

Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

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PCB headers, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, color: green, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.9 mm




The figure shows a 10-position version of the product

Your advantages

- ✓ Maximum flexibility when it comes to device design – one header for connectors with different connection technologies
- ✓ Well-known mounting principle allows worldwide use
- ✓ Vertical connection enables multi-row arrangement on the PCB
- ✓ Closed contour for optimum stability of the plug-in connection
- ✓ Easy PCB replacement thanks to plug-in modules



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 50 pc |
| GTIN |  4 017918 029494 |
| GTIN | 4017918029494 |

Technical data

Item properties

| | |
|---------------------------|---------------------|
| Brief article description | Feed-through header |
| Plug-in system | CLASSIC COMBICON |
| Type of contact | Male connector |
| Range of articles | MSTBVA 2,5/...-G |
| Pitch | 5.08 mm |
| Number of positions | 20 |
| Mounting type | Wave soldering |
| Pin layout | Linear pinning |
| Locking | without |
| Number of levels | 1 |

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Technical data

Item properties

| | |
|-----------------------|----|
| Number of connections | 20 |
| Number of potentials | 20 |

Electrical parameters

| | |
|-----------------------------|-------|
| Nominal current | 12 A |
| Nom. voltage | 320 V |
| Rated voltage | 250 V |
| Rated voltage (III/2) | 320 V |
| Rated voltage (II/2) | 400 V |
| Rated surge voltage (III/3) | 4 kV |
| Rated surge voltage (III/2) | 4 kV |
| Rated surge voltage (II/2) | 4 kV |

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 contact area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface contact area (middle layer) | Nickel (1.3 - 3 µm Ni), |
| Metal surface soldering area (top layer) | Tin (3 - 5 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1.3 - 3 µm Ni) |

Material data - housing

| | |
|--|--------------|
| Housing color | green (6021) |
| Insulating material | PBT |
| Insulating material group | IIIa |
| CTI according to IEC 60112 | 225 |
| Flammability rating according to UL 94 | V0 |

Dimensions for the product

| | |
|-----------------------------|----------|
| Length [l] | 8.6 mm |
| Width [w] | 103.6 mm |
| Height [h] | 15.9 mm |
| Pitch | 5.08 mm |
| Height (without solder pin) | 12 mm |
| Solder pin [P] | 3.9 mm |

Dimensions for PCB design

| | |
|---------------|--------|
| Hole diameter | 1.4 mm |
|---------------|--------|

Packaging information

| | |
|--------------------|---------------------|
| Type of packaging | packed in cardboard |
| Pieces per package | 50 |

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Technical data

Packaging information

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

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) | 4 mm |
| Minimum creepage distance value (III/2) | 3.2 mm |
| Minimum creepage distance value (II/2) | 4 mm |

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 | 2.4 mΩ |
| Insertion/withdrawal cycles | 25 |
| Contact resistance R ₂ | 2.5 mΩ |
| Impulse withstand voltage at sea level | 4.8 kV |
| Power-frequency withstand voltage | 2.21 kV |
| Insulation resistance, neighboring positions | > 0.2 TΩ |

Thermal tests (C)

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

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Technical data

Climatic tests (D)

