# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

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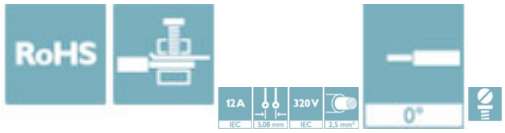
PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



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 | 50 pc |
| GTIN | 4 046356 621403 |
| GTIN | 4046356621403 |

## Technical data

### Item properties

| | |
|---|---|
| Brief article description | Printed-circuit board connector |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Female connector |
| Range of articles | MSTB 2,5/..-ST |
| Pitch | 5.08 mm |
| Number of positions | 3 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 3 |
| Number of potentials | 3 |

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## 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 |
| pluggable | Yes |
| Conductor cross section solid | 0.2 mm² ... 2.5 mm² |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross section AWG / kcmil | 24 ... 12 |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 2.5 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 2.5 mm² |
| 2 conductors with same cross section, solid | 0.2 mm² ... 1 mm² |
| 2 conductors with same cross section, flexible | 0.2 mm² ... 1.5 mm² |
| 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 2.4 mm / 2.5 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 | 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 | 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 |

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## Technical data

### Material data - housing

| | |
|---|---|
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |

### Dimensions for the product

| | |
|---|---|
| Length [ l ] | 18.3 mm |
| Width [ w ] | 15.24 mm |
| Height [ h ] | 15 mm |
| Pitch | 5.08 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 |

### 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 |
| Insertion strength per pos. approx. | 8 N |

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## Technical data

### Mechanical tests according to standard

| | |
|---|---|
| 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. | 27 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. | 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 $R_1$ | 1.3 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance $R_2$ | 1.4 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |
| Insulation resistance, neighboring positions | > 2 TΩ |

### Thermal tests (C)

| | |
|---|---|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 12 |
| Conductor cross section | 2.5 mm² |
| Test current | 12 A |
| Upper limiting temperature requirements <100 °C | Test passed |

### Climatic tests (D)

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

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## 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)

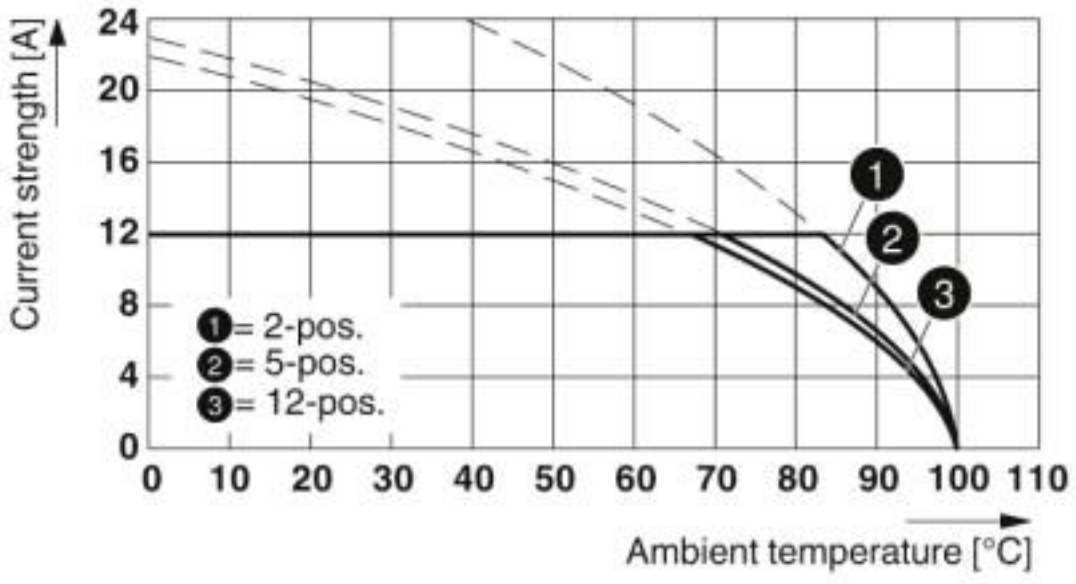
| | |
|---|---|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

