# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

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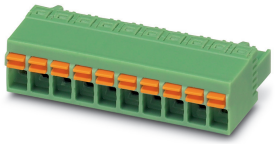


The figure shows a 10-position version of the product

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: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: FKCN 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: CLASSIC COMBICON, 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
- Extremely small design for the respective conductor cross section
- Defined contact force ensures that contact remains stable over the long term
- Can be combined with the MSTB 2,5 range


## Key Commercial Data

| | |
|---|---|
| Packing unit | 50 pc |
| GTIN | 4 046356 330282 |
| GTIN | 4046356330282 |

## Technical data

### Item properties

| | |
|---|---|
| Brief article description | PCB connector |
| Connector system | CLASSIC COMBICON |
| Type of contact | Female connector |
| Range of articles | FKCN 2,5/..-ST |
| Pitch | 5.08 mm |
| Number of positions | 8 |
| Locking | without |
| Number of rows | 1 |
| Number of connections | 8 |
| Number of potentials | 8 |

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Technical data

### Electrical parameters

| | |
|---|---|
| Nominal current | 12 A |
| Nom. voltage | 320 V |
| Rated voltage (III/3) | 320 V |
| Rated voltage (III/2) | 320 V |
| Rated voltage (II/2) | 630 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated surge voltage (III/2) | 4 kV |
| Rated surge voltage (II/2) | 4 kV |

### Connection capacity

| | |
|---|---|
| Connection method | Push-in spring connection |
| pluggable | Yes |
| Conductor cross section solid | 0.2 mm² ... 1.5 mm² |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section AWG / kcmil | 24 ... 16 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 1.5 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 1.5 mm² |
| Cylindrical gauge a x b / diameter | 2.8 mm x 2.0 mm / 2.0 mm |
| Stripping length | 10 mm |

### 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

| | |
|---|---|
| Housing color | 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 | PA |
| CTI according to IEC 60112 | 600 |
| Flammability rating according to UL 94 | V0 |

### Dimensions for the product

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Technical data

### Dimensions for the product

| | |
|---|---|
| Caption | Schematische Abbildung - weitere Details siehe Produktfamilienzeichnung im Download Center |
| Length [ l ] | 27.1 mm |
| Width [ w ] | 40.64 mm |
| Height [ h ] | 10.9 mm |
| Pitch | 5.08 mm |
| Height (without solder pin) | 10.9 mm |

### Packaging information

| | |
|---|---|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |
| Denomination packing units | Pcs. |

### General product information

| | |
|---|---|
| Type of note | Notes on operation |
| Note | 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. |

### Ambient conditions

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

### Termination and connection method

| | |
|---|---|
| Conductor connection test | The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force. |
| Test result | Test passed |
| Test – repeated connection and release | IEC 60999-1:1999-11 |
| | Test passed |
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

### Pull-out test

| | |
|---|---|
| Pull-out test | IEC 60999-1:1999-11 |
| Conductor cross section / conductor type / tensile force | 0.2 mm² / solid / > 10 N |
| | 0.2 mm² / flexible / > 10 N |
| | 1.5 mm² / solid / > 40 N |
| | 2.5 mm² / flexible / > 50 N |

### Mechanical tests according to standard

| | |
|---|---|
| Test specification | IEC 61984 |
| Visual inspection | IEC 60512-1-1:2002-02 |
| Dimension check | IEC 60512-1-2:2002-02 |

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Technical data

### Mechanical tests according to standard

| | |
|---|---|
| Resistance of inscriptions | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | IEC 60512-13-2:2006-02 |
| No. of cycles | 25 |
| Insertion strength per pos. approx. | 10 N |
| Withdraw strength per pos. approx. | 9 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |
| Contact holder in insert | IEC 60512-15-1:2008-05 |
| Test force per pos. | 33 N |

### Air clearances and creepage distances

| | |
|---|---|
| Clearances and creepage distances | IEC 60664-1:2007-04 |
| Specification | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 3 mm |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm |
| Minimum clearance - inhomogeneous field (II/2) | 3 mm |
| Minimum creepage distance value (III/3) | 4 mm |
| Minimum creepage distance value (III/2) | 3 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |

### Current carrying capacity / derating curves

| | |
|---|---|
| Caption | Type: FKCN 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR |

### Mechanical tests (A)

| | |
|---|---|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 10 N |
| Withdraw strength per pos. approx. | 9 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 $R_1$ | 1.2 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance $R_2$ | 1.3 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Insulation resistance, neighboring positions | > 5 MΩ |