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

Standards and Regulations

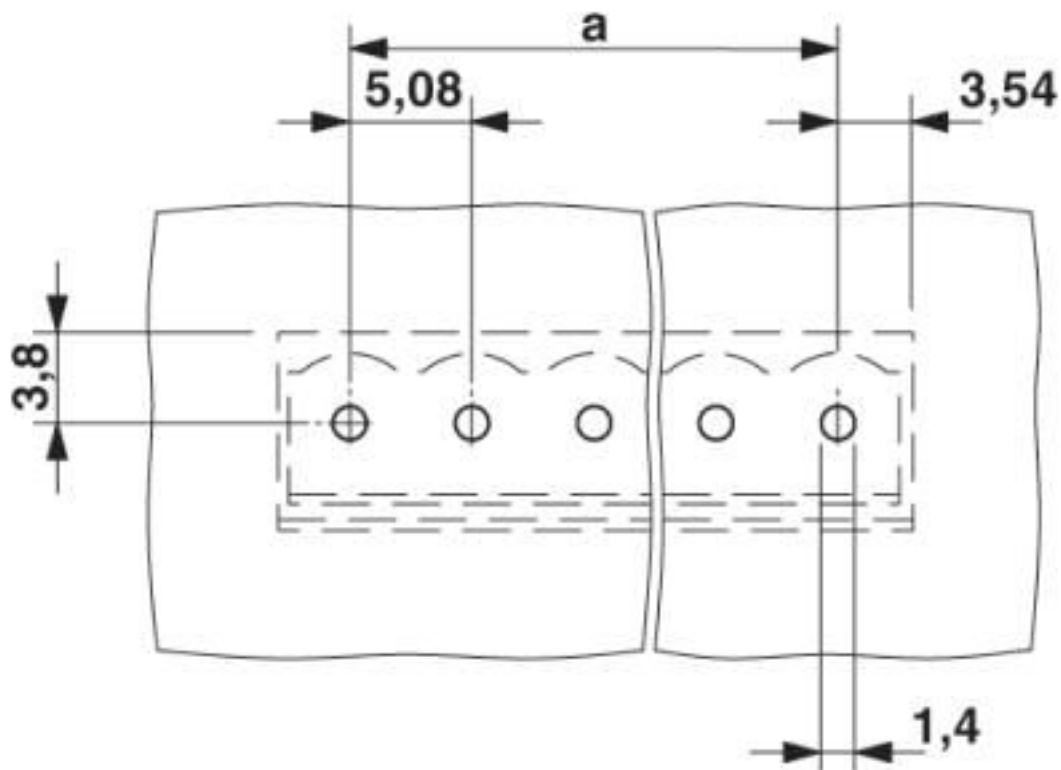
| | |
|--|--------|
| Connection in acc. with standard | EN-VDE |
| | CSA |
| Flammability rating according to UL 94 | V0 |

