

## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

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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 mm, connection method: Screw connection with tension sleeve, color: red, contact surface: Tin, pin layout: Linear pinning



The figure shows a 10-position version of the product

### Your advantages

- ✓ Well-known connection principle allows worldwide use
- ✓ Low temperature rise, thanks to maximum contact force
- ✓ Allows connection of two conductors



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 017918 422936 |
| GTIN                                 | 4017918422936                                                                                           |
| Weight per Piece (excluding packing) | 6.650 g                                                                                                 |
| Custom tariff number                 | 85366990                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Item properties

|                           |                                 |
|---------------------------|---------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system            | CLASSIC COMBICON                |
| Type of contact           | Female connector                |
| Range of articles         | MSTBT 2,5/-ST                   |
| Pitch                     | 5 mm                            |

# Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

## Technical data

### Item properties

|                       |                                      |
|-----------------------|--------------------------------------|
| Number of positions   | 4                                    |
| Connection method     | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L)                          |
| Screw thread          | M3                                   |
| Pin layout            | Linear pinning                       |
| Locking               | no                                   |
| 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         |
| pluggable                                                                                 | Yes                                          |
| 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

# Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

## Technical data

### 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 (5 - 7 µm Sn)                                                                 |
| Metal surface contact area (top layer)   | Tin (5 - 7 µm Sn)                                                                 |

### Material data - housing

|                                                                   |            |
|-------------------------------------------------------------------|------------|
| Housing color                                                     | red (3001) |
| 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     |

### Dimensions for the product

|                             |         |
|-----------------------------|---------|
| Length [ l ]                | 18.1 mm |
| Width [ w ]                 | 20 mm   |
| Height [ h ]                | 15 mm   |
| Pitch                       | 5 mm    |
| Height (without solder pin) | 15 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         |

## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

### Technical data

#### Pull-out test

|                                                          |                                         |
|----------------------------------------------------------|-----------------------------------------|
| Pull-out test                                            | IEC 60999-1:1999-11                     |
|                                                          | Test passed                             |
| Conductor cross section / conductor type / tensile force | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|                                                          | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|                                                          | 2.5 mm <sup>2</sup> / solid / > 50 N    |
|                                                          | 2.5 mm <sup>2</sup> / 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                                 |
| Insertion strength per pos. approx. | 8 N                                |
| Withdraw strength per pos. approx.  | 6 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.                 | 36 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                                         |
| Note on connection cross section                | With connected conductor 2,5 mm <sup>2</sup> . |

#### Current carrying capacity / derating curves

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

#### Mechanical tests (A)

|                                     |           |
|-------------------------------------|-----------|
| Test specification                  | IEC 61984 |
| Insertion strength per pos. approx. | 8 N       |

## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

### Technical data

#### Mechanical tests (A)

|                                              |             |
|----------------------------------------------|-------------|
| 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 <sub>1</sub>            | 1.2 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Contact resistance R <sub>2</sub>            | 1.3 mΩ                |
| Impulse withstand voltage at sea level       | 4.8 kV                |
| Power-frequency withstand voltage            | 2.21 kV               |
| Insulation resistance, neighboring positions | > 0,4 TΩ              |