### Environmental Product Compliance

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

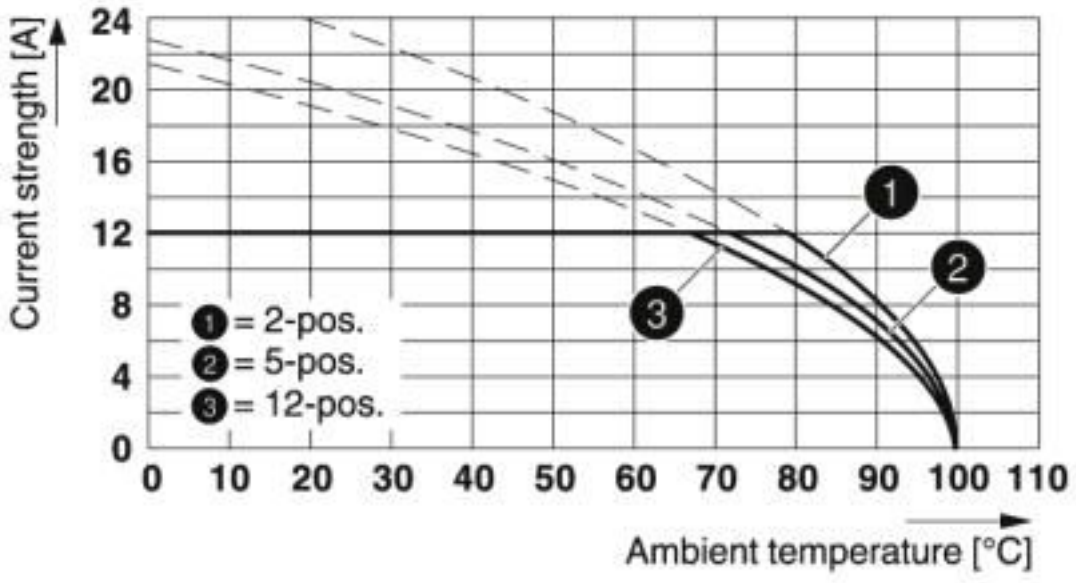
Diagram




Type: MSTB 2,5/...-ST-5,08 with CC 2,5/...-G-5,08 P26THR

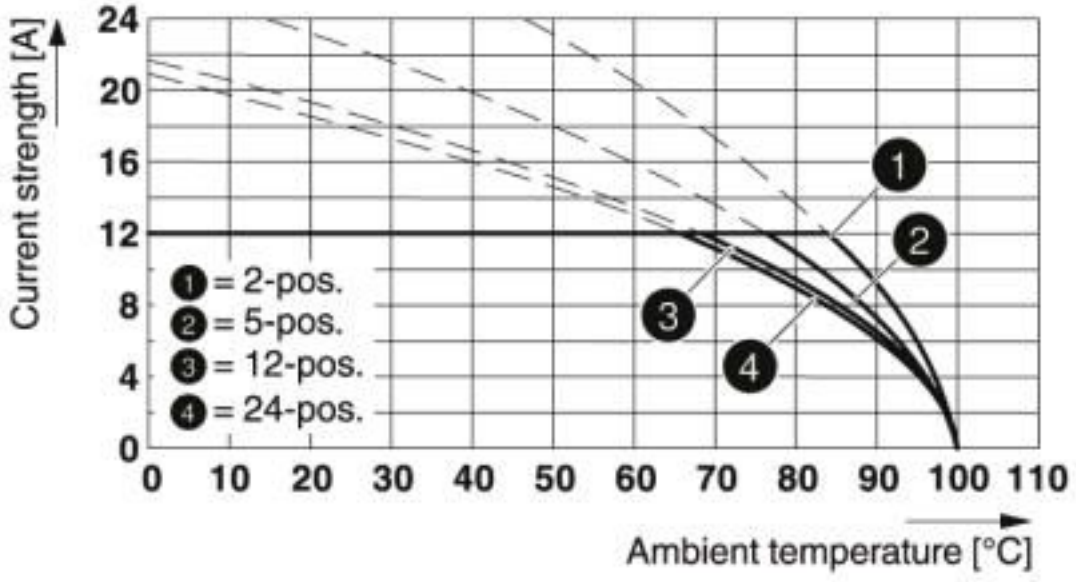
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