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

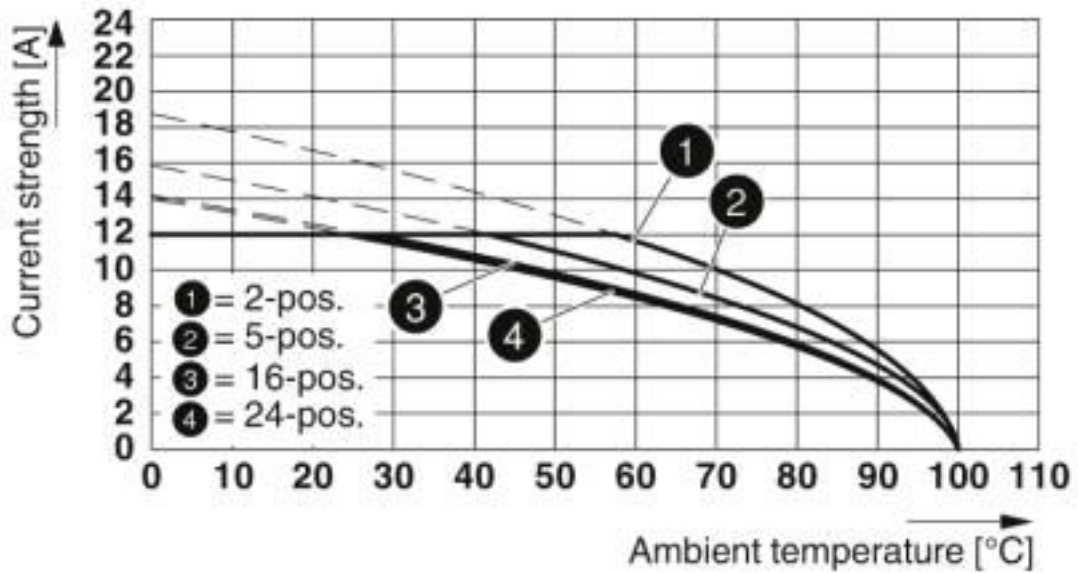
Drawings

Drilling diagram



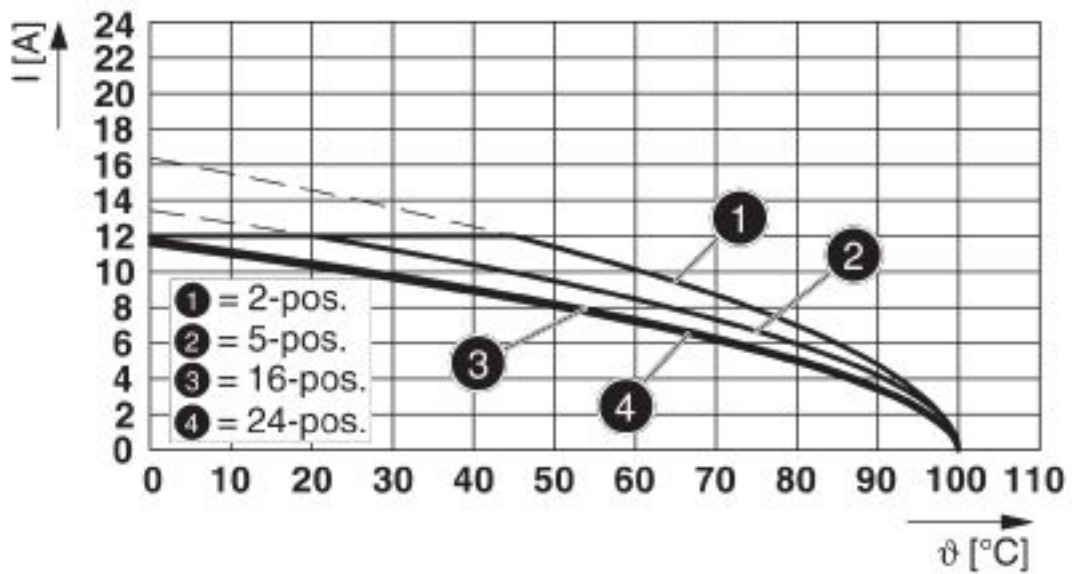
Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Diagram