#### 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 |

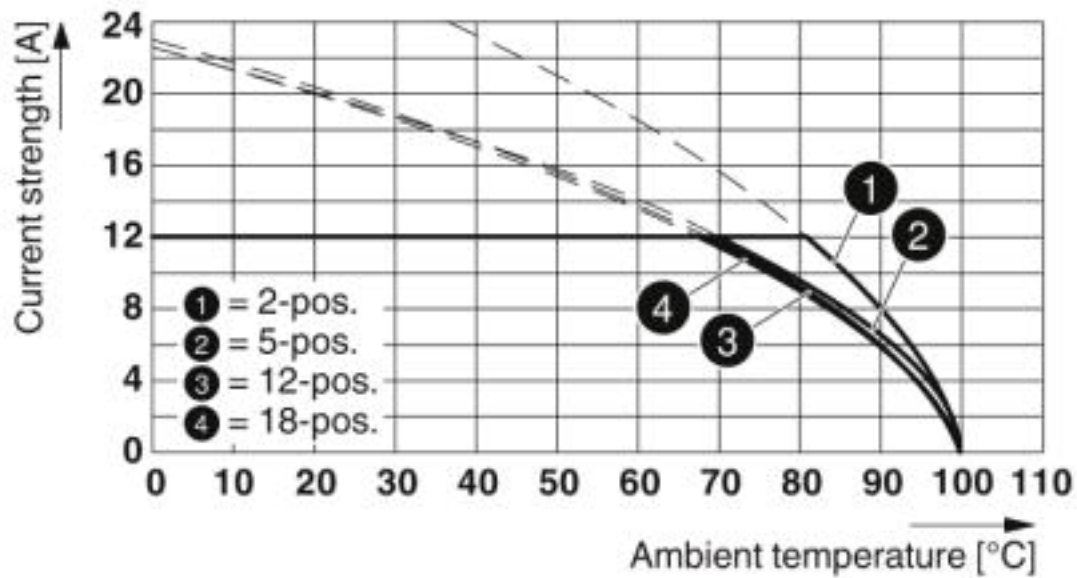
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

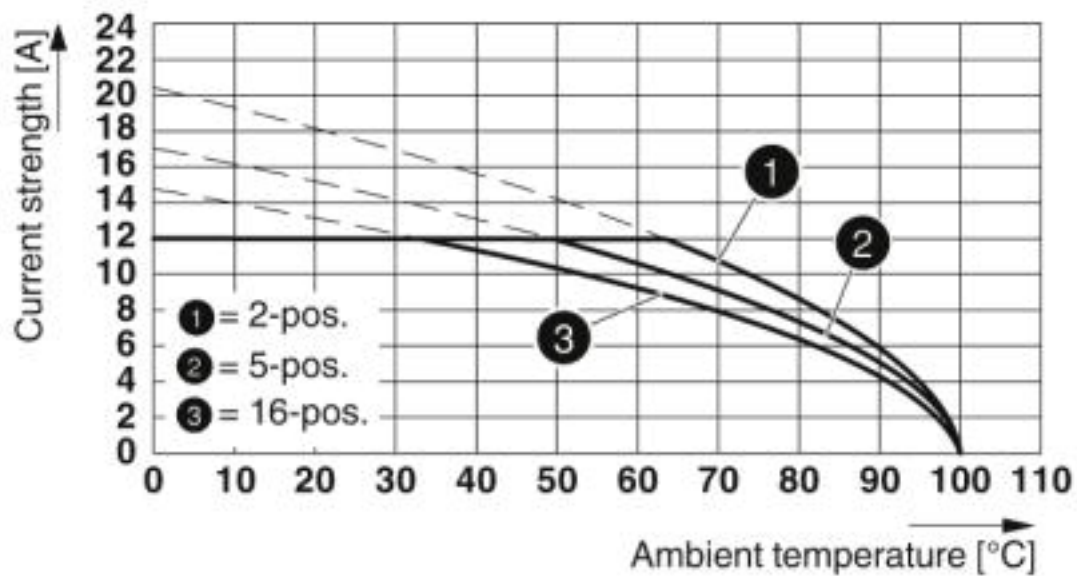
## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