Type: MSTB 2,5/...-ST-5,08 with CCV 2,5/...-G-5,08 P26THR

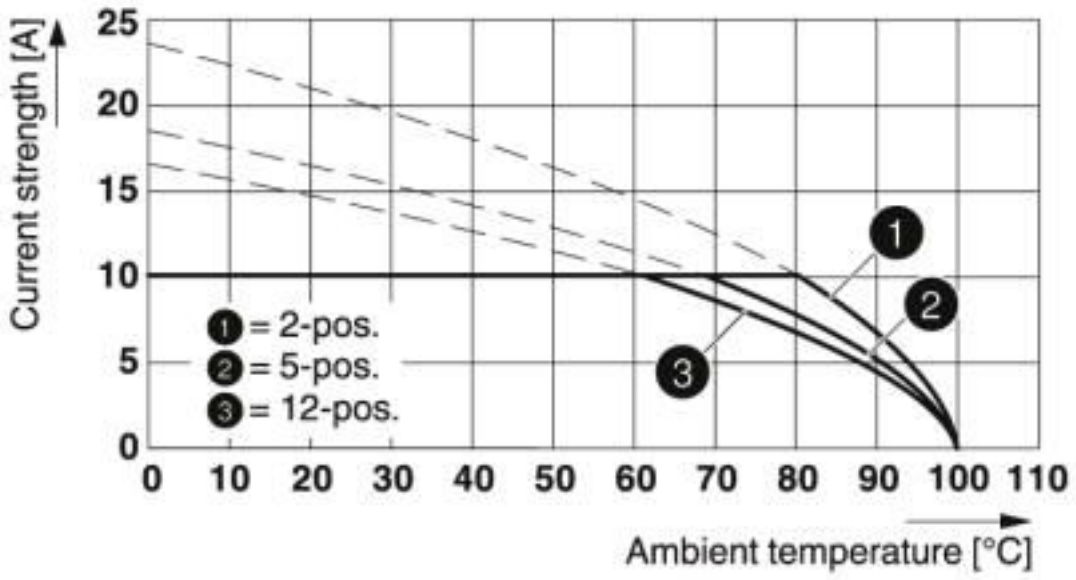
Diagram




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

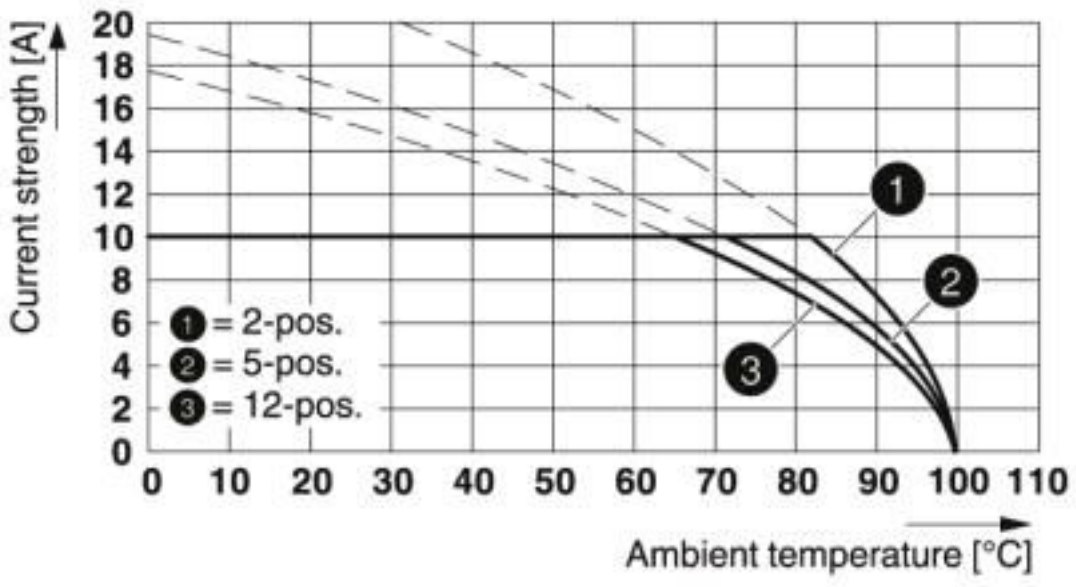
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