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

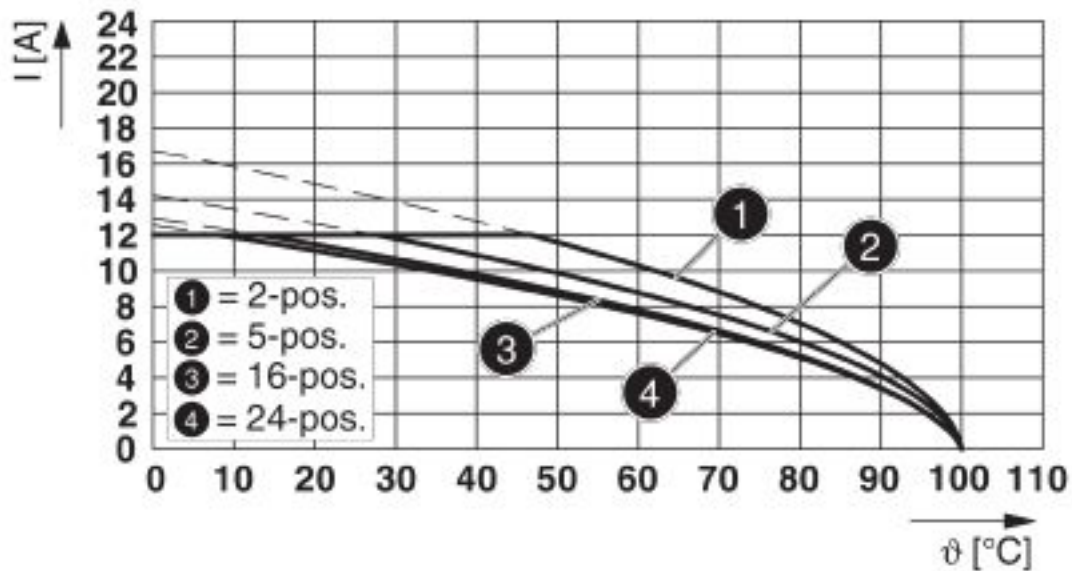
Diagram



Type: MVSTB(R/W) 2,5/...-ST-5,08 with MSTBVA 2,5/...-G-5,08

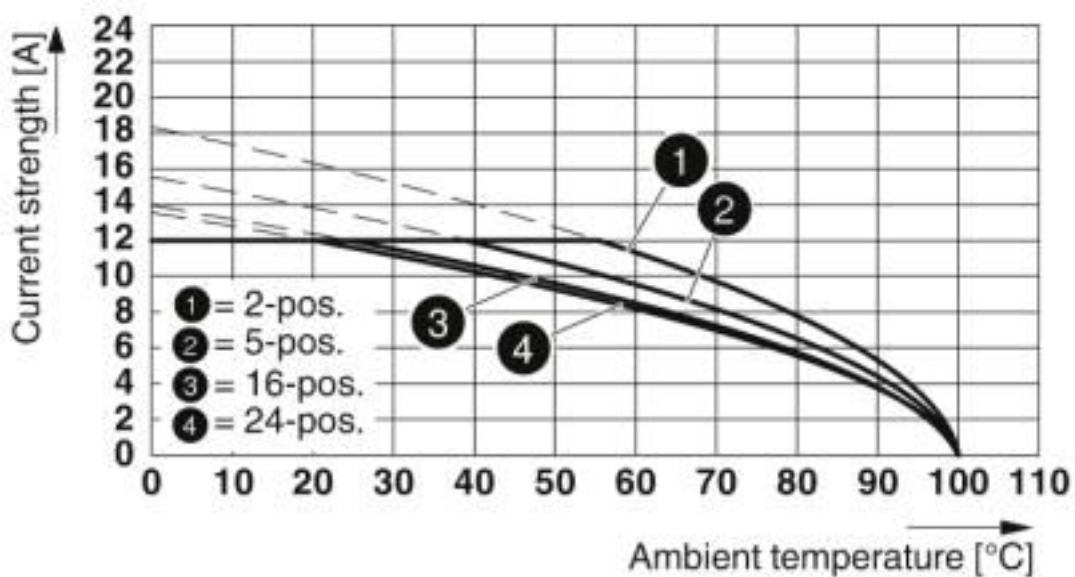
Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Diagram