Diagram



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

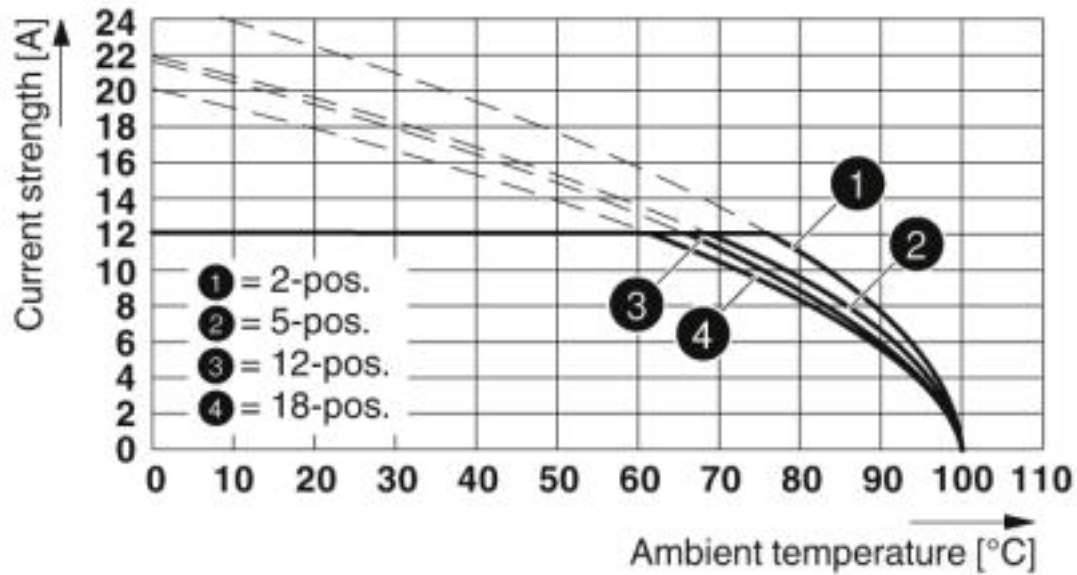
Diagram



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

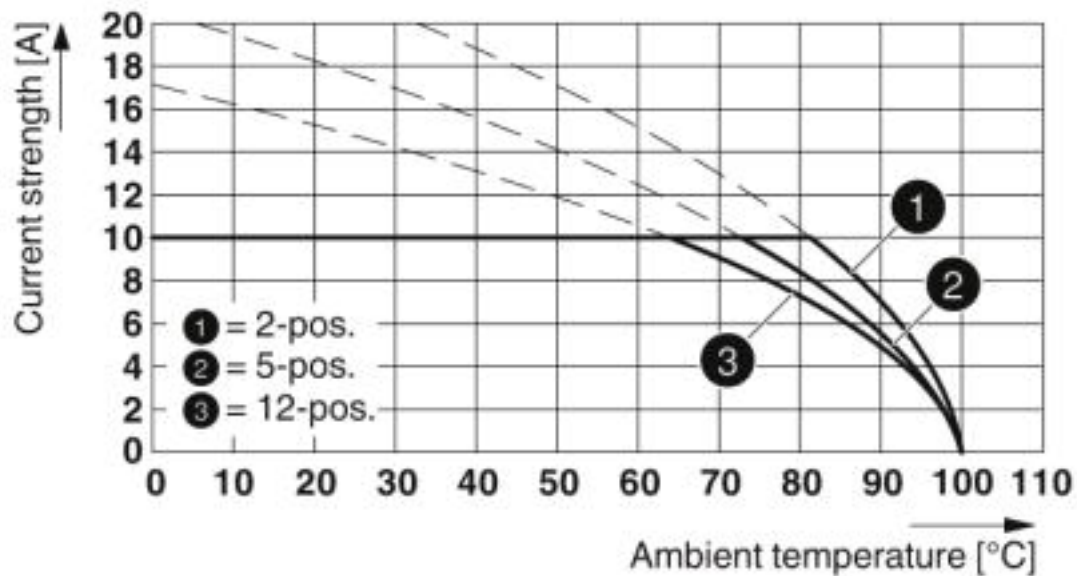
## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

