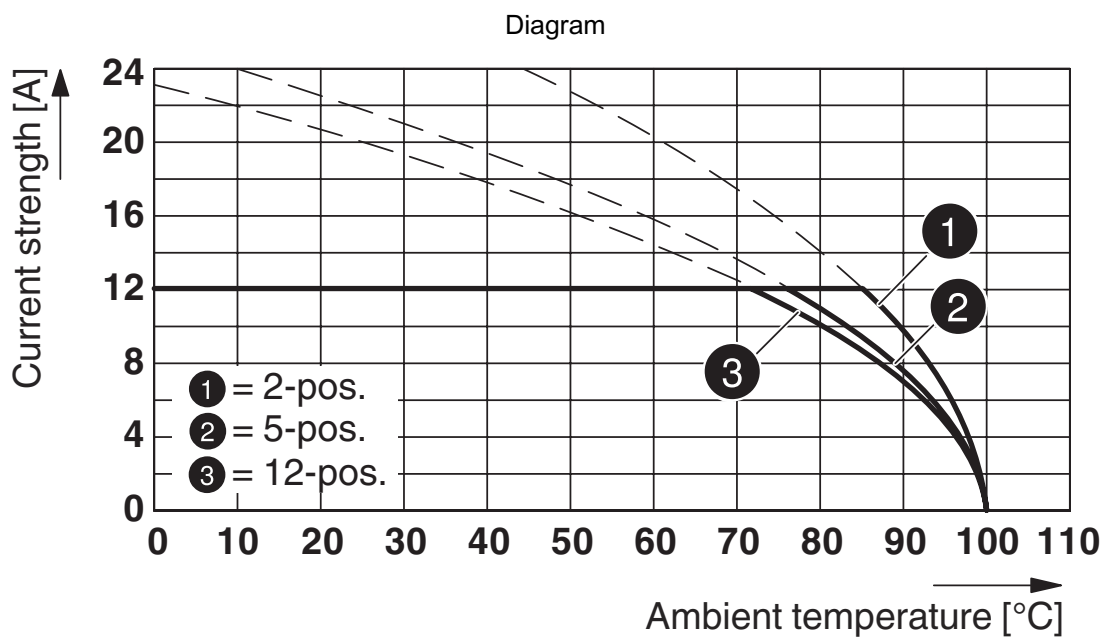
Type: FKC 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

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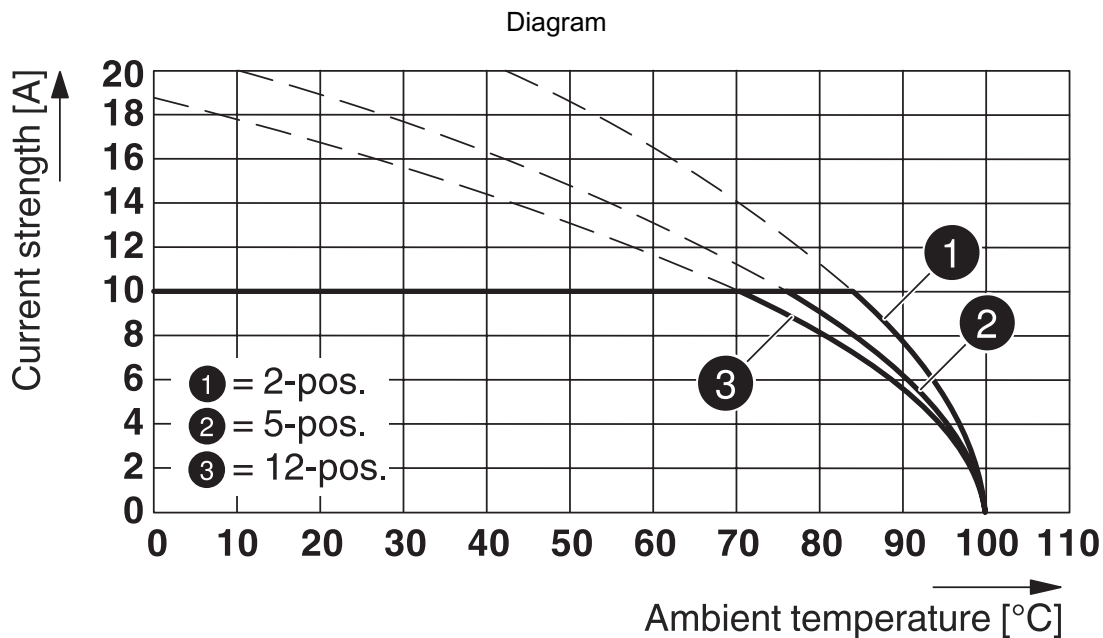
Type: FKC 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR



