

Printed-circuit board connector - IC 2,5/24-ST-5,08 - 1786394

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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: 24, 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
- Easy PCB replacement thanks to plug-in modules
- Inverted connector with pin contacts for touch-proof device outputs or free-hanging cable/cable connections
- Can be combined with the MSTB 2,5 range
- Low temperature rise, thanks to maximum contact force



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 017918 042547 |
| GTIN | 4017918042547 |

Technical data

Item properties

| | |
|---------------------------|--------------------------------------|
| Brief article description | Printed-circuit board connector |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Male connector |
| Range of articles | IC 2,5/..-ST |
| Pitch | 5.08 mm |
| Number of positions | 24 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Screw thread | M3 |
| Locking | without |

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Technical data

Item properties

| | |
|-----------------------|----|
| Number of levels | 1 |
| Number of connections | 24 |
| Number of potentials | 24 |

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 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 same cross section, solid | 0.2 mm ² ... 1 mm ² |
| 2 conductors with same cross section, flexible | 0.2 mm ² ... 1.5 mm ² |
| 2 conductors with same cross section, flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 1 mm ² |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.5 mm ² ... 1.5 mm ² |
| 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 |

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Material data - housing

| | |
|---|--------|
| 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] | 19.2 mm |
| Width [w] | 123.42 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. |

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 mm ² / solid / > 10 N |
| | 0.2 mm ² / flexible / > 10 N |
| | 2.5 mm ² / solid / > 50 N |
| | 2.5 mm ² / flexible / > 50 N |

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

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Mechanical tests according to standard

| | |
|------------------------------------|------------------------|
| Withdraw strength per pos. approx. | 7 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |

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) | 1.6 mm |
| Minimum creepage distance value (II/2) | 3.2 mm |

Current carrying capacity / derating curves

| | |
|------------------|---|
| Caption | Type: (U)MSTBVK 2,5/...-ST-5,08 with IC 2,5/...-ST-5,08 |
| 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. | 7 N |
| Polarization when inserted requirement >20 N | Test passed |

Durability tests (B)

| | |
|--|-----------------------|
| Specification | IEC 60512-9-1:2010-03 |
| Contact resistance R ₁ | 2.9 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 3 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 | 16 |
| Conductor cross section | 2.5 mm ² |
| Test current | 12 A DC |
| 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)

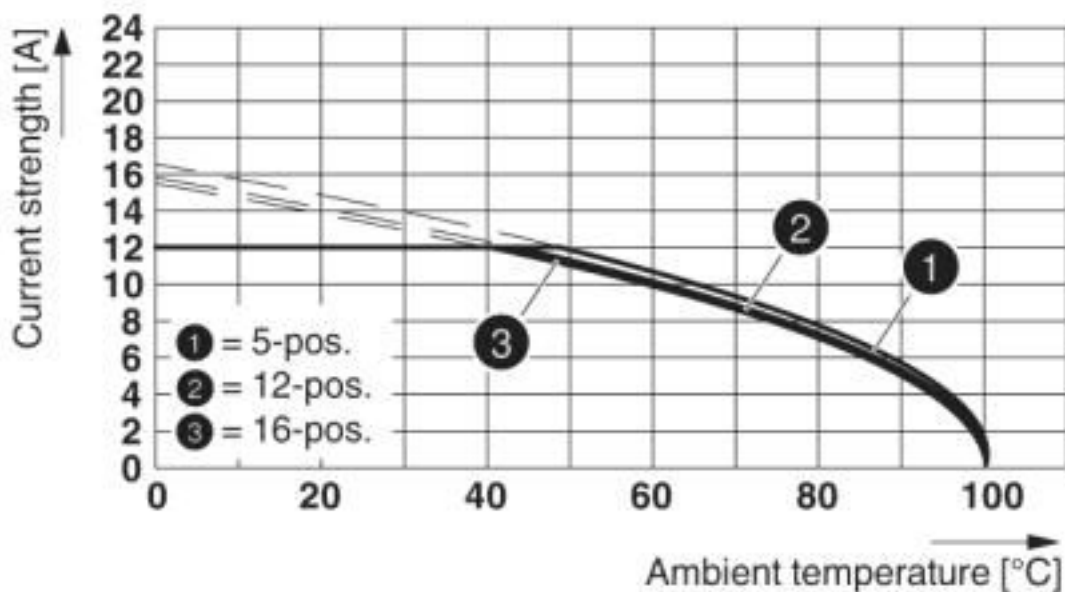
| | |
|---------------------------------------|-------------------------------------|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