Diagram



Type: MSTBT 2,5/...-ST with MSTBW 2,5/...-G

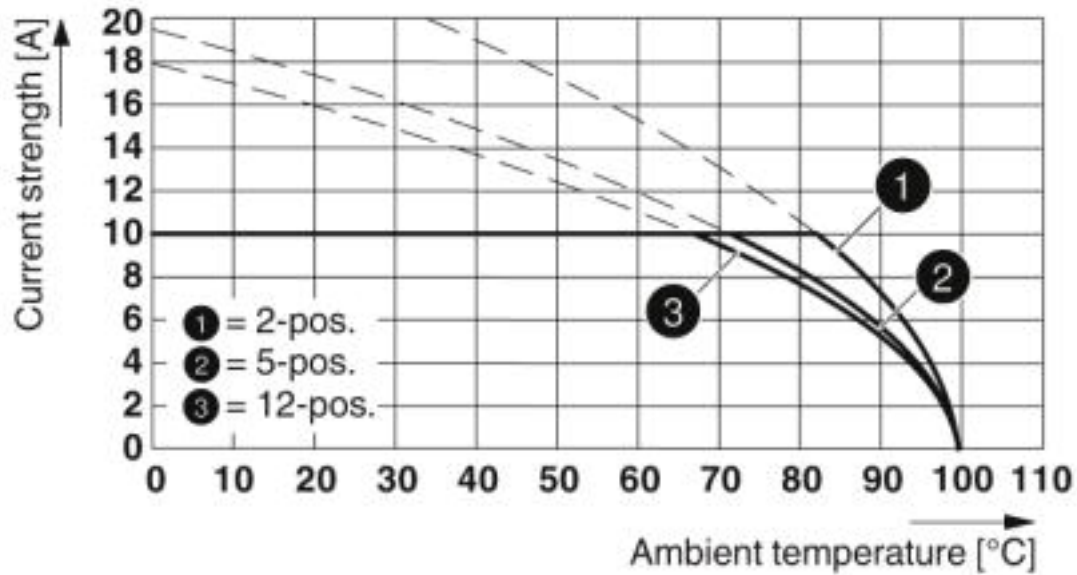
Diagram



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

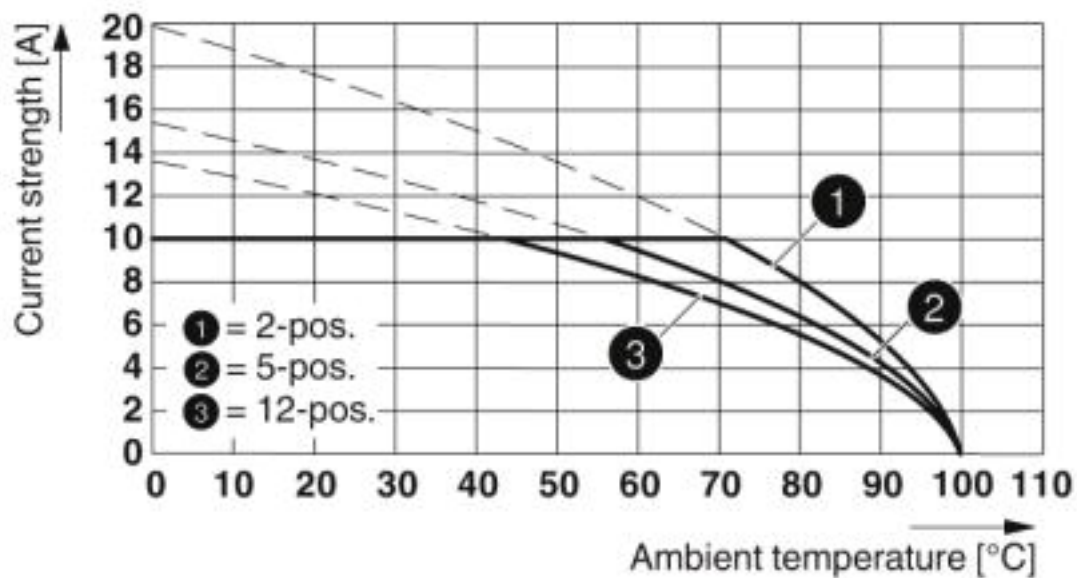
## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