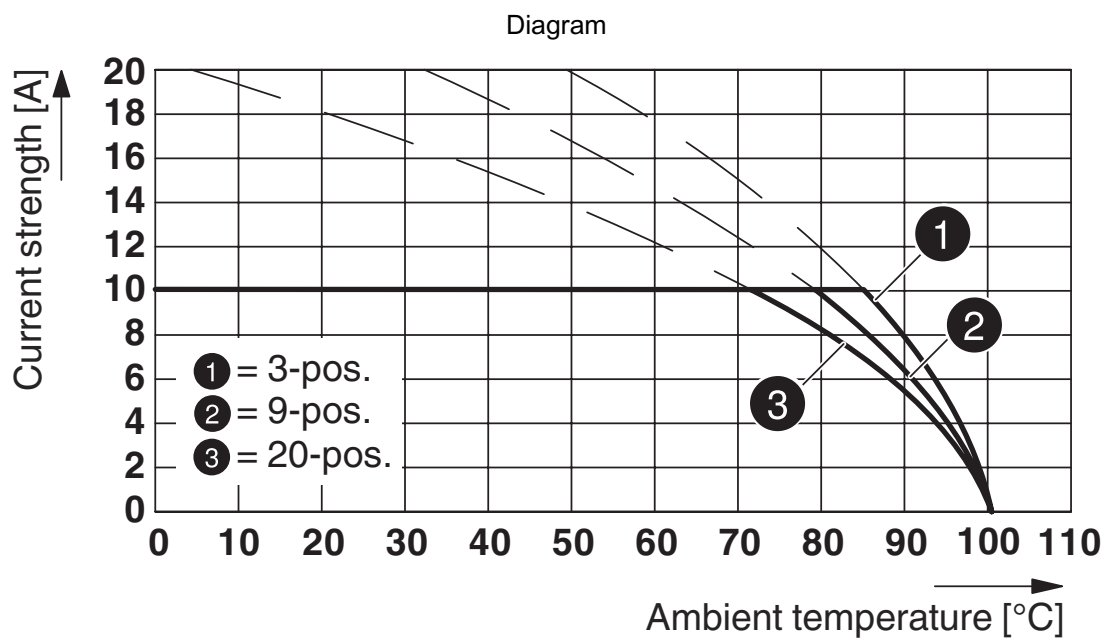
Type: FKC 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR

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Type: FKC 2,5/...-ST-5,08 with MDSTB 2,5/...-G-5,08



Type: FKC 2,5/...-ST-5,08 with MDSTBV 2,5/...-G1-5,08

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1873168>



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 | 10 A | 26 - 12 | - |
| Use group D | | | | |
| | 300 V | 10 A | 26 - 12 | - |



VDE Zeichengenehmigung

Approval ID: 40050694

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 250 V | 12 A | - | 0.2 - 2.5 |

FKC 2,5/13-ST-5,08 - PCB connector



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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27460202 |
| ECLASS-12.0 | 27460202 |
| ECLASS-13.0 | 27460202 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC002638 |
|----------|----------|

UNSPSC

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

FKC 2,5/13-ST-5,08 - PCB connector



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Environmental Product Compliance

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

FKC 2,5/13-ST-5,08 - PCB connector

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Accessories

CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/pc/products/1734634>

Coding profile, is inserted into the slot on the plug or inverted header, red insulating material



STZ 4-FKC-5,08 - Strain relief

1876877

<https://www.phoenixcontact.com/pc/products/1876877>

Strain relief for snapping into the latching chambers of the plugs, 4-pos.



FKC 2,5/13-ST-5,08 - PCB connector

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STZ 8-FKC-5,08 - Strain relief

1876880

<https://www.phoenixcontact.com/pc/products/1876880>



Strain relief for snapping into the latching chambers of the plug components, 8-pos.

MPS-MT - Test plugs

0201744

<https://www.phoenixcontact.com/pc/products/0201744>



Test plugs, with solder connection up to 1 mm² conductor cross section, number of positions: 1, color: gray

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MPS-IH WH - Insulating sleeve

0201663

<https://www.phoenixcontact.com/pc/products/0201663>

Insulating sleeve, color: white



MPS-IH RD - Insulating sleeve

0201676

<https://www.phoenixcontact.com/pc/products/0201676>

Insulating sleeve, color: red



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MPS-IH BU - Insulating sleeve

0201689

<https://www.phoenixcontact.com/pc/products/0201689>

Insulating sleeve, color: blue



MPS-IH GN - Insulating sleeve

0201702

<https://www.phoenixcontact.com/pc/products/0201702>

Insulating sleeve, color: green



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RPS - Reducing plug

0201647

<https://www.phoenixcontact.com/pc/products/0201647>



Reducing plug, number of positions: 1, color: gray

SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/pc/products/1205053>



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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SK 5,08/3,8:FORTL.ZAHLEN - Marker card

0804293

<https://www.phoenixcontact.com/pc/products/0804293>



Marker card, white, labeled, horizontal: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... (99)100, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm

SK 5,08/3,8:UNBEDRUCKT - Marker card

0805412

<https://www.phoenixcontact.com/pc/products/0805412>



Marker card, Din A4, white, unlabeled, can be labeled with: Marker pen: without print, mounting type: adhesive, for terminal block width: 5.08 mm, lettering field size: 5.08 x 3.8 mm, Number of individual labels: 1

FKC 2,5/13-ST-5,08 - PCB connector



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MSTBW 2,5/13-G-5,08 - PCB header

1735772

<https://www.phoenixcontact.com/pc/products/1735772>



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MSTBW 2,5/..-G, pitch: 5.08 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

MSTBVA 2,5/13-G-5,08 - PCB header

1755846

<https://www.phoenixcontact.com/pc/products/1755846>



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MSTBVA 2,5/..-G, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 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

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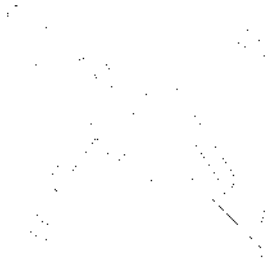
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MSTBV 2,5/13-GEH-5,08 - PCB header

1808573

<https://www.phoenixcontact.com/pc/products/1808573>



PCB headers, nominal cross section: 2.5 mm², color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Pin, number of potentials: 13, number of rows: 1, number of positions: 13, number of connections: 13, product range: MSTBV 2,5/...-GEH, pitch: 5.08 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 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

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