

Printed-circuit board connector - FKC 2,5/12-ST-5,08-RF - 1925799

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PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin, Article with self-locking flange




The figure shows a 10-position version of the product

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
- ✓ Intuitive locking mechanism prevents accidental disconnection



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 017918 819859 |
| GTIN | 4017918819859 |

Technical data

Item properties

| | |
|---------------------------|---------------------------|
| Brief article description | PCB connector |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Female connector |
| Range of articles | FKC 2,5/..-ST-RF |
| Pitch | 5.08 mm |
| Number of positions | 12 |
| Connection method | Push-in spring connection |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 12 |

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Technical data

Item properties

| | |
|----------------------|----|
| Number of potentials | 12 |
|----------------------|----|

Electrical parameters

| | |
|-----------------------------|-------|
| Nominal current | 12 A |
| Nom. voltage | 320 V |
| Rated voltage | 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 mm ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG / kcmil | 24 ... 12 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| 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 / 2.0 mm |
| Stripping length | 10 mm |

Flange specifications

| | |
|-----------------|---------------------|
| Type of locking | Snap-in locking |
| Mounting flange | Self-locking flange |

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 |

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Technical data

Material data - housing

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

Dimensions for the product

| | |
|--------------|----------|
| Length [l] | 25.73 mm |
| Width [w] | 74.38 mm |
| Height [h] | 15 mm |
| Pitch | 5.08 mm |

Packaging information

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

General product information

| | |
|------|--|
| 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. |
| | 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 |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -40 °C ... 100 °C (dependent on the derating curve) |

Termination and connection method

| | |
|--|---------------------|
| Test for conductor damage and slackening | IEC 60999-1:1999-11 |
| | Test passed |

Pull-out test

| | |
|---------------|---------------------|
| Pull-out test | IEC 60999-1:1999-11 |
| | Test passed |

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 |
| Resistance of inscriptions | IEC 60068-2-70:1995-12 |
| Insertion and withdrawal force | IEC 60512-13-2:2006-02 |
| No. of cycles | 25 |

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Technical data

Mechanical tests according to standard

| | |
|-------------------------------------|------------------------|
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |
| Contact holder in insert | IEC 60512-15-1:2008-05 |
| Test force per pos. | 30 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) | 1.6 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |

Electrical tests - Function

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

Temperature cycles

| | |
|--------------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Temperature cycles | 192 |

Current carrying capacity / derating curves

| | |
|------------------|---|
| Caption | Type: FKC 2,5/...-ST-5,08-RF with MSTBA 2,5/...-G-5,08-RN |
| Specification | IEC 61984:2008-10 |
| Reduction factor | 0.8 |
| Note | Representation based on IEC 60512-5-2:2002-02 |
| | For number of positions, see diagram |

Mechanical tests (A)

| | |
|--|-------------|
| Test specification | IEC 61984 |
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 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 | 0.8 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 0.9 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |

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Technical data

Durability tests (B)

| | |
|--|---------|
| Insulation resistance, neighboring positions | > 93 GΩ |
|--|---------|

Thermal tests (C)

| | |
|---|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 18 |
| Conductor cross section | 2.5 mm ² |
| Test current | 12 A |
| Upper limiting temperature requirements <100 °C | Test passed |

Climatic tests (D)