Diagram



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

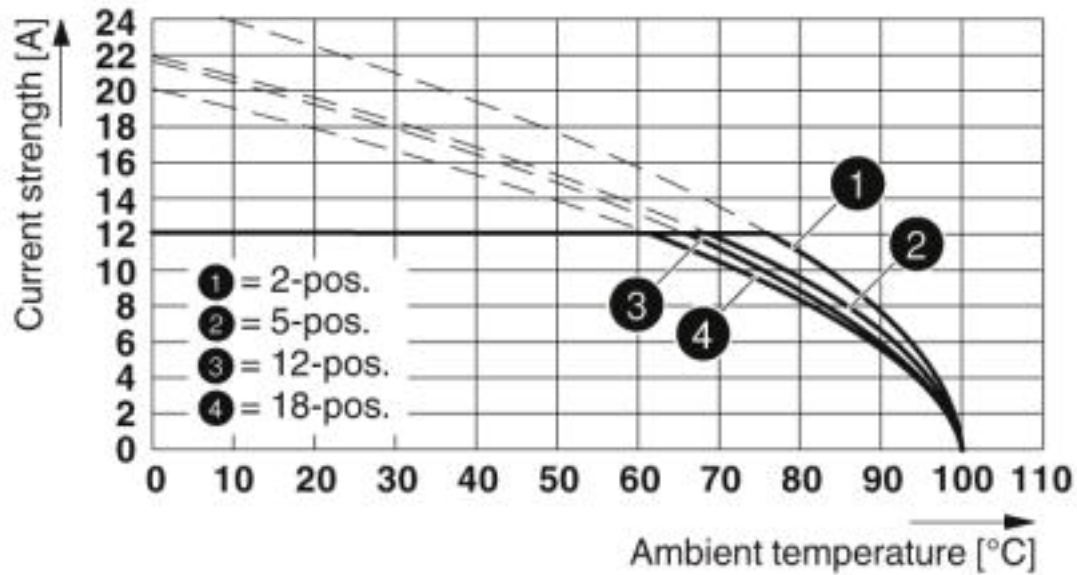
Diagram



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

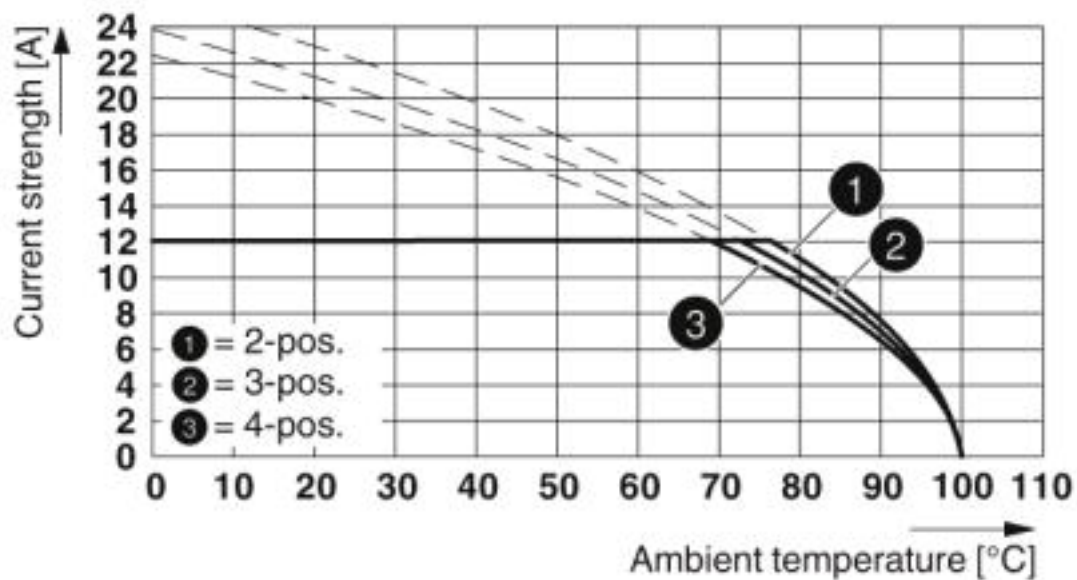
## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

