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Feed-through connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

The figure shows a 5-pos. version of the product

### Your advantages

- ☑ Well-known connection principle allows worldwide use
- ☑ Cable connection on the inside of the device enables flexible positioning of the panel feed-through
- ☑ Can be combined with the MSTB 2,5 range



## Key Commercial Data

| Packing unit                         | 50 pc           |
|--------------------------------------|-----------------|
| Minimum order quantity               | 50 pc           |
| GTIN                                 | 4 055626 940922 |
| GTIN                                 | 4055626940922   |
| Weight per Piece (excluding packing) | 9.700 g         |
| Custom tariff number                 | 85366990        |
| Country of origin                    | China           |

## Technical data

| item properties | Item | properties |
|-----------------|------|------------|
|-----------------|------|------------|

| Brief article description | Feed-through plug                    |
|---------------------------|--------------------------------------|
| Plug-in system            | CLASSIC COMBICON                     |
| Type of contact           | Male connector                       |
| Range of articles         | DFK-MSTB 2,5/STF-LR                  |
| Pitch                     | 5.08 mm                              |
| Number of positions       | 4                                    |
| Connection method         | Screw connection with tension sleeve |
| Locking                   | Lock & release threaded flange       |

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## Technical data

### Item properties

| Number of levels      | 1 |
|-----------------------|---|
| Number of connections | 4 |
| Number of potentials  | 4 |

### **Electrical parameters**

| Nominal current             | 12 A  |
|-----------------------------|-------|
| Nom. voltage                | 320 V |
| Rated voltage               | 250 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   | Screw connection with tension sleeve     |
|---|--|
| Conductor cross section solid   | 0.2 mm <sup>2</sup> 2.5 mm <sup>2</sup>  |
| Conductor cross section flexible  | 0.2 mm <sup>2</sup> 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG / kcmil   | 24 12                                    |
| Conductor cross section flexible, with ferrule without plastic sleeve                     | 0.25 mm <sup>2</sup> 2.5 mm <sup>2</sup> |
| Conductor cross section, flexible, with ferrule, with plastic sleeve                      | 0.25 mm <sup>2</sup> 2.5 mm <sup>2</sup> |
| 2 conductors with same cross section, solid   | 0.2 mm <sup>2</sup> 1 mm <sup>2</sup>    |
| 2 conductors with same cross section, flexible  | 0.2 mm <sup>2</sup> 1.5 mm <sup>2</sup>  |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve       | 0.25 mm² 1 mm²                           |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm² 1.5 mm²                          |
| Cylindrical gauge a x b / diameter  | 2.8 mm x 2.0 mm / 2.4 mm                 |
| Stripping length  | 7 mm                                     |
| Torque  | 0.5 Nm 0.6 Nm                            |

### Material data - contact

| Note  | WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/<br>JEDEC JESD 201 |
|---|--|
| Contact material                            | Cu alloy   |
| Surface characteristics                     | Tin-plated   |
| Metal surface terminal point (top layer)    | Tin (5 - 7 μm Sn)  |
| Metal surface terminal point (middle layer) | Nickel (2 - 3 µm Ni)   |
| Metal surface contact area (top layer)      | Tin (5 - 7 μm Sn)  |
| Metal surface contact area (middle layer)   | Nickel (2 - 3 µm Ni),  |

### Material data - housing

| Housing color       | green (6021) |
|---------------------|--------------|
| Insulating material | РА           |



## Technical data

### Material data - housing

| Insulating material group   | 1      |
|---|--------|
| 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 |

#### Dimensions for the product

| Length [1]                  | 19.3 mm  |
|-----------------------------|----------|
| Width [ w ]                 | 45.29 mm |
| Height [ h ]                | 16.5 mm  |
| Pitch                       | 5.08 mm  |
| Height (without solder pin) | 16.5 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.  |

## 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                 |
| Conductor cross section / conductor type / tensile force | 0.2 mm² / solid / > 10 N    |
|  | 0.2 mm² / flexible / > 10 N |
|  | 2.5 mm² / solid / > 50 N    |
|  | 2.5 mm² / flexible / > 50 N |

### Mechanical tests according to standard

| Test specification | IEC 61984                         |
|--------------------|-----------------------------------|
| Visual examination | Test passed IEC 60512-1-1:2002-02 |
| Dimensional test   | Test passed IEC 60512-1-2:2002-02 |



## Technical data

### Mechanical tests according to standard

| Resistance of marking                 | Test passed IEC 60068-2-70:1995-12 |
|---------------------------------------|------------------------------------|
| Result                                | Test passed                        |
| Specification                         | IEC 60512-13-2:2006-02             |
| No. of cycles                         | 25                                 |
| Insertion strength per pos. approx.   | 7 N                                |
| Withdraw strength per pos. approx.    | 7 N                                |
| Polarization and coding               | Test passed IEC 60512-13-5:2006-02 |
| Result                                | Test passed                        |
| Specification                         | IEC 60512-15-1:2008-05             |
| Test force per pos.                   | 26 N                               |
| Air clearances and creepage distances |                                    |
| Clearance and ereaners 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)         | 3.2 mm              |
| Minimum creepage distance value (III/2)         | 3 mm                |
| Minimum creepage distance value (II/2)          | 3.2 mm              |

