

Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

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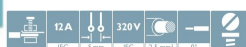
PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin




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 017918 028893 |
| GTIN | 4017918028893 |

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 mm |
| Number of positions | 16 |
| Connection method | Screw connection with tension sleeve |
| Drive form screw head | Slotted (L) |
| Screw thread | M3 |
| Locking | without |
| Number of levels | 1 |
| Number of connections | 16 |

Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

Technical data

Item properties

| | |
|----------------------|----|
| Number of potentials | 16 |
|----------------------|----|

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 |
| 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 |

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Technical data

Material data - housing

| | |
|-------------------------------------------------------------------|--------|
| 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] | 18.2 mm |
| Width [w] | 80 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 |

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 |

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Technical data

Mechanical tests according to standard

| | |
|-------------------------------------|------------------------|
| Insertion strength per pos. approx. | 8 N |
| Withdraw strength per pos. approx. | 6 N |
| Polarization and coding | IEC 60512-13-5:2006-02 |
| Contact holder in insert | 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 |

Current carrying capacity / derating curves

| | |
|------------------|-----------------------------------------------|
| Caption | Type: MSTB 2,5/...-ST with MSTBA 2,5/...-G |
| 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. | 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 | 1.4 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 1.5 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |
| Insulation resistance, neighboring positions | > 1 TΩ |

Thermal tests (C)

| | |
|-------------------------|-----------------------|
| Specification | IEC 60512-5-1:2002-02 |
| Number of positions | 24 |
| Conductor cross section | 2.5 mm ² |

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Technical data

Thermal tests (C)

| | |
|-------------------------------------------------|-------------|
| 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 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)

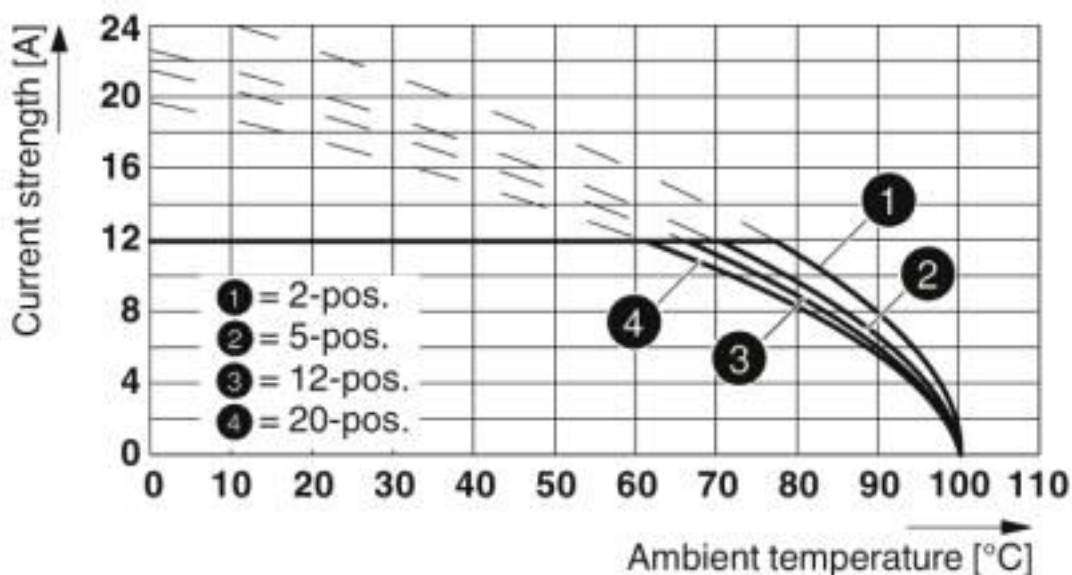
| | |
|---------------------------------------|-------------------------------------|
| Specification | IEC 61984:2008-10 |
| Result, degree of protection, IP code | Finger safety with IP20 test finger |