### Thermal tests (C)

| | |
|---|---|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 12 |
| Upper limiting temperature requirements <100 °C | Test passed |

### Climatic tests (D)

| | |
|---|---|
| Specification | ISO 6988:1985-02 |

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Technical data

### Climatic tests (D)

| | |
|---|---|
| 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 | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |

### Environmental and durability tests (E)

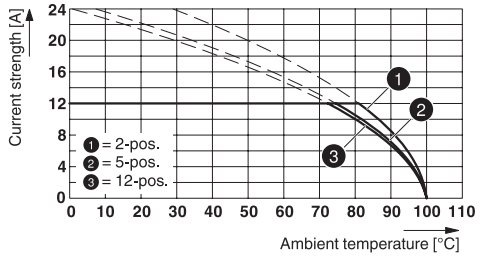
| | |
|---|---|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

### Environmental Product Compliance

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

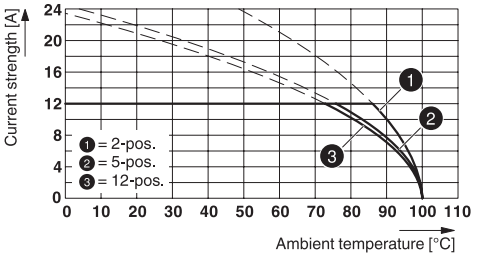
## Drawings

Diagram



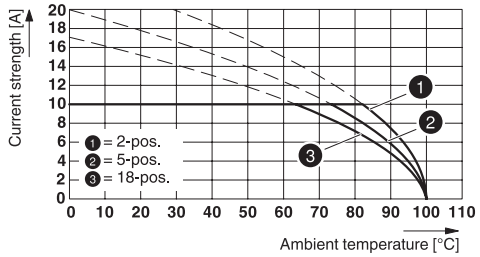

Type: FKCN 2,5/...-ST-5,08 with CCA 2,5/...-G-5,08 P26THR

Diagram



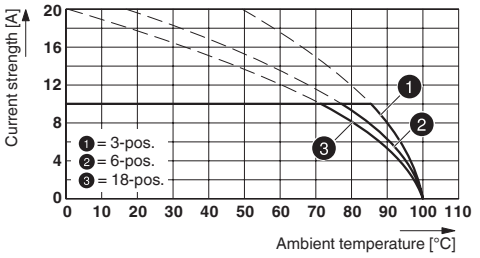

Type: FKCN 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P26THR

Diagram




Type: FKCN 2,5/...-ST-5,08 with MDSTB 2,5/...-G1-5,08

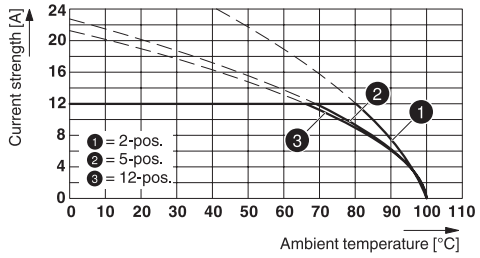
Diagram




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

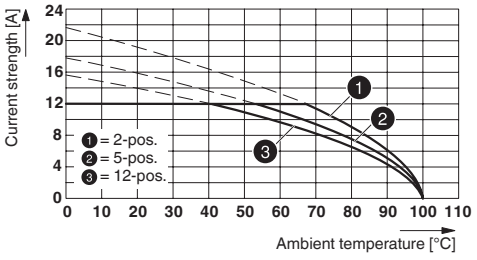
# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