## Current carrying capacity / derating curves

| Specification | IEC 61984 |
|---------------|-----------|

## Mechanical tests (A)

| Test specification                           | IEC 61984   |
|--|-------------|
| Insertion strength per pos. approx.          | 7 N         |
| Withdraw strength per pos. approx.           | 7 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 <sub>1</sub>            | 1.5 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Contact resistance R <sub>2</sub>            | 1.6 mΩ                |
| Impulse withstand voltage at sea level       | 4.8 kV                |
| Power-frequency withstand voltage            | 2.21 kV               |
| Insulation resistance, neighboring positions | > 630 GΩ              |

## Thermal tests (C)

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



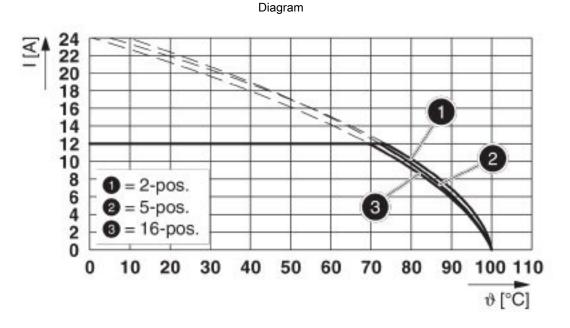
## Technical data

## Thermal tests (C)

| Conductor cross section                         | 2.5 mm <sup>2</sup>   |  |
|---|---|--|
| 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 <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /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                                       |  |

## REACh SVHC Lead 7439-92-1

## Drawings



Type: FKC 2,5/...-STF-5,08 with DFK-MSTB 2,5/...-STF-5,08-LR



## Classifications

## eCl@ss

| eCl@ss 10.0.1 | 27440309 |
|---------------|----------|
| eCl@ss 8.0    | 27440309 |
| eCl@ss 9.0    | 27440309 |

#### ETIM

| ETIM 5.0 EC002638 |
|-------------------|
|-------------------|

## Accessories

Accessories

Bridge

Insertion bridge - EBP 2- 5 - 1733169

Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

Coding element

Coding section - CR-MSTB - 1734401



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

## Filler plug

Accessories - MSTB-BL - 1755477



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

Labeled terminal marker



Accessories

Marker card - SK 5,08/3,8:FORTL.ZAHLEN - 0804293



Marker card, 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

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Screw contact

Screw set - SCREW M3X7 H1L - 1209788



Screws

Screw set - SCREW M3X10 H1L - 1209790



Screws

#### 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

Terminal marking

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## Accessories

Marker card - SK U/2,8 WH:UNBEDRUCKT - 0803883



Marker card, Sheet, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, Office printing systems, mounting type: adhesive, for terminal block width: 210 mm, lettering field size: 186 x 2.8 mm, Number of individual labels: 3600

#### Additional products

Printed-circuit board connector - FKC 2,5/ 4-ST-5,08 - 1873074



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKC 2,5/ 4-STF-5,08 - 1873223



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKC 2,5/ 4-ST-5,08-LR - 1792533



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - MSTB 2,5/ 4-ST-5,08 - 1757035



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



## Accessories

Printed-circuit board connector - MSTB 2,5/ 4-STF-5,08 - 1778001



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

#### Printed-circuit board connector - MSTB 2,5/ 4-ST-5,08-LR - 1808909



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTB 2,5/ 4-STZ-5,08 - 1776155



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Feed-through header - IC 2,5/ 5-G-5,08 - 1786433



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 5, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

Printed-circuit board connector - ICV 2,5/ 4-G-5,08 - 1785968



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



## Accessories

Printed-circuit board connector - MVSTBR 2,5/ 4-ST-5,08 - 1792265



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

#### Printed-circuit board connector - MVSTBW 2,5/ 4-ST-5,08 - 1792773



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - SMSTB 2,5/ 4-ST-5,08 - 1826306



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - FKCVW 2,5/ 4-ST-5,08 - 1873676



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVR 2,5/ 4-ST-5,08 - 1873977



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin



## Accessories

Printed-circuit board connector - MVSTBW 2,5/ 4-STF-5,08 - 1834929



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

#### Printed-circuit board connector - MVSTBR 2,5/ 4-STF-5,08 - 1835119



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - SMSTB 2,5/ 4-STF-5,08 - 1971086



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - FKCVW 2,5/ 4-STF-5,08 - 1873825



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCVR 2,5/ 4-STF-5,08 - 1874125



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 4, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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