Diagram



Type: MSTBT 2,5/...-ST with MSTBW 2,5/...-G

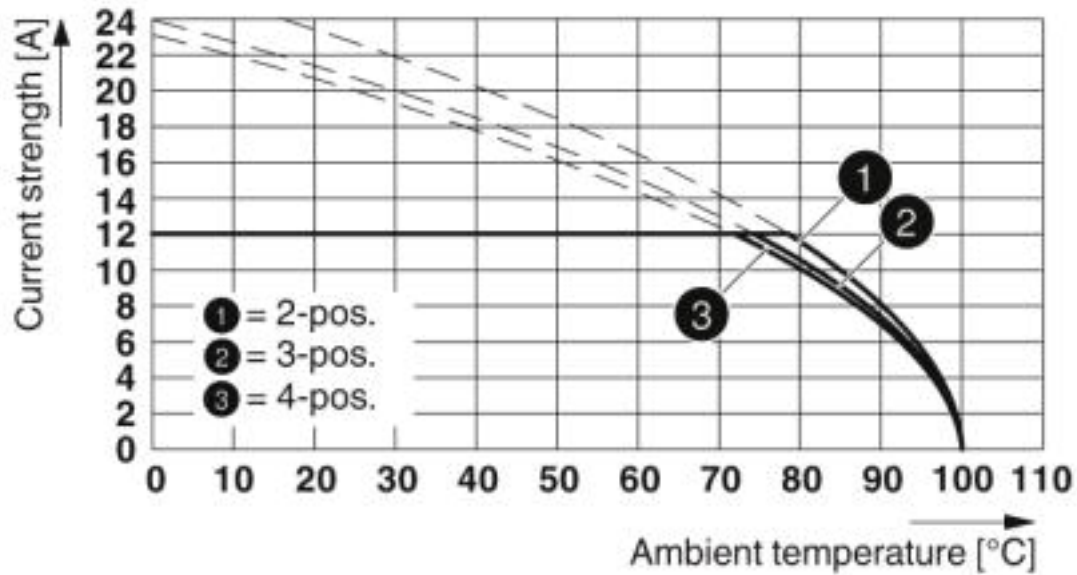
Diagram



Type: MSTBT 2,5/...-ST with MSTBO 2,5/...-G1L

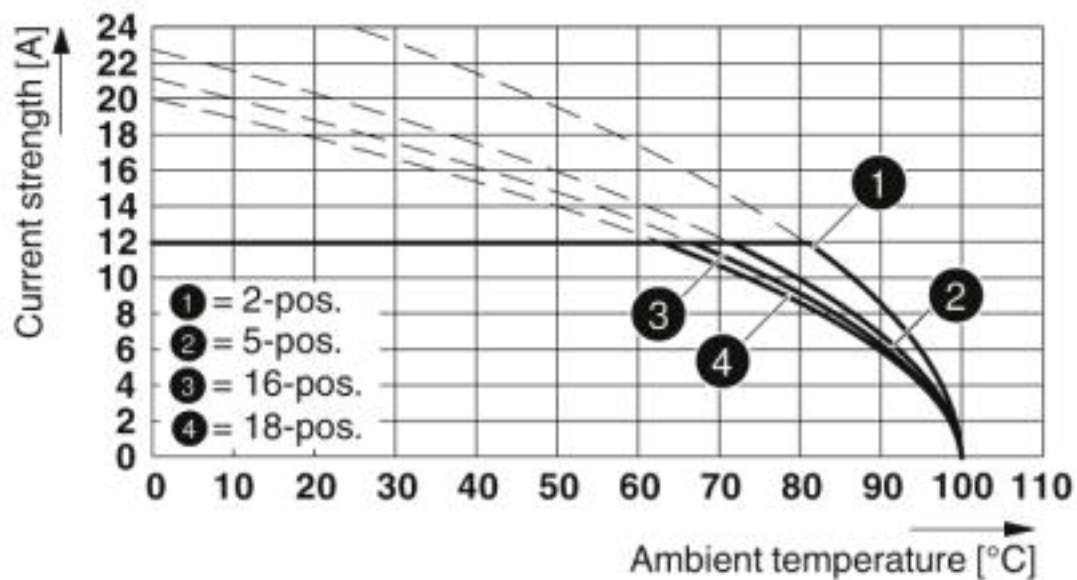
## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