Diagram



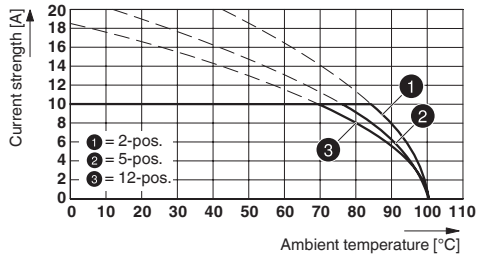

Type: FKCN 2,5/...-ST-5,08 with MSTBA 2,5/...-G-5,08

Diagram



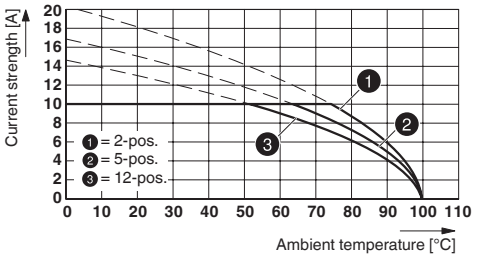

Type: FKCN 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08

Diagram



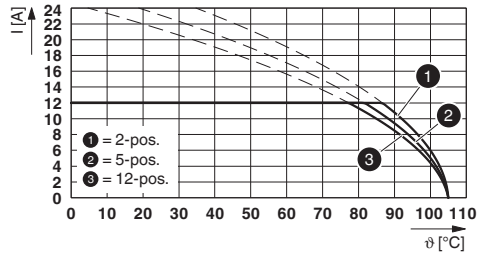

Type: FKCN 2,5/...-ST-5,08 with MDSTBA 2,5/...-G-5,08

Diagram



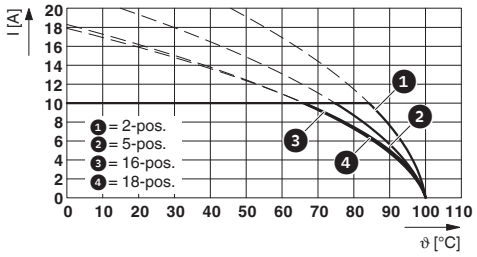

Type: FKCN 2,5/...-ST-5,08 with MDSTBVA 2,5/...-G-5,08

Diagram




Type: FKCN 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P...THR

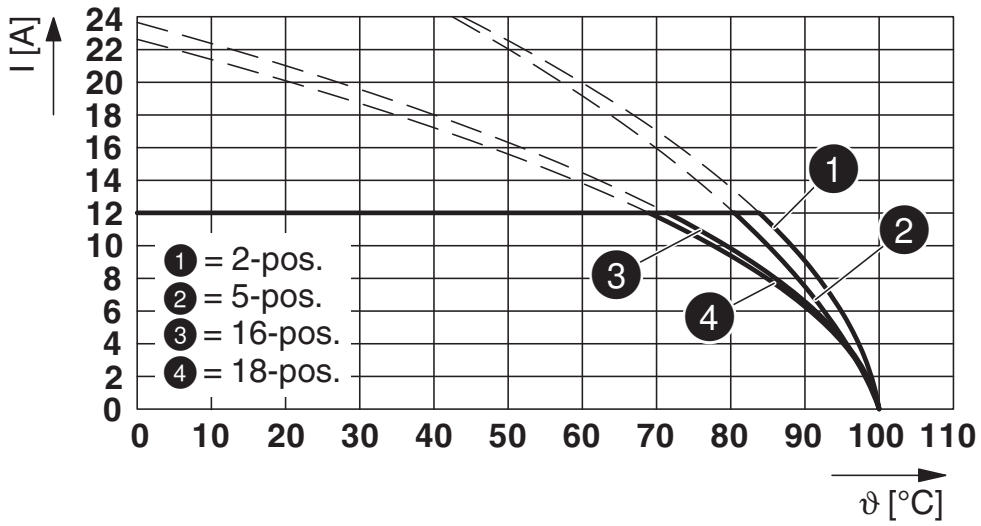
Diagram




Type: FKCN 2,5/...-ST-5,08 with CCDN#2,5/...-G1-5,08 P...THR

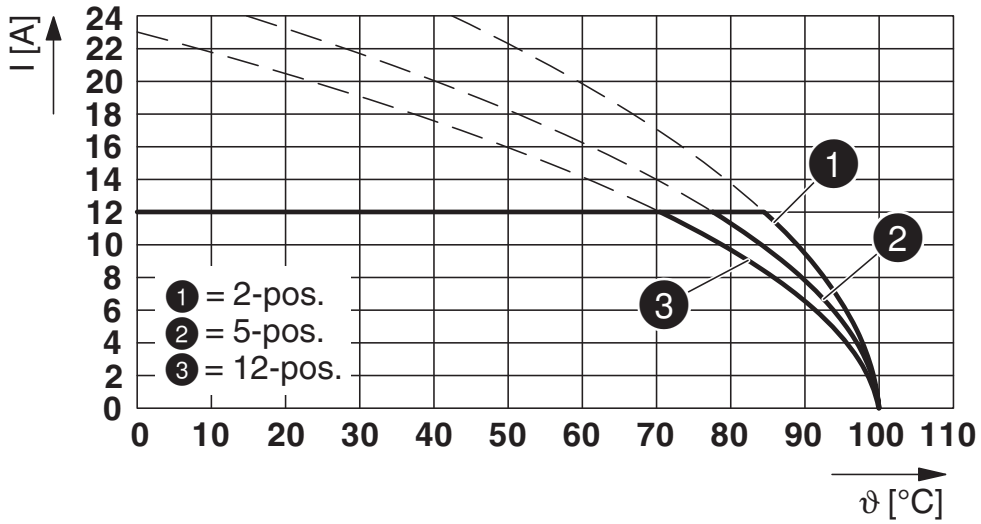
# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

