

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

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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: 2, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

The figure shows a 2-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         | 1                                                                                                       |
| GTIN                 | <br>4 055626 927244 |
| GTIN                 | 4055626927244                                                                                           |
| Custom tariff number | 85366990                                                                                                |

### Technical data

#### 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       | 2                                    |
| Connection method         | Screw connection with tension sleeve |
| Locking                   | Lock & release threaded flange       |
| Number of levels          | 1                                    |
| Number of connections     | 2                                    |
| Number of potentials      | 2                                    |

# Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

## Technical data

### 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 mm <sup>2</sup> ... 1 mm <sup>2</sup>   |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>  |
| 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/ 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                                          | 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 |

### Dimensions for the product

|                             |          |
|-----------------------------|----------|
| Length [ l ]                | 19.3 mm  |
| Width [ w ]                 | 35.13 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  |
| 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                                 |

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Technical data

#### Mechanical tests according to standard

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

|                                                 |                     |
|-------------------------------------------------|---------------------|
| 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 $R_1$                     | 1.5 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Contact resistance $R_2$                     | 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                    |
| Conductor cross section                         | 2.5 mm <sup>2</sup>   |
| Test current                                    | 12 A                  |
| Upper limiting temperature requirements <100 °C | Test passed           |

#### Climatic tests (D)

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Technical data

#### 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)

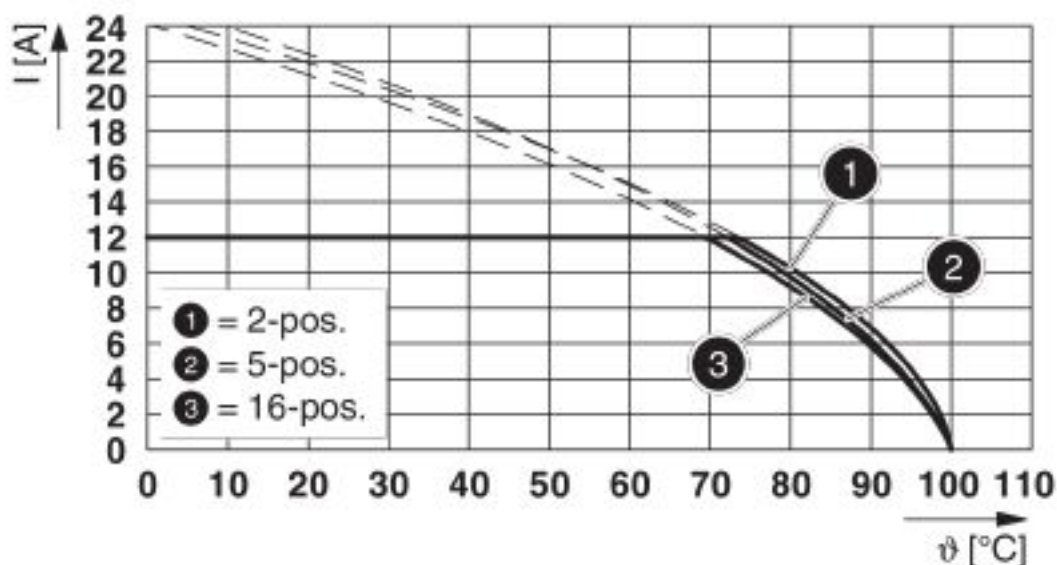
|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Specification                         | IEC 61984:2008-10                   |
| Result, degree of protection, IP code | Finger safety with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

#### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

### Drawings

Diagram



Type: FK 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 |

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Classifications

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

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### Coding element

Coding section - CR-MSTB - 1734401



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

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### Filler plug

Accessories - MSTB-BL - 1755477



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

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### Labeled terminal marker

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

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### Marker pen

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Accessories

Marker pen - B-STIFT - 1051993



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

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### Screw contact

Screw set - SCREW M3X7 H1L - 1209788



Screws

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Screw set - SCREW M3X10 H1L - 1209790



Screws

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### 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

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### Terminal marking

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

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### Additional products

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Accessories

Printed-circuit board connector - FKC 2,5/ 2-ST-5,08 - 1873058



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

Printed-circuit board connector - FKC 2,5/ 2-STF-5,08 - 1873207



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

Printed-circuit board connector - FKC 2,5/ 2-ST-5,08-LR - 1792517



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

Printed-circuit board connector - MSTB 2,5/ 2-ST-5,08 - 1757019



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

Printed-circuit board connector - MSTB 2,5/ 2-STF-5,08 - 1777989



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

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Accessories

#### Printed-circuit board connector - MSTB 2,5/ 2-ST-5,08-LR - 1808886



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

#### Printed-circuit board connector - MSTB 2,5/ 2-STZ-5,08 - 1709791



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

#### Feed-through header - IC 2,5/ 2-G-5,08 - 1786404



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 2, 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/ 2-G-5,08 - 1785942



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 2, 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 - MVSTBR 2,5/ 2-ST-5,08 - 1792249



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

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Accessories

#### Printed-circuit board connector - MVSTBW 2,5/ 2-ST-5,08 - 1792757



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

#### Printed-circuit board connector - SMSTB 2,5/ 2-ST-5,08 - 1826283



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

#### Printed-circuit board connector - FKCVW 2,5/ 2-ST-5,08 - 1873650



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

#### Printed-circuit board connector - FKCVR 2,5/ 2-ST-5,08 - 1873951



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

#### Printed-circuit board connector - MVSTBW 2,5/ 2-STF-5,08 - 1834903



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

## Feed-through plug - DFK-MSTB 2,5/ 2-STF-5,08-LR - 1096152

### Accessories

#### Printed-circuit board connector - MVSTBR 2,5/ 2-STF-5,08 - 1835096



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

#### Printed-circuit board connector - SMSTB 2,5/ 2-STF-5,08 - 1971060



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

#### Printed-circuit board connector - FKCVW 2,5/ 2-STF-5,08 - 1873809



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

#### Printed-circuit board connector - FKCVR 2,5/ 2-STF-5,08 - 1874109



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