Diagram



Type: MSTBT 2,5/...-ST with MSTBO 2,5/...-G1R

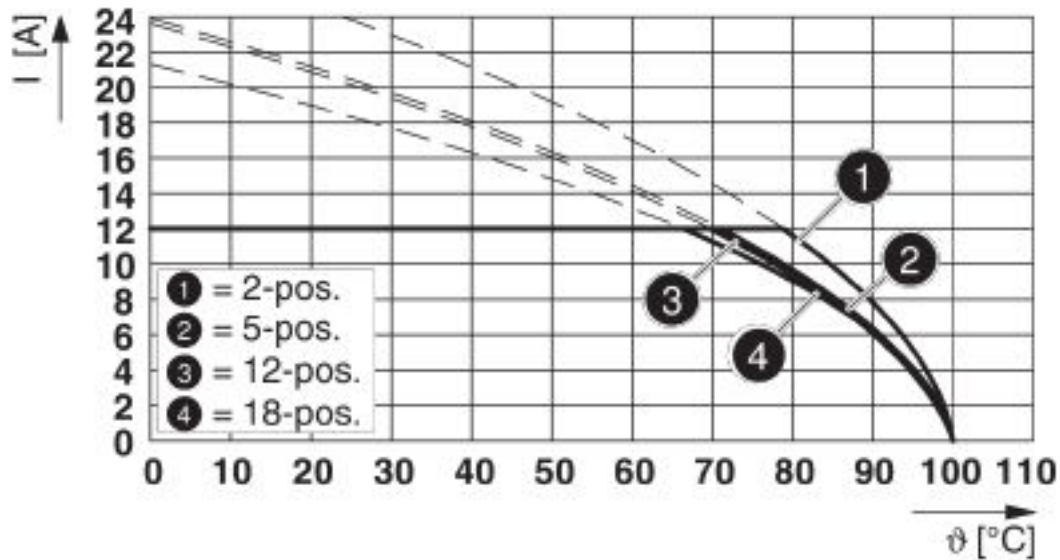
Diagram



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

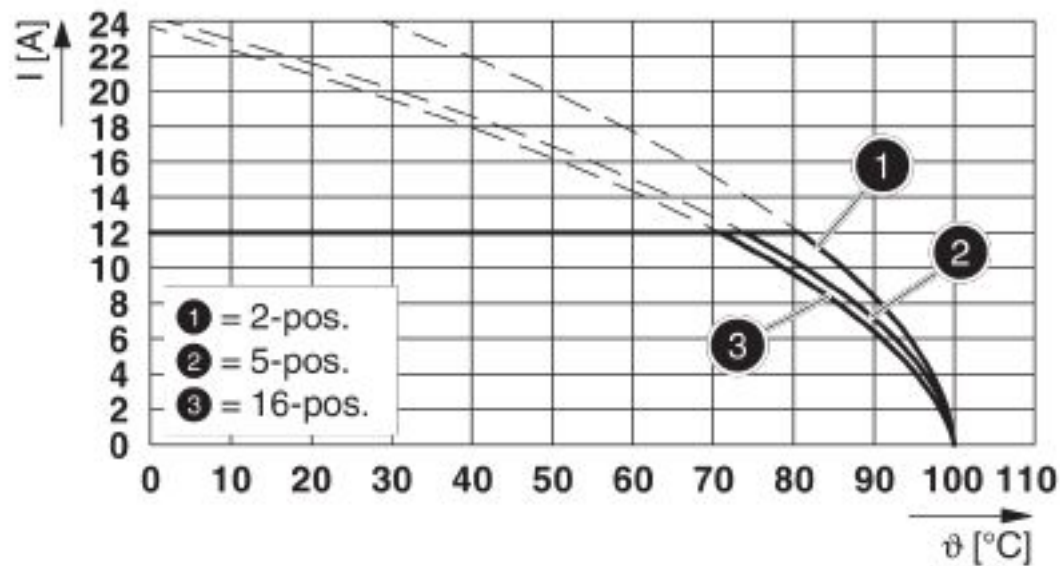
## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