Diagram




Type: FKCN 2,5/...-ST-5,08 with MSTB 2,5/...-G-5,08

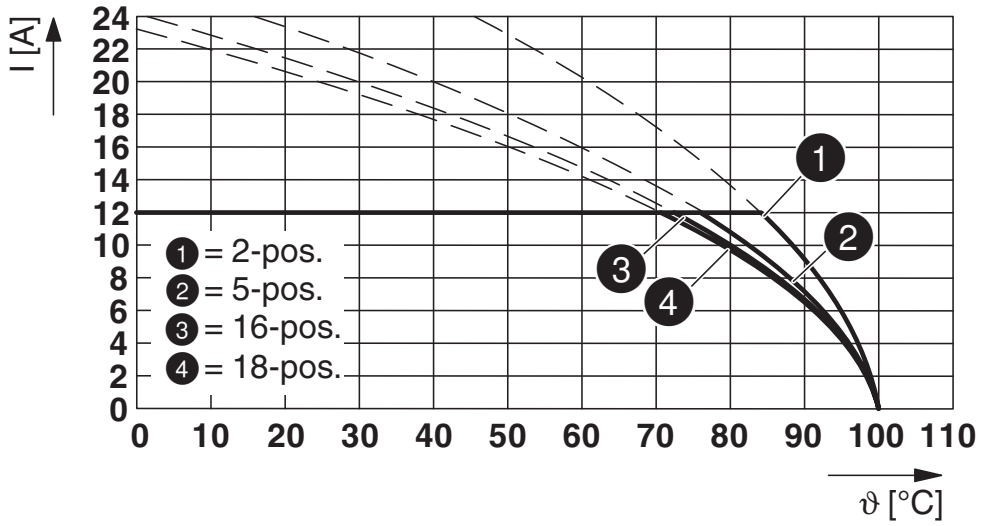
Diagram




Type: FKCN 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P...THR

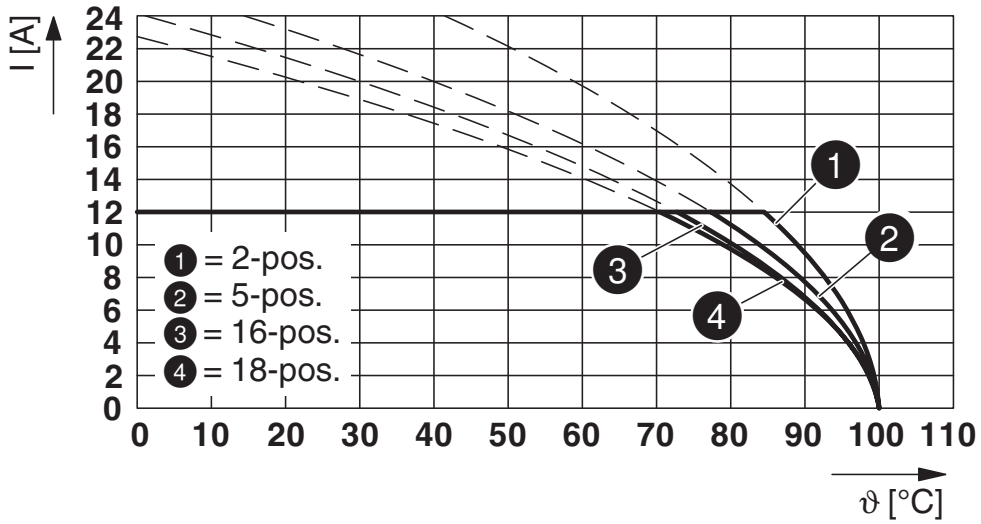
# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