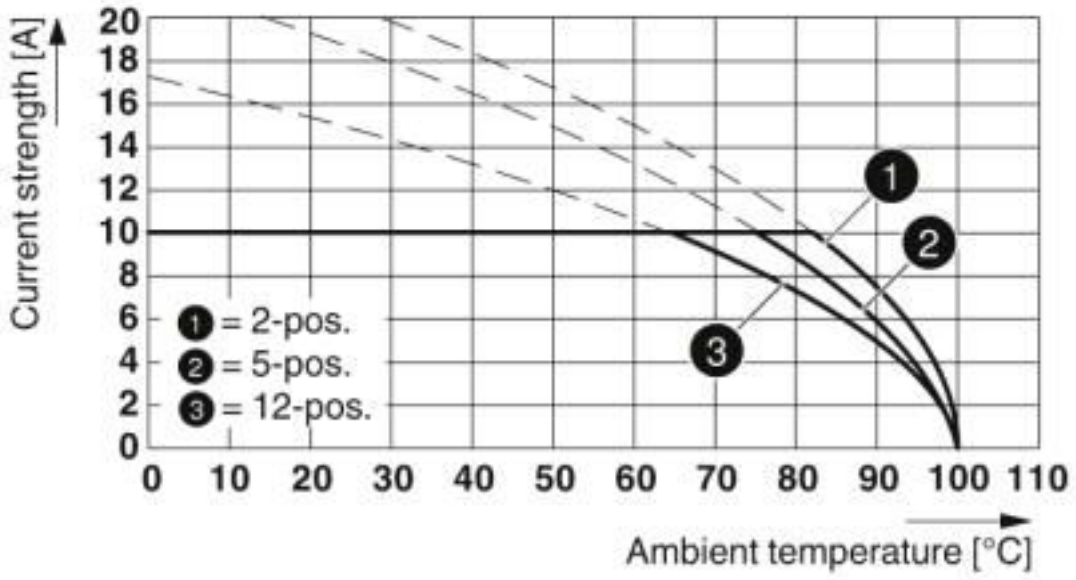
Diagram




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

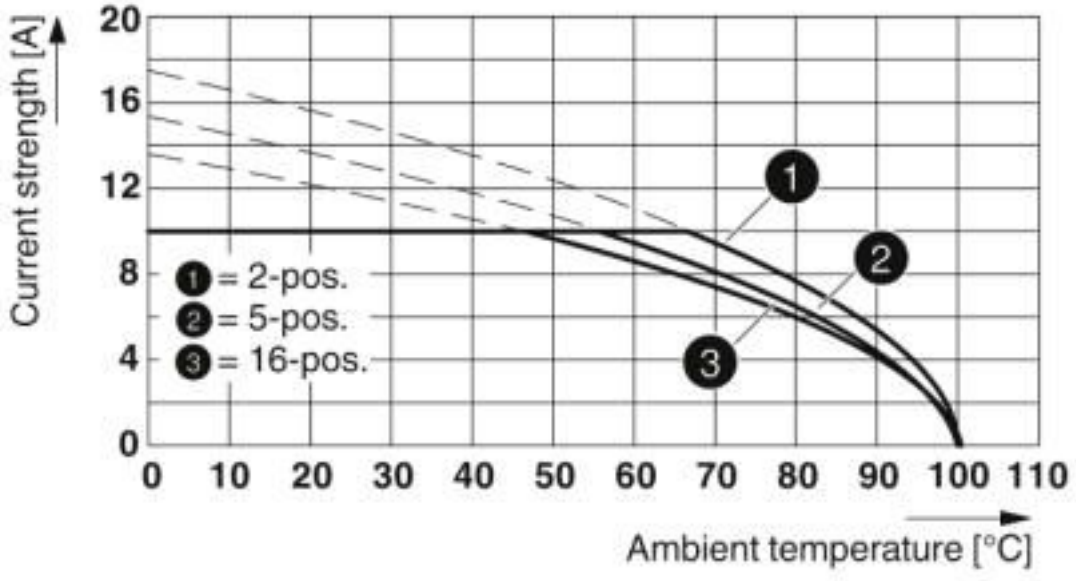
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

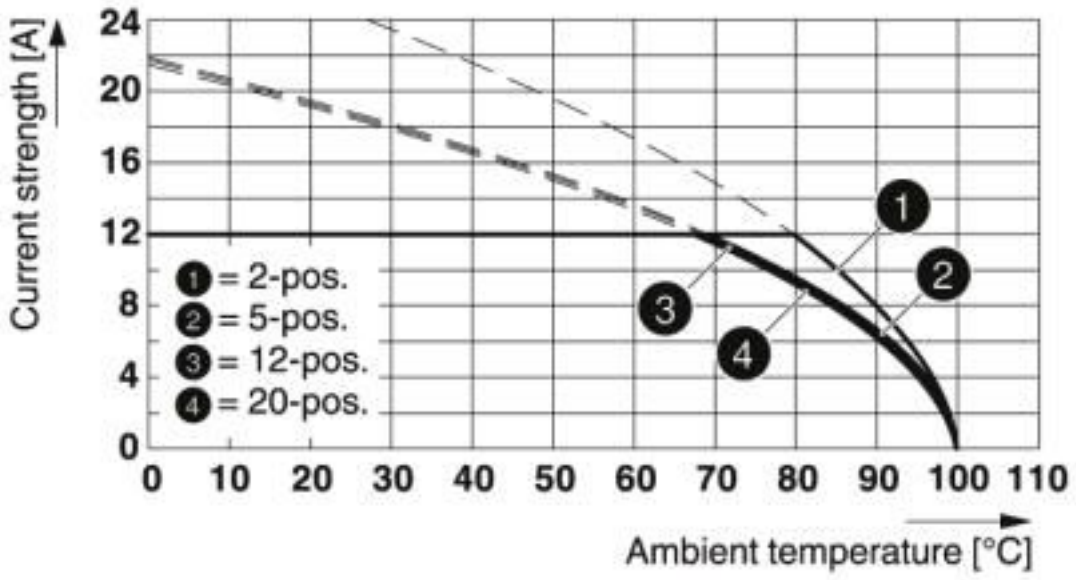
Diagram




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

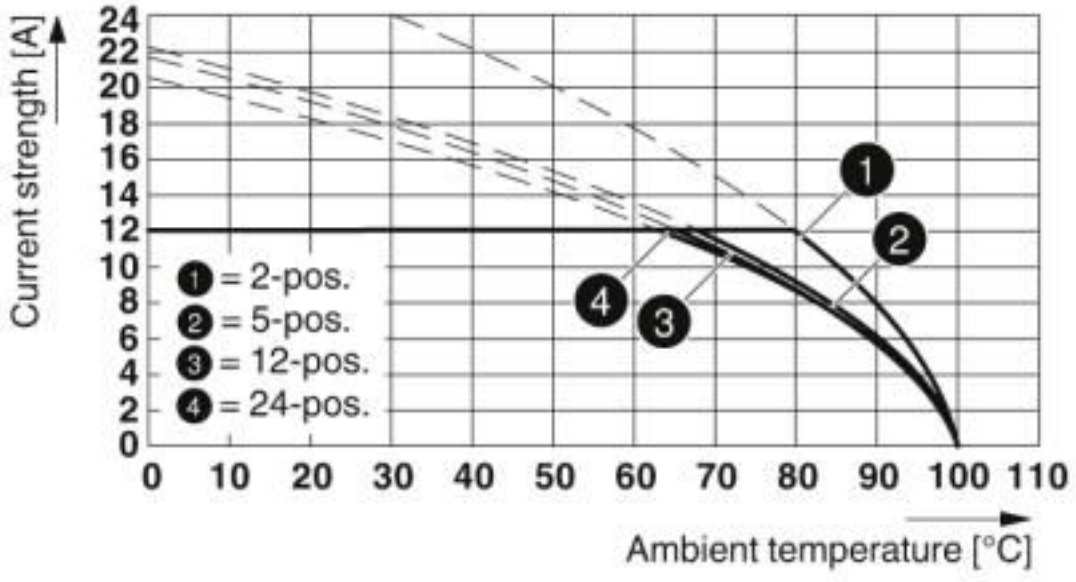
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