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

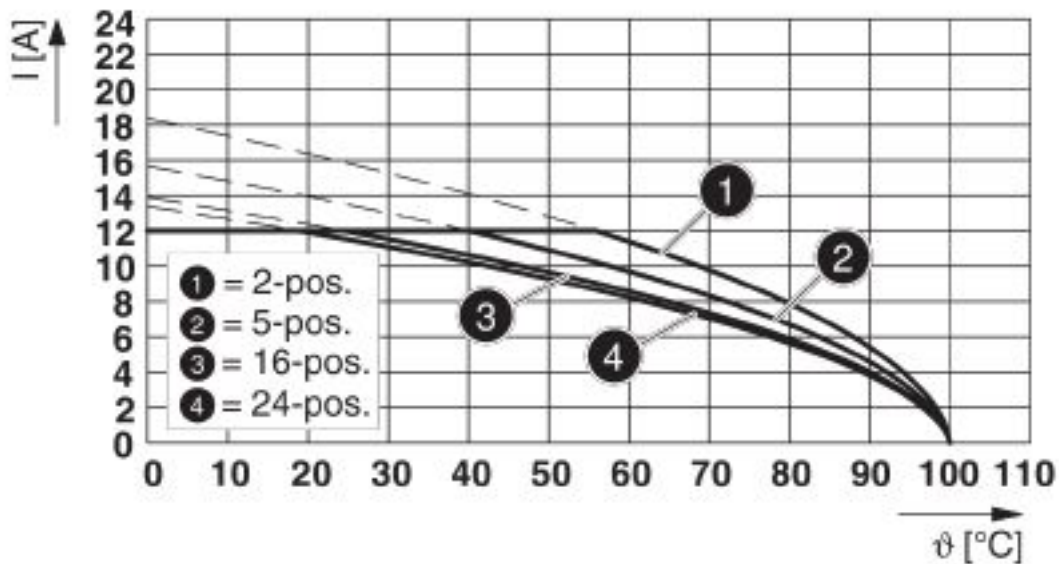
Diagram



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

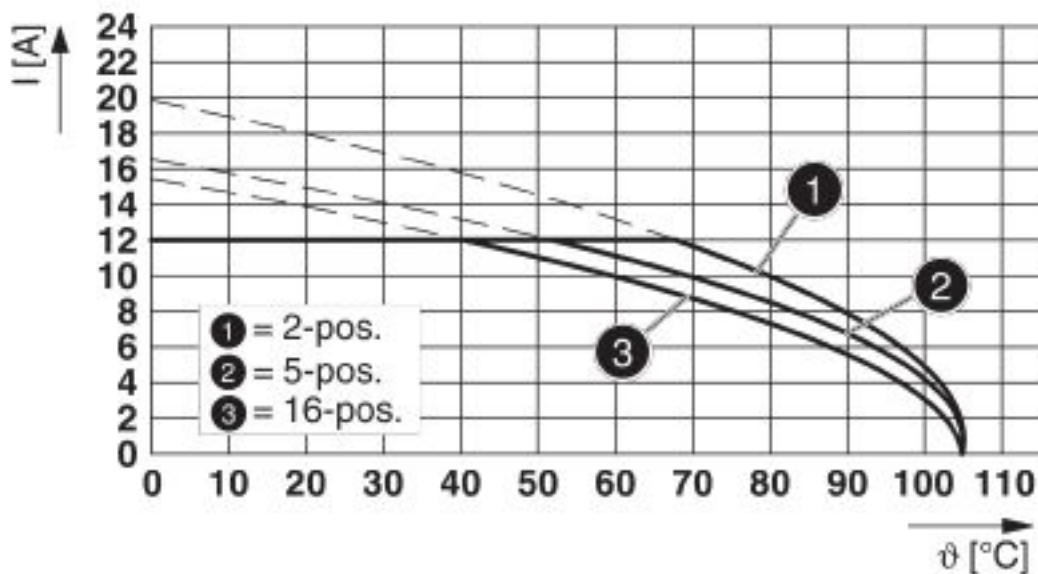
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Diagram