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

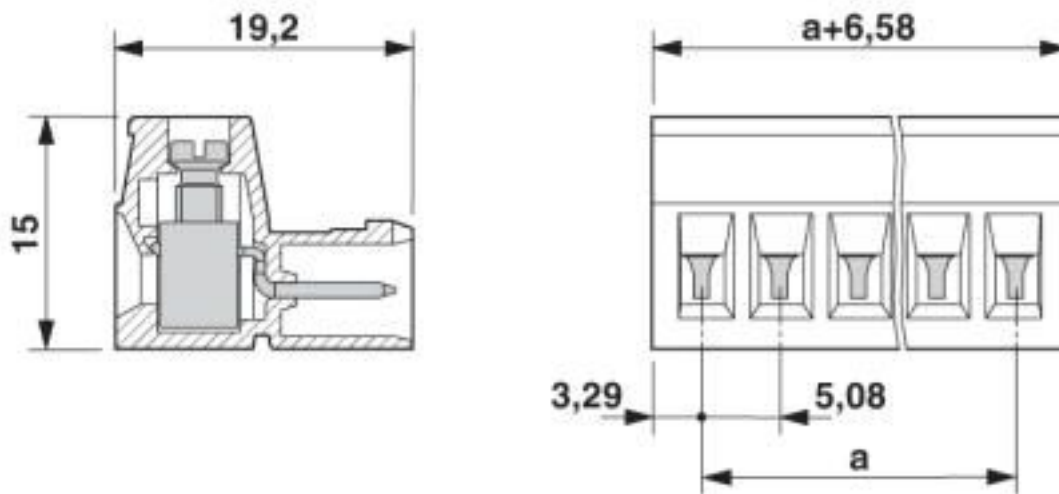
Diagram



Type: (U)MSTBVK 2,5/...-ST-5,08 with IC 2,5/...-ST-5,08

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Dimensional drawing



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 |

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Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121409 |
|-------------|----------|

Approvals

Approvals

Approvals

CSA / IEC EE CB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

| | | | |
|----------------------------|--|---|-------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| | | B | D |
| Nominal voltage UN | | 300 V | 300 V |
| Nominal current IN | | 10 A | 10 A |
| mm ² /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 | |
| 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 | E60425-19931014 |
| | | B | D |
| Nominal voltage UN | | 250 V | 300 V |
| Nominal current IN | | 12 A | 10 A |
| mm ² /AWG/kcmil | | 30-12 | 30-12 |

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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

Bridge

Insertion bridge - EBP 2- 5 - 1733169



Insertion bridge for connectors with 5.0 mm or 5.08 mm pitch

Cable housing

Cable housing - KGS-MSTB 2,5/24 - 1805657



Cable housing, pitch: 0 mm, number of positions: 24, dimension a: 120 mm, color: green

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

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Accessories

Accessories - MSTB-BL - 1755477



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

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

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

Additional products

Printed-circuit board connector - MSTB 2,5/24-ST-5,08 - 1757239



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MVSTBR 2,5/24-ST-5,08 - 1792469



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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Accessories

Printed-circuit board connector - MSTBC 2,5/24-STZ-5,08 - 1809721

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte



Feed-through header - IC 2,5/24-G-5,08 - 1786624

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Feed-through header - ICV 2,5/24-G-5,08 - 1786161

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Feed-through terminal block - ZFKK 1,5-ICV-5,08 - 1873029



Feed-through terminal block, connection method: Special and hybrid connection, cross section: 0.2 mm² - 2.5 mm², AWG: 24 - 16, width: 5.1 mm, color: gray, mounting: NS 35/15, NS 35/7,5

Printed-circuit board connector - SMSTB 2,5/24-ST-5,08 - 1850631

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - IC 2,5/24-ST-5,08 - 1786394

Accessories

Printed-circuit board connector - MSTBU 2,5/24-STD-5,08 - 1824340



Direct plug-in block, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

Printed-circuit board connector - MVSTBW 2,5/24-ST-5,08 - 1792977



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Plug - FRONT-MSTB 2,5/24-ST-5,08 - 1777507



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Front screw connection, color: green, contact surface: Tin

Printed-circuit board connector - MSTBP 2,5/24-ST-5,08 - 1769696



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTBC 2,5/24-ST-5,08 - 1809035



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 24, pitch: 5.08 mm, connection method: Crimp connection, color: green, Corresponding female crimp contacts with current [A] and conductor cross section range [mm²] data: 10A/MSTBC-MT 0,5-1,0 (3190564); 10A/MSTBC-MT 0,5-1,0 BA (3190645); 12A/MSTBC-MT 1,5-2,5 (3190551); 12A/MSTBC-MT 1,5-2,5 BA (3190658). BA = Bandkontakte

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