Diagram



Type: MSTBT 2,5/...-ST with FKIC 2,5/...-ST

Diagram



Type: MSTBT 2,5/...-ST with FKICS 2,5/...-ST

## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

### 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 |
| 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

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#### Approvals

CSA / IECCE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

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#### Ex Approvals

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## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

### Approvals

#### Approval details

|                    |                                                                                   |                                                                                                                                         |       |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|
| CSA                |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
|                    | B                                                                                 | D                                                                                                                                       |       |
| Nominal voltage UN | 300 V                                                                             | 300 V                                                                                                                                   |       |
| Nominal current IN | 10 A                                                                              | 10 A                                                                                                                                    |       |
| mm²/AWG/kcmil      | 28-12                                                                             | 28-12                                                                                                                                   |       |

|                    |                                                                                   |                                                           |                |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------|----------------|
| IECEE CB Scheme    |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-60988-B1B2 |
|                    |                                                                                   |                                                           |                |
| Nominal voltage UN | 250 V                                                                             |                                                           |                |
| Nominal current IN | 12 A                                                                              |                                                           |                |
| mm²/AWG/kcmil      | 0.2-2.5                                                                           |                                                           |                |

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

|                    |                                                                                     |                                                                                                                                                       |                 |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| cULus Recognized   |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-19931011 |
|                    | B                                                                                   | D                                                                                                                                                     |                 |
| Nominal voltage UN | 300 V                                                                               | 300 V                                                                                                                                                 |                 |
| Nominal current IN | 15 A                                                                                | 10 A                                                                                                                                                  |                 |
| mm²/AWG/kcmil      | 30-12                                                                               | 30-12                                                                                                                                                 |                 |

|                        |                                                                                     |                                                                                                                                                                                                           |          |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40004701 |
|                        |                                                                                     |                                                                                                                                                                                                           |          |
| Nominal voltage UN     | 250 V                                                                               |                                                                                                                                                                                                           |          |
| Nominal current IN     | 12 A                                                                                |                                                                                                                                                                                                           |          |
| mm²/AWG/kcmil          | 0.2-2.5                                                                             |                                                                                                                                                                                                           |          |

## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

### 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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Insertion bridge - EBP 3- 5 - 1733172



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

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Insertion bridge - EBP 4- 5 - 1733185



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

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### Cable housing

Cable housing - KGG-MSTB 2,5/ 4 - 1803882



Cable housing, pitch: 0 mm, number of positions: 4, color: green

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### Coding element

## Printed-circuit board connector - MSTBT 2,5/ 4-ST RD - 1898826

### Accessories

Coding profile - CP-MSTB - 1734634



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

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### Labeled terminal marker

Marker card - SK 5/3,8:FORTL.ZAHLEN - 0804183



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 mm, lettering field size: 5 x 3.8 mm

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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/3,8 WH:UNBEDRUCKT - 0803906



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 3.8 mm, Number of individual labels: 1440