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

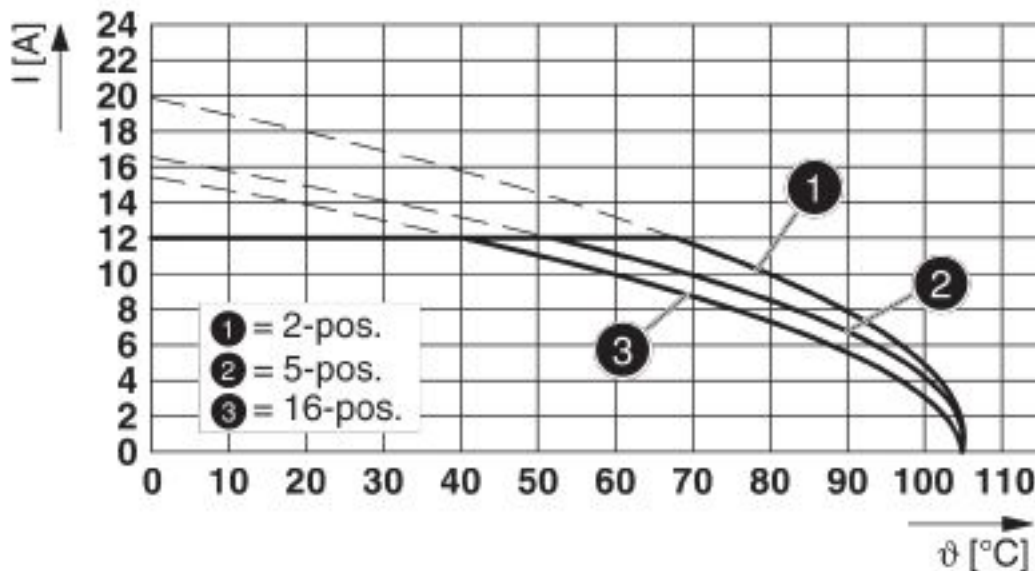
Diagram



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

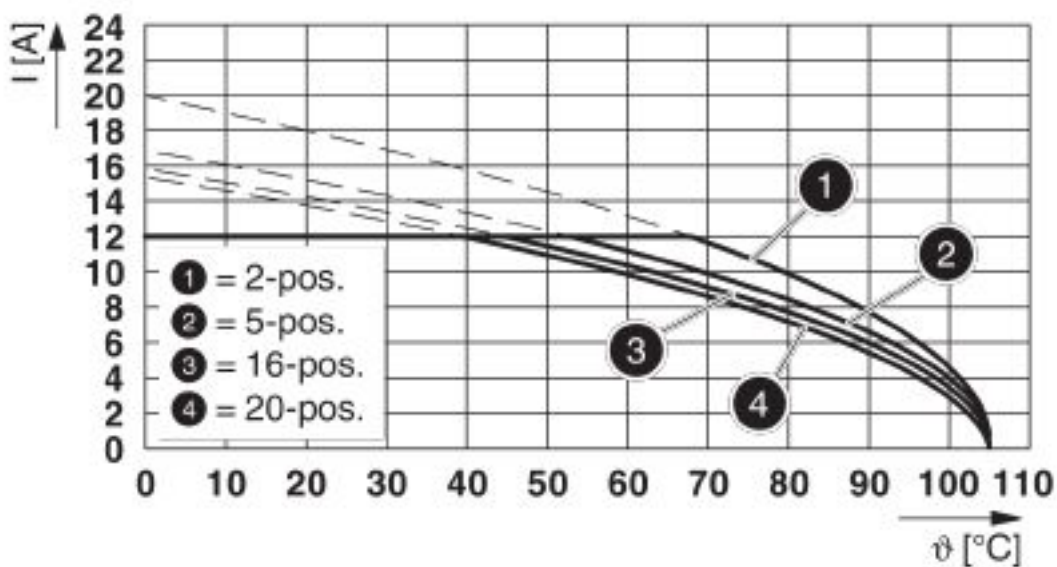
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Diagram