Type: MSTB 2,5/...-ST-5,08 with MVSTBU 2,5/...-GB-5,08

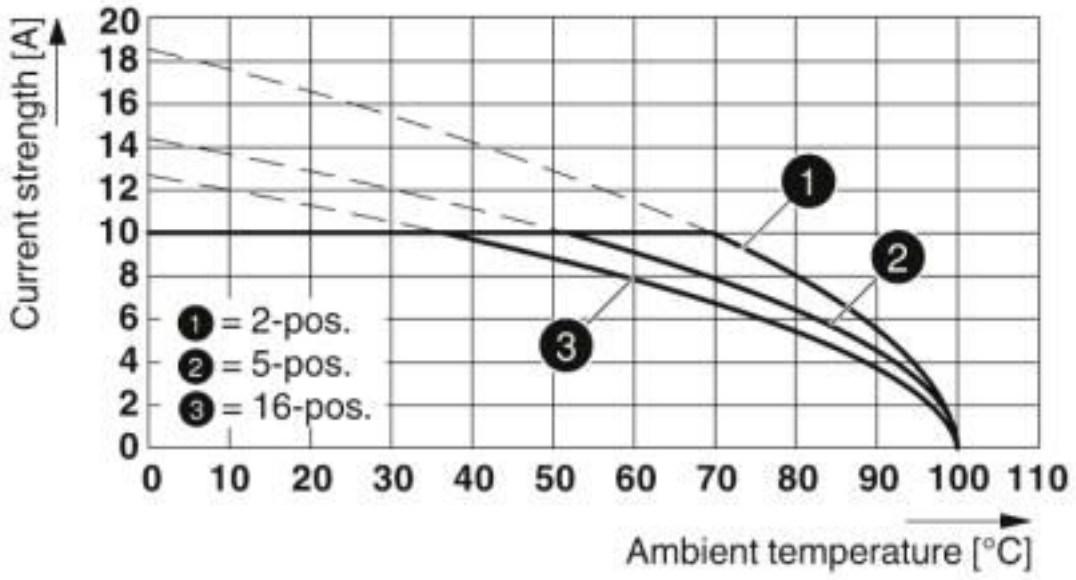
Diagram




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

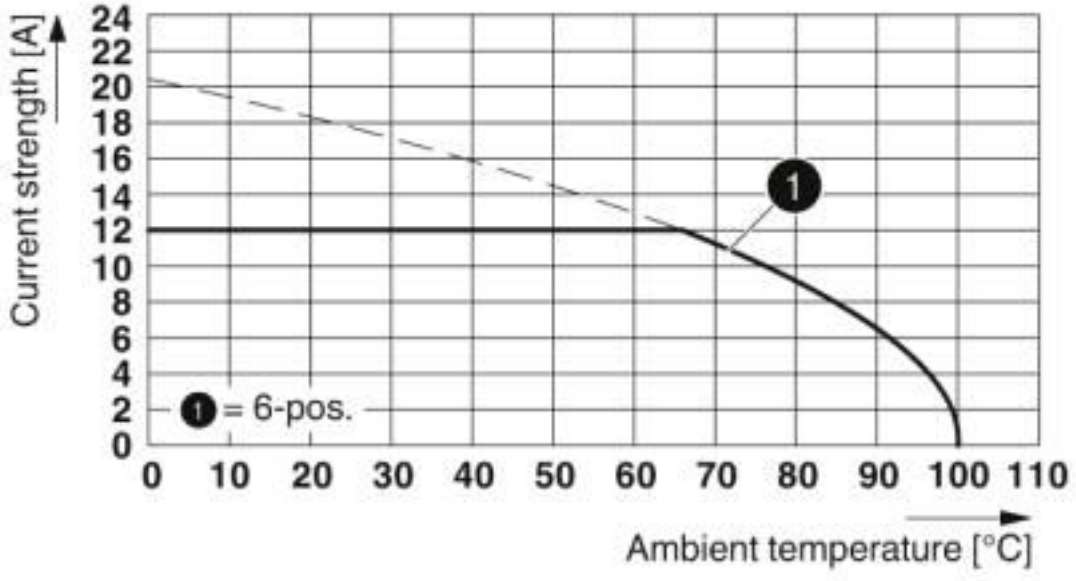
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