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

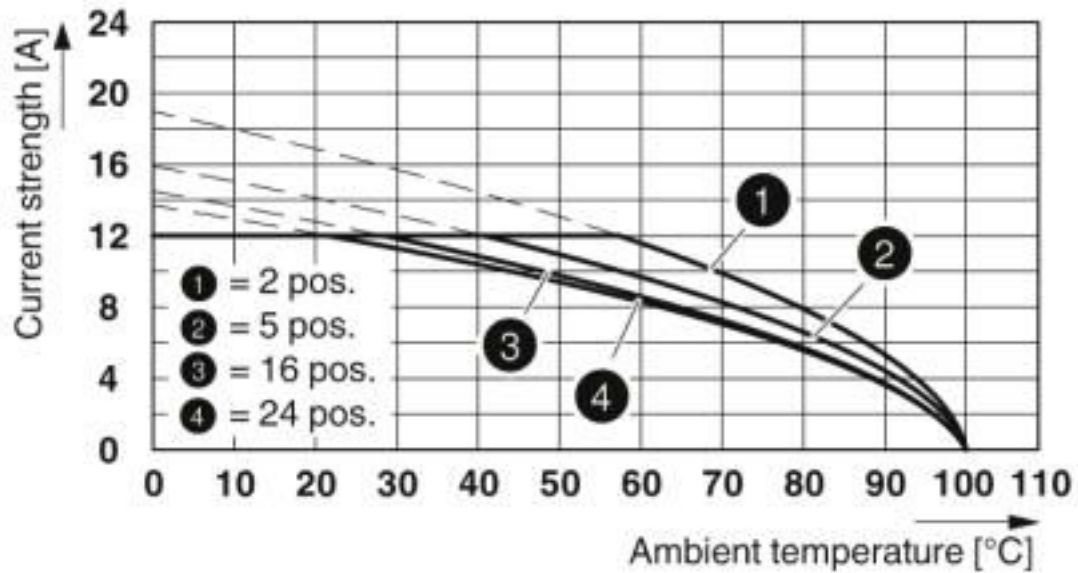
Diagram



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

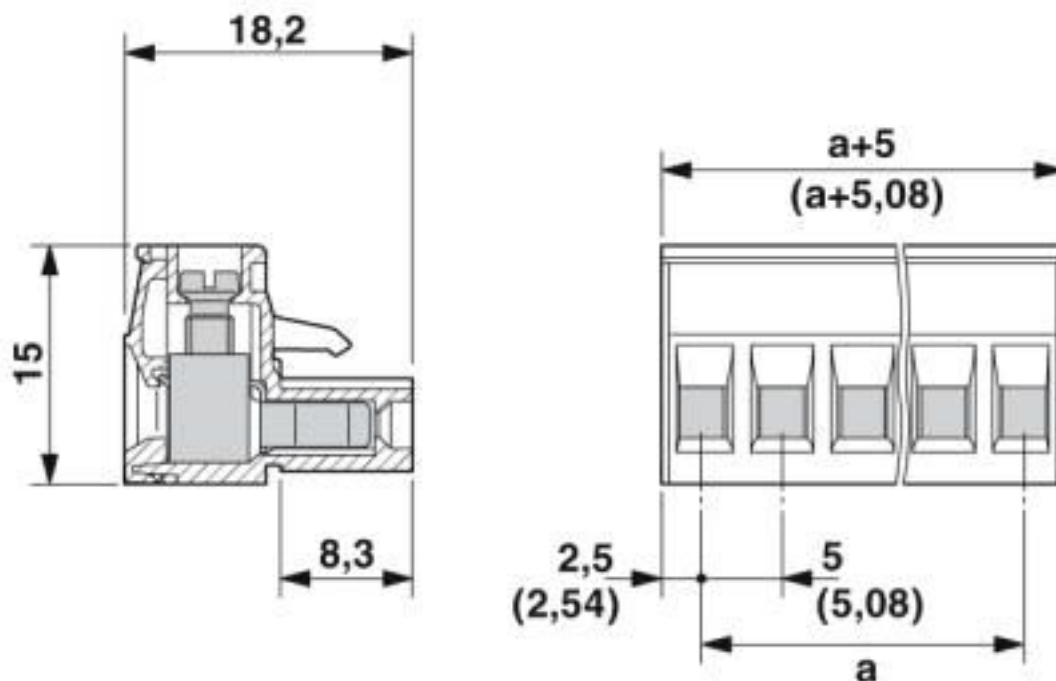
Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

Diagram



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

Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440309 |
|---------------|----------|

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Classifications

eCl@ss

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

Approvals

CSA / IECCEB Scheme / EAC / cULus Recognized / VDE Zeichengenehmigung

Ex Approvals

Approval details

Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

Approvals

| | | | |
|----------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 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 | |
| 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 | E60425-19931011 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |
| Nominal current IN | 15 A | 10 A | |
| mm ² /AWG/kcmil | 30-12 | 30-12 | |

| | | | |
|----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40004701 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 12 A | | |
| mm ² /AWG/kcmil | 0.2-2.5 | | |

Accessories

Accessories

Bridge

Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

Accessories

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 2,5/16 - 1783850



Cable housing, pitch: 0 mm, number of positions: 16, dimension a: 80 mm, color: green

Coding element

Coding profile - CP-MSTB - 1734634



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

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

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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Accessories

Additional products

Feed-through header - MSTBW 2,5/16-G - 1735976

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Feed-through header - MSTBV 2,5/16-G - 1753712

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm



Feed-through header - MSTB 2,5/16-G - 1754711

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Printed-circuit board connector - MSTBVA 2,5/16-G - 1755642

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm



Printed-circuit board connector - MSTBA 2,5/16-G - 1757608

PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm



Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

Accessories

Feed-through header - MDSTB 2,5/16-G1 - 1762839



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm. In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MDSTBV 2,5/16-G1 - 1762981



PCB headers, nominal current: 10 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm. In combination with MVSTB or FKCV plug components, both an MVSTBW (or FKCVW) and an MVSTBR plug (or FKCVR) must be used. Combination with TMSTBP plug components is not possible!

Feed-through header - MSTB 2,5/16-G-LA - 1768325



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning

Printed-circuit board connector - SMSTB 2,5/16-G - 1769379



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

Feed-through header - SMSTBA 2,5/16-G - 1769942



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.5 mm

Printed-circuit board connector - MSTB 2,5/16-ST - 1754724

Accessories

Feed-through header - MSTBA 2,5/16-G-LA - 1770627



PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 16, pitch: 5 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.2 mm

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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>

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