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

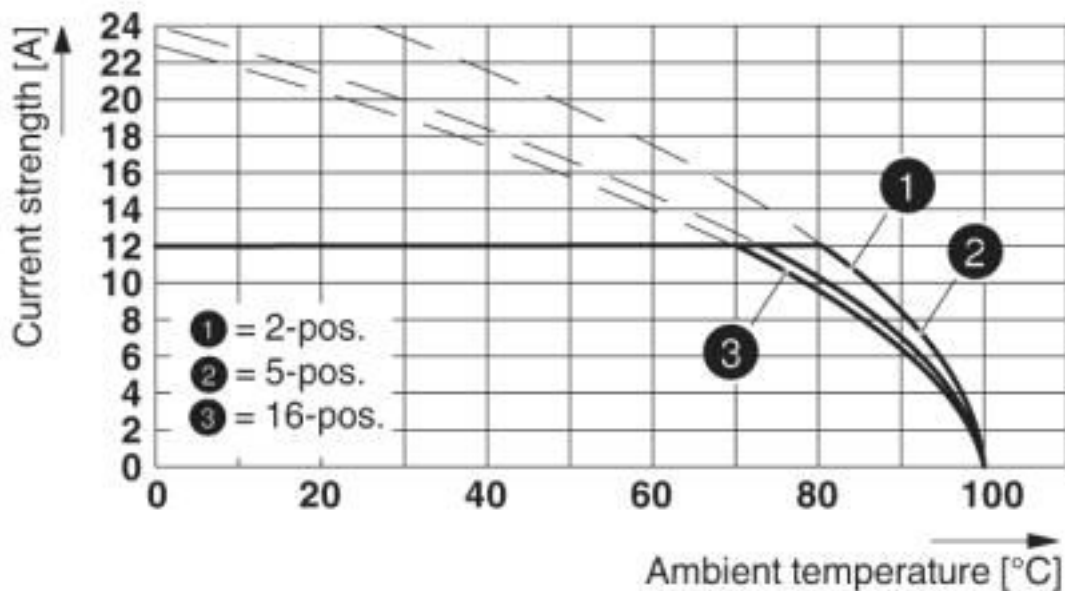
Environmental Product Compliance

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

Drawings

Printed-circuit board connector - FKC 2,5/12-ST-5,08-RF - 1925799

Diagram



Type: FKC 2,5/...-ST-5,08-RF with FKICS 2,5/...-STD-5,08-RN

Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 8.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002638 |
| ETIM 5.0 | EC002638 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |

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Classifications

UNSPSC

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


IECEE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

| | | | |
|----------------------------|---|---|----------------|
| IECEE CB Scheme |  | http://www.iecee.org/ | DE1-60988-B1B2 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 12 A | | |
| mm ² /AWG/kcmil | 0.2-2.5 | | |

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

| | | | |
|----------------------------|---|---|-----------------|
| cULus Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | E60425-19931011 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 10 A | 10 A | |
| mm ² /AWG/kcmil | 26-12 | 26-12 | |

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Approvals

| | | | |
|----------------------------|--|---|----------|
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40050694 |
| Nominal voltage UN | | 250 V | |
| Nominal current IN | | 12 A | |
| mm ² /AWG/kcmil | | 0.2-2.5 | |

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



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

Strain relief

Strain relief - STZ 8-FKC-5,08 - 1876880



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

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Accessories

Strain relief - STZ 4-FKC-5,08 - 1876877



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

Test plug terminal block

Reducing plug - RPS - 0201647



Reducing plug, color: gray

Additional products

Printed-circuit board connector - CCA 2,5/12-G-5,08 RNP26THR - 1955264



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, Article with self-locking flange; user information and design recommendations on through-hole reflow technology can be found at: "Downloads"

Printed-circuit board connector - CCVA 2,5/12-G-5,08 RNP26THR - 1956182



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, Article with self-locking flange; user information and design recommendations on through-hole reflow technology can be found at: "Downloads"

Printed-circuit board connector - CCA 2,5/12-G-5,08 RNP26THRR88 - 1955374



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, Article with self-locking flange; user information and design recommendations on through-hole reflow technology can be found at: "Downloads"

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Accessories

Printed-circuit board connector - CCVA 2,5/12-G-5,08RNP26THRR88 - 1956292



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, color: black, contact surface: Tin, mounting: THR soldering, pin layout: Linear pinning, solder pin [P]: 2.6 mm, Article with self-locking flange; user information and design recommendations on through-hole reflow technology can be found at: "Downloads"

Feed-through header - MSTBA 2,5/12-G-5,08-RN - 1926112



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm, Article with engagement nose

Printed-circuit board connector - MSTBVA 2,5/12-G-5,08-RN - 1936115



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm, Article with engagement nose

Printed-circuit board connector - ICC 2,5/12-STZ-5,08 - 1823943



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding male crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/ICC-MT 0,5-1,0 (3190577); 10A/ICC-MT 0,5-1,0 BA (3190603); 12A/ICC-MT 1,5-2,5 (3190580); 12A/ICC-MT 1,5-2,5 BA (3190593). BA = Bandkontakte

Printed-circuit board connector - FKIC 2,5/12-ST-5,08-RN - 1925964



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin, Article with engagement nose

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Accessories

Printed-circuit board connector - FKICS 2,5/12-STD-5,08-RN - 1808828



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 12, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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