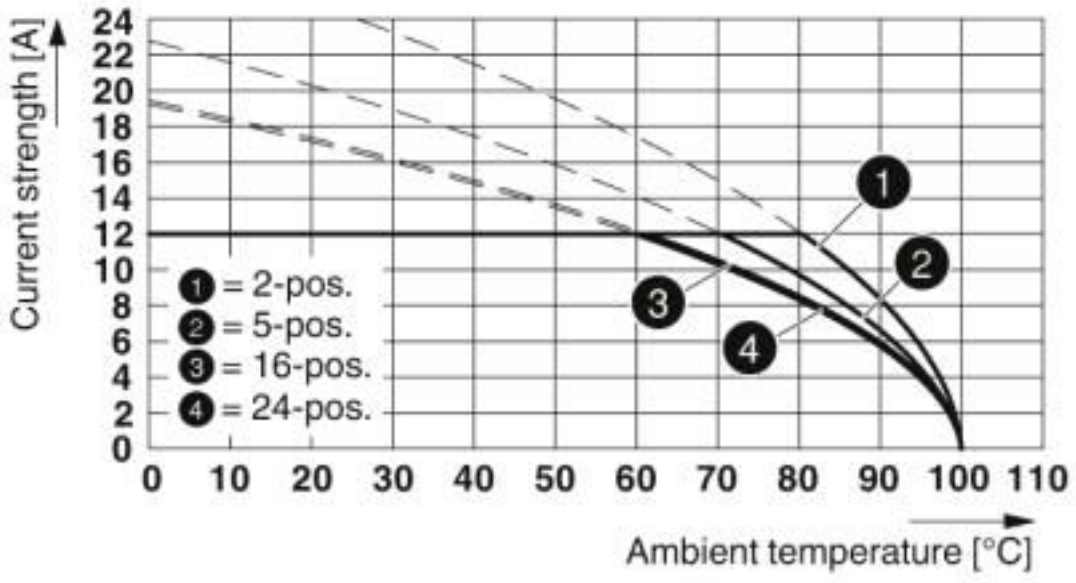
Diagram




Type: MSTB 2,5/..-ST(-5,08) with EMSTBVA 2,5/...-G(-5,08)

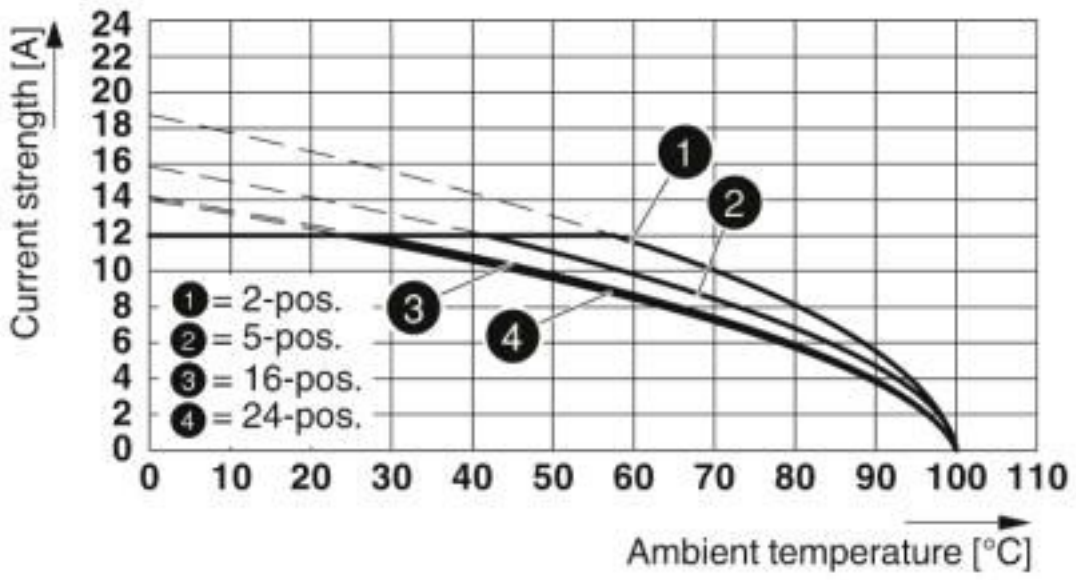
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