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

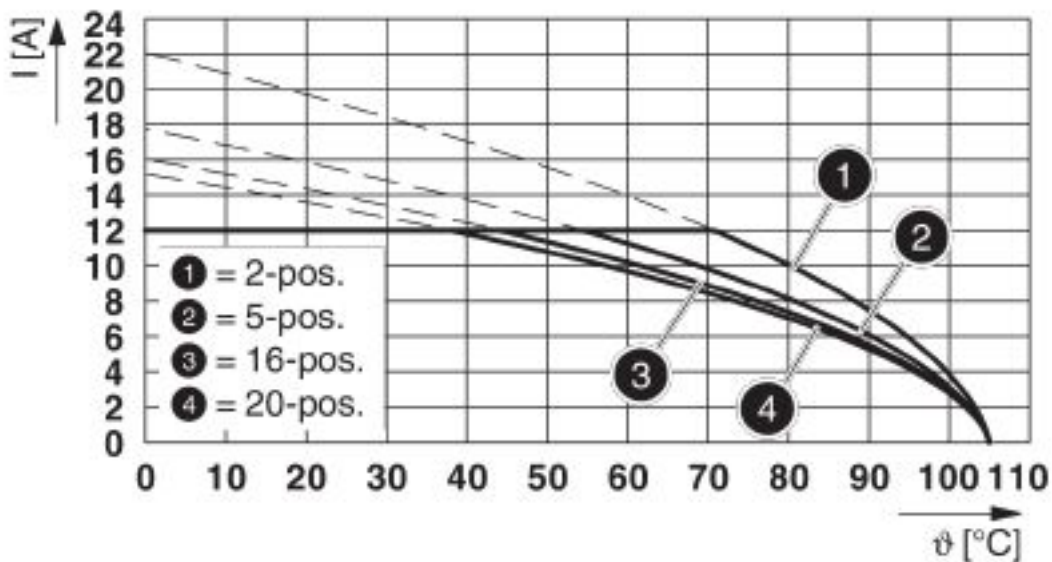
Diagram



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

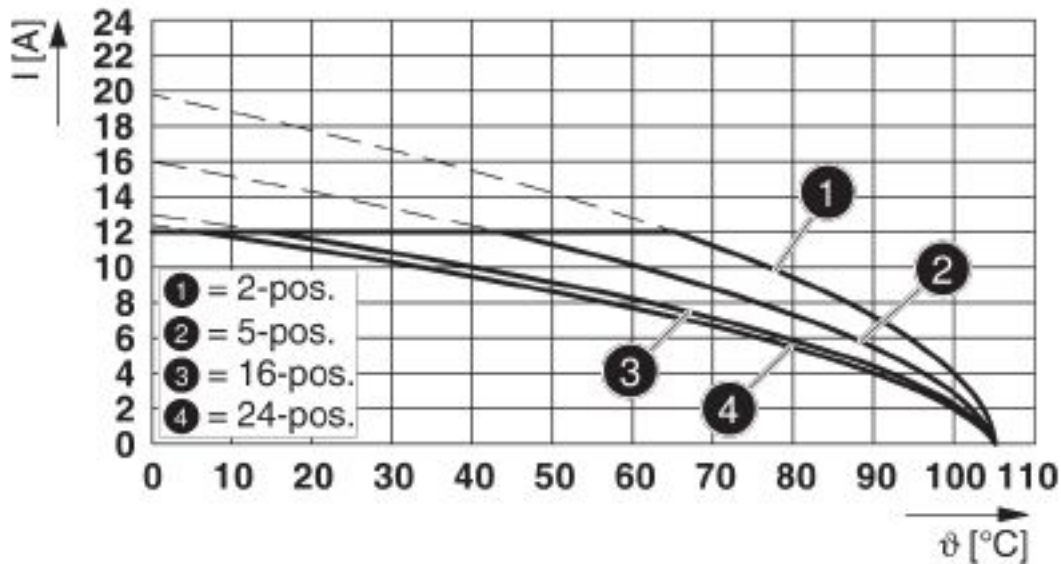
Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Diagram