Diagram




Type: FKCN 2,5/...-ST-5,08 with SMSTB 2,5/...-G-5,08

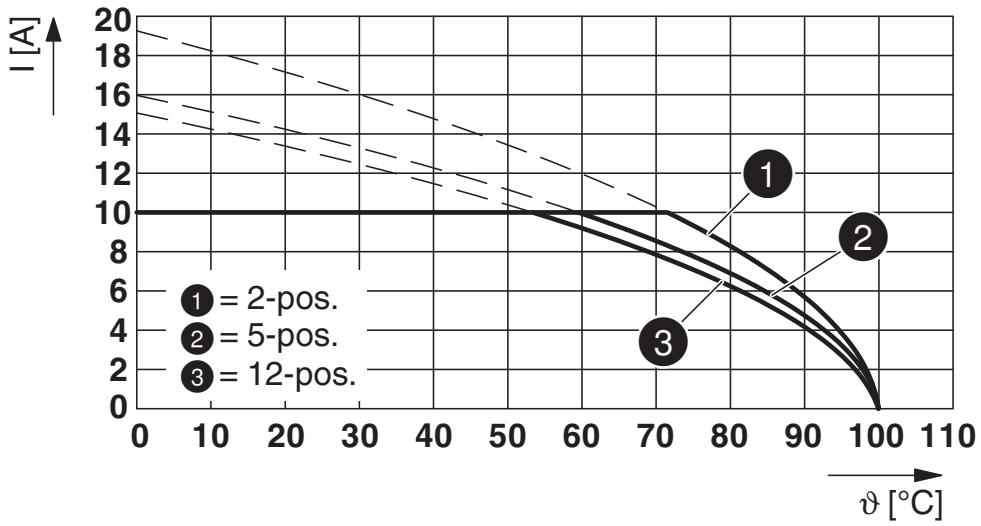
Diagram




Type: FKCN 2,5/...-ST-5,08 with SMSTBA 2,5/...-G-5,08

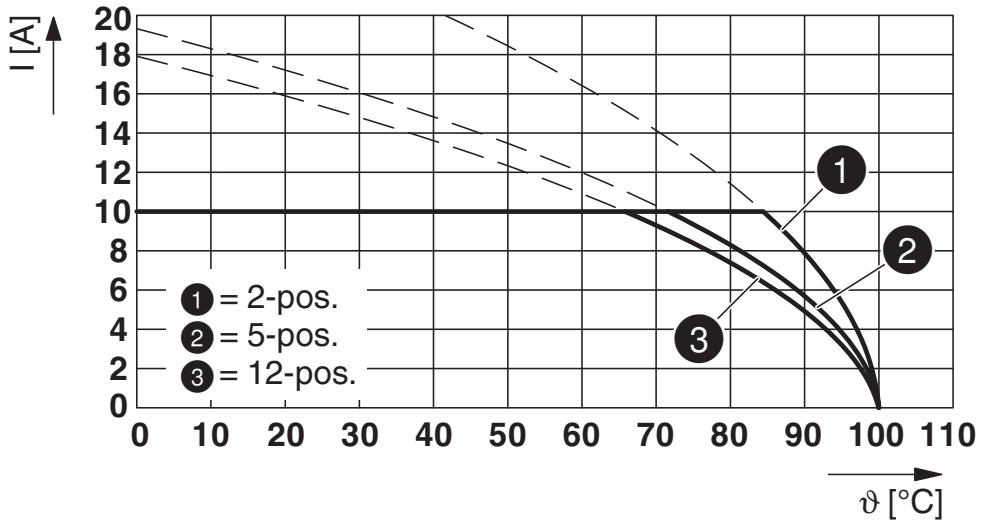
# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

Diagram




Type: FKCN 2,5/...-ST-5,08 with MDSTBV 2,5/...-G-5,08

Diagram




Type: FKCN 2,5/...-ST-5,08 with MDSTBW 2,5/...-G-5,08

## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 11.0 | 27460202 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

### ETIM

| | |
|---|---|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

### UNSPSC

| | |
|---|---|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |
| UNSPSC 13.2 | 39121409 |
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

## Approvals

### Approvals

Approvals

VDE Gutachten mit Fertigungsüberwachung / IECEE CB Scheme / EAC / cULus Recognized

Ex Approvals

### Approval details

| | | | |
|---|---|---|---|
| VDE Gutachten mit Fertigungsüberwachung | VDE | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40041908 |

| | |
|---|---|
| Nominal voltage UN | 400 V |
| Nominal current IN | 12 A |
| mm²/AWG/kcmil | 0.2-2.5 |