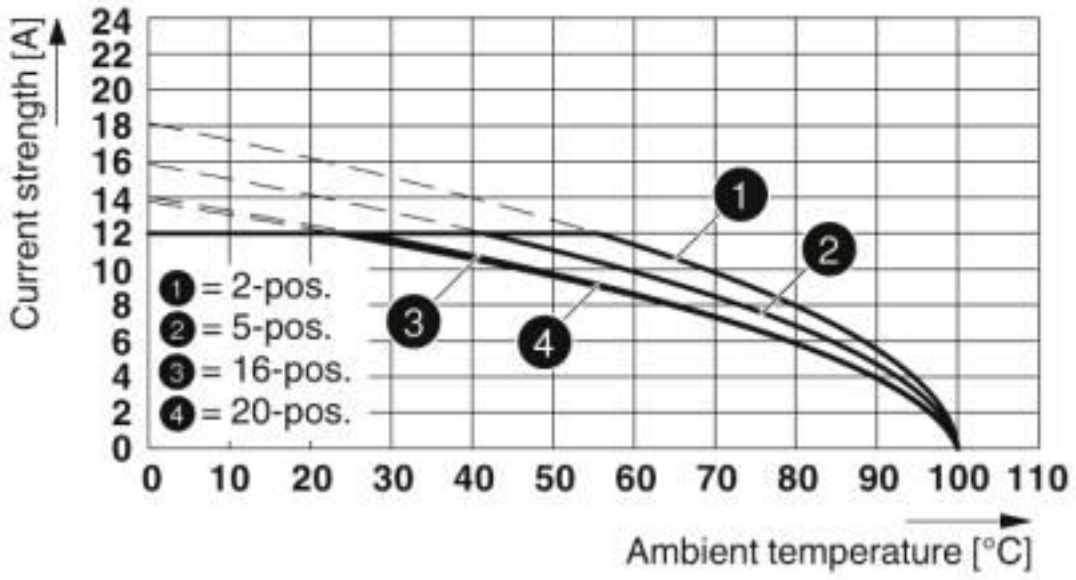
Diagram




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

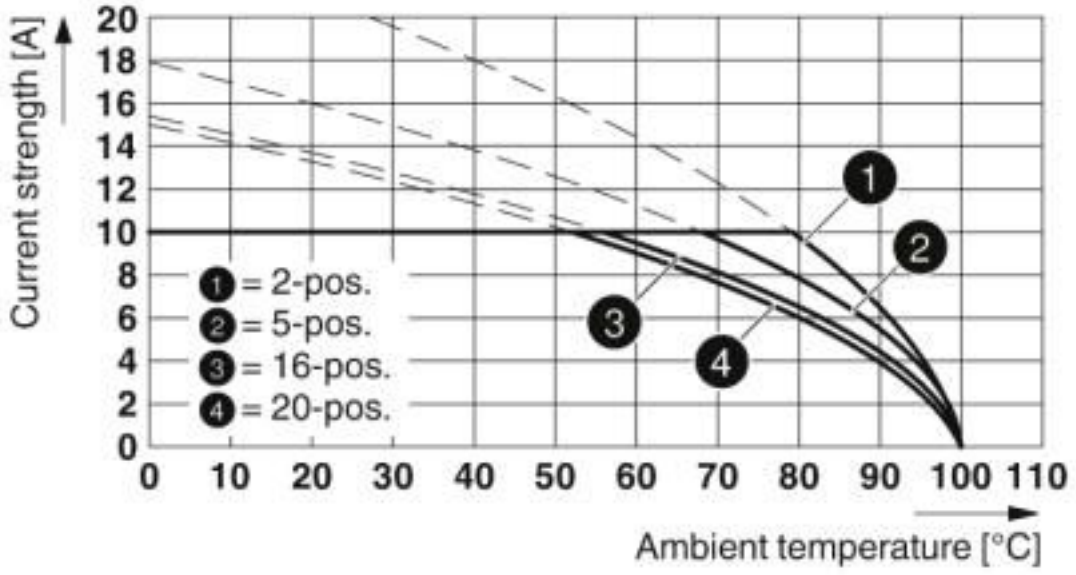
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