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

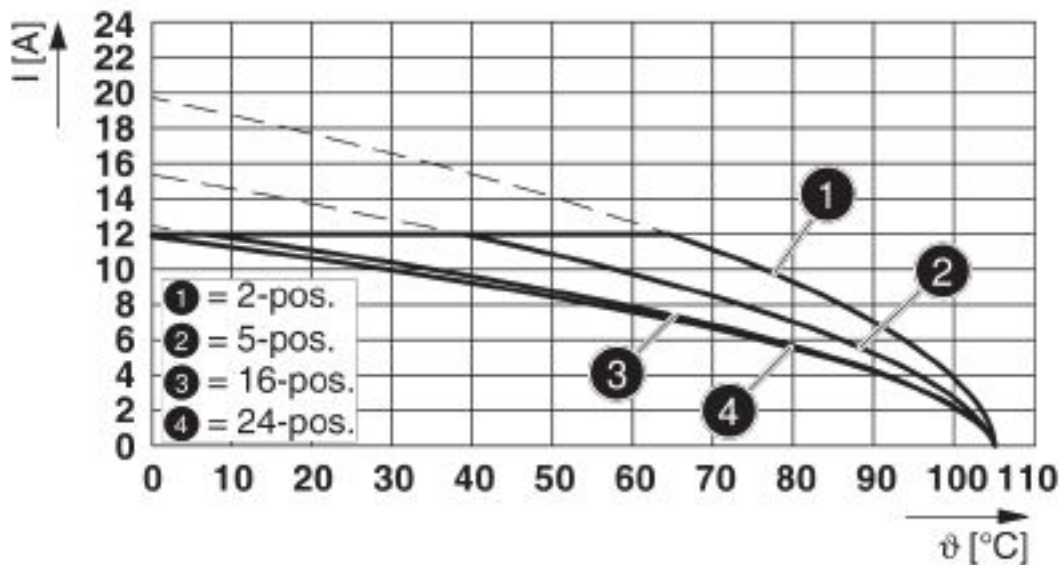
Diagram



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

Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Diagram



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

Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27440402 |
| 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 | 27440402 |
| eCl@ss 8.0 | 27440402 |
| eCl@ss 9.0 | 27440402 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001121 |
| ETIM 4.0 | EC002637 |
| ETIM 5.0 | EC002637 |
| ETIM 6.0 | EC002637 |
| ETIM 7.0 | EC002637 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30211810 |
| UNSPSC 7.0901 | 39121409 |
| UNSPSC 11 | 39121409 |
| UNSPSC 12.01 | 39121409 |

Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Classifications

UNSPSC

| | |
|-------------|----------|
| 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 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 | 12 A | 10 A | |

| | | | |
|--------------------|---|---|----------------|
| IECEE CB Scheme |  | http://www.iecee.org/ | DE1-60988-B1B2 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 12 A | | |

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

| | | | |
|--------------------|---|---|-----------------|
| cULus Recognized |  | http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm | E60425-19931011 |
| | B | D | |
| Nominal voltage UN | 300 V | 300 V | |

Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Approvals

| | | |
|--------------------|------|------|
| | B | D |
| Nominal current IN | 12 A | 10 A |

| | | | |
|------------------------|-------|---|----------|
| VDE Zeichengenehmigung | | http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx | 40050648 |
| Nominal voltage UN | 250 V | | |
| Nominal current IN | 12 A | | |

Accessories

Accessories

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

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

Additional products

Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Accessories

Printed-circuit board connector - MSTB 2,5/20-ST-5,08 - 1757190

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - MSTBP 2,5/20-ST-5,08 - 1769191

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - FRONT-MSTB 2,5/20-ST-5,08 - 1777468

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Front screw connection, color: green, contact surface: Tin



Printed-circuit board connector - MVSTBR 2,5/20-ST-5,08 - 1792427

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - MVSTBW 2,5/20-ST-5,08 - 1792935

PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin



Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Accessories

Printed-circuit board connector - MSTBC 2,5/20-ST-5,08 - 1808997



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, 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

Printed-circuit board connector - MSTBC 2,5/20-STZ-5,08 - 1809682



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, 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

Printed-circuit board connector - MSTBU 2,5/20-STD-5,08 - 1824308



Direct plug-in block, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

Printed-circuit board connector - MSTBU 2,5/20-ST-5,08-FL - 1824531



Direct plug-in block, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin, mounting: Direct mounting

Printed-circuit board connector - SMSTB 2,5/20-ST-5,08 - 1850592



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

Printed-circuit board connector - MSTBVA 2,5/20-G-5,08 - 1755914

Accessories

Printed-circuit board connector - FKCT 2,5/20-ST-5,08 - 1902291



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

Printed-circuit board connector - FKCS 2,5/20-ST-5,08 - 1975257



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 20, pitch: 5.08 mm, connection method: Push-in spring connection, color: green, contact surface: Tin

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