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Approvals

| | | | |
|---|---|---|---|
| IECEE CB Scheme | CB scheme | http://www.iecee.org/ | DE1-58427 |

| | |
|---|---|
| Nominal voltage UN | 400 V |
| Nominal current IN | 12 A |
| mm²/AWG/kcmil | 0.2-2.5 |

| | | |
|---|---|---|
| EAC | EAC | B.01687 |

| | | | |
|---|---|---|---|
| cULus Recognized | c UL us | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19931012 |

| | B | D |
|---|---|---|
| Nominal voltage UN | 300 V | 300 V |
| Nominal current IN | 10 A | 10 A |
| mm²/AWG/kcmil | 24-14 | 24-14 |

## Accessories

### Accessories

### Coding element

Coding profile - CP-MSTB - 1734634

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

### Crimping tool

Crimping pliers - CRIMPFOX 6 - 1212034

Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

### Ferrule

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Accessories

Ferrule - AI 0,5 -10 WH - 3201275

Ferrule, sleeve length: 10 mm, length: 16 mm, color: white

Ferrule - AI 0,75-10 GY - 3201288

Ferrule, sleeve length: 10 mm, length: 16 mm, color: gray

Ferrule - AI 1 -10 RD - 3200182

Ferrule, sleeve length: 10 mm, length: 16 mm, color: red

Ferrule - AI 1,5 -10 BK - 3200195

Ferrule, sleeve length: 10 mm, length: 16 mm, color: black

Ferrule - A 0,5 -10 - 3202494

Ferrule, length: 10 mm, color: silver

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Accessories

Ferrule - A 0,75-10 - 3200234

Ferrule, length: 10 mm, color: silver

Ferrule - A 1 -10 - 3200250

Ferrule, length: 10 mm, color: silver

Ferrule - A 1,5 -10 - 3200276

Ferrule, length: 10 mm, color: silver

## Screwdriver tools

Screwdriver - SZS 0,6X3,5 - 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

## Additional products

PCB header - MSTBW 2,5/ 8-G-5,08 - 1735824

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: Male connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, 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: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard

# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Accessories

Printed-circuit board connector - CCDN 2,5/ 8-G1-5,08 P26 THR - 1753190

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 16, number of rows: 2, number of positions: 8, number of connections: 16, product range: CCDN 2,5/..-G1-THR, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard

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Printed-circuit board connector - CCVA 2,5/ 8-G-5,08 P26THRR56 - 1956027

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of potentials: 8, number of rows: 1, number of positions: 8, number of connections: 8, product range: CCVA 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 56 mm wide tape, User information and design recommendations for through hole reflow technology can be found under: Downloads

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Printed-circuit board connector - CCA 2,5/ 8-GL-5,08P26THRR56 - 1959192

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of rows: 1, number of positions: 8, product range: CCA 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 56 mm wide tape, Two-in-one – Pin strips must always be made up of a left (L) and a right (R) segment. Please allow for the corresponding counterpart from the accessories to complete the THR pin strip.

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Printed-circuit board connector - CCA 2,5/ 8-GR-5,08P26THRR56 - 1959338

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of rows: 1, number of positions: 8, product range: CCA 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: 56 mm wide tape, Two-in-one – Pin strips must always be made up of a left (L) and a right (R) segment. Please allow for the corresponding counterpart from the accessories to complete the THR pin strip.

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Printed-circuit board connector - CCVA 2,5/ 8-GL-5,08P26THR - 1959969

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of rows: 1, number of positions: 8, product range: CCVA 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard, Two-in-one – Pin strips must always be made up of a left (L) and a right (R) segment. Please allow for the corresponding counterpart from the accessories to complete the THR pin strip.

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# Printed-circuit board connector - FKCN 2,5/ 8-ST-5,08 - 1754623

## Accessories

Printed-circuit board connector - CCVA 2,5/ 8-GL-5,08P26THRR56 - 1960068

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of rows: 1, number of positions: 8, product range: CCVA 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, Two-in-one – Pin strips must always be made up of a left (L) and a right (R) segment. Please allow for the corresponding counterpart from the accessories to complete the THR pin strip.

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Printed-circuit board connector - CCVA 2,5/ 8-GR-5,08P26THR - 1960149

PCB headers, nominal cross section: 2.5 mm², color: black, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Male connector, number of rows: 1, number of positions: 8, product range: CCVA 2,5/..-G, pitch: 5.08 mm, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, number of solder pins per potential: 1, plug-in system: CLASSIC COMBICON, Pin connector pattern alignment: Standard, Locking: without, mounting: without, type of packaging: packed in cardboard, Two-in-one – Pin strips must always be made up of a left (L) and a right (R) segment. Please allow for the corresponding counterpart from the accessories to complete the THR pin strip.

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