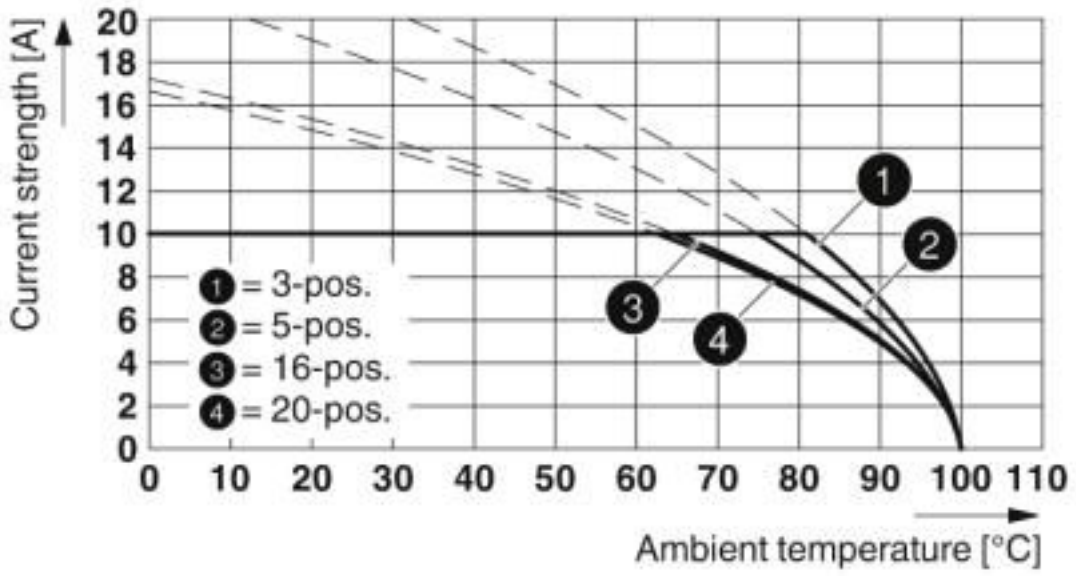
Diagram




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

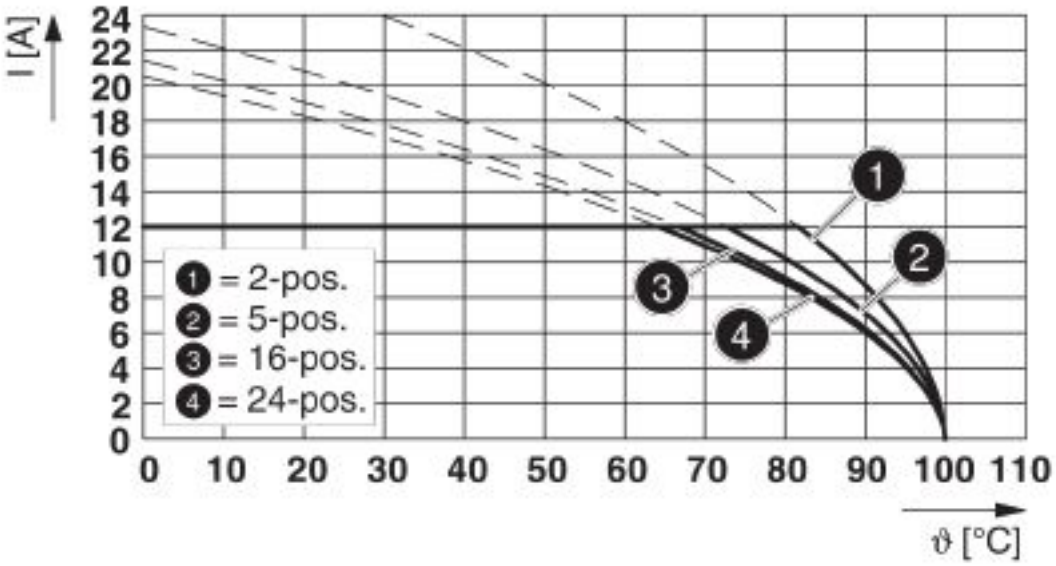
# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

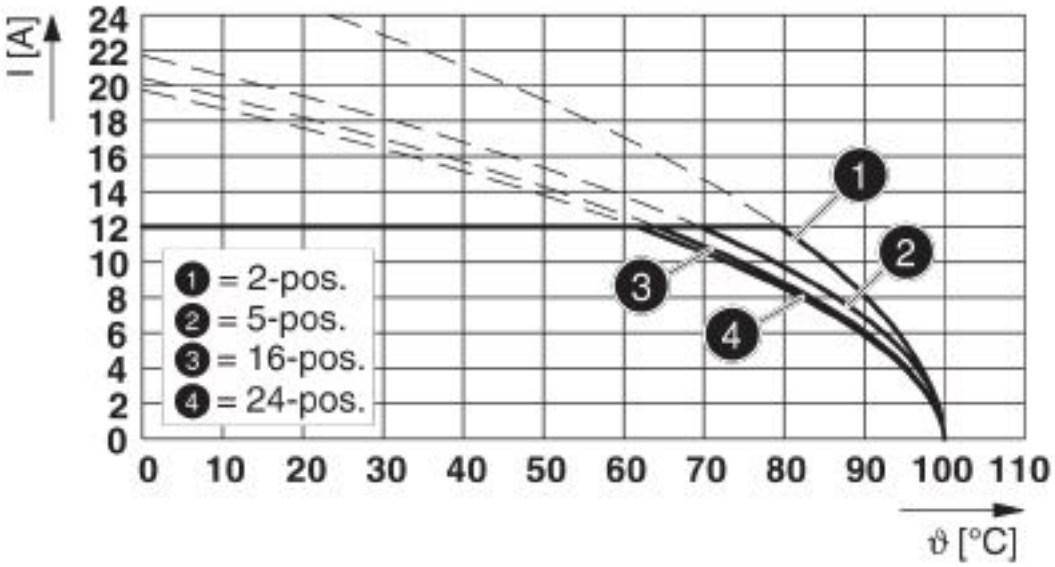
Diagram




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

# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

Diagram




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

## 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 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 |

# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

## Classifications

### UNSPSC

| | |
|---|---|
| UNSPSC 18.0 | 39121409 |
| UNSPSC 19.0 | 39121409 |
| UNSPSC 20.0 | 39121409 |
| UNSPSC 21.0 | 39121409 |

## Approvals

### Approvals

Approvals

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

Ex Approvals

### Approval details

CSA http://www.csagroup.org/services-industries/product-listing/ LR13631-2585950

| | B | D |
|---|---|---|
| Nominal voltage UN | 300 V | 300 V |
| Nominal current IN | 15 A | 10 A |
| mm²/AWG/kcmil | 28-12 | 28-12 |

IECEE CB Scheme http://www.iecee.org/ DE1-60988-B1B2

| | |
|---|---|
| Nominal voltage UN | 250 V |
| Nominal current IN | 12 A |
| mm²/AWG/kcmil | 0.2-2.5 |

EAC B.01742

# Printed-circuit board connector - MSTB 2,5/ 3-ST-5,08 PA1,3 - 1702836

## Approvals

| | | | |
|---|---|---|---|
| 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 | 15 A | 10 A |
| mm²/AWG/kcmil | 30-12 | 30-12 |

| | | | |
|---|---|---|---|
| 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 |
| mm²/AWG/kcmil | 0.2-2.5 |

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