

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



1809255

<https://www.phoenixcontact.com/us/products/1809255>

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PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Socket, number of potentials: 23, number of rows: 1, number of positions: 23, number of connections: 23, product range: MSTBC 2,5/...-STZ-RF, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Snap-in locking, mounting: Self-locking flange, type of packaging: packed in cardboard, Corresponding female crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] 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

## Your advantages

- Inexpensive connection of large quantities of preassembled conductors
- Pull-out aid facilitates handling and allows the tensile force to be reduced at the contact point
- Intuitive locking mechanism prevents accidental disconnection

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1809255                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Product key                          | AACCEE                         |
| GTIN                                 | 4017918115135                  |
| Weight per piece (including packing) | 17 g                           |
| Weight per piece (excluding packing) | 16.3 g                         |
| Country of origin                    | PL                             |

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



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## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | PCB connector         |
| Product family        | MSTBC 2,5/...-STZ-RF  |
| Product line          | COMBICON Connectors M |
| Type                  | Standard              |
| Number of positions   | 23                    |
| Pitch                 | 5.08 mm               |
| Number of connections | 23                    |
| Number of rows        | 1                     |
| Number of potentials  | 23                    |
| Mounting flange       | Self-locking flange   |

### Electrical properties

|                             |       |
|-----------------------------|-------|
| Nominal current $I_N$       | 12 A  |
| Nominal voltage $U_N$       | 320 V |
| Rated voltage (III/3)       | 320 V |
| Rated surge voltage (III/3) | 4 kV  |
| Rated voltage (III/2)       | 320 V |
| Rated surge voltage (III/2) | 4 kV  |
| Rated voltage (II/2)        | 630 V |
| Rated surge voltage (II/2)  | 4 kV  |

### Connection data

#### Connection technology

|                         |                     |
|-------------------------|---------------------|
| Connector system        | COMBICON MSTB 2,5   |
| Nominal cross section   | 2.5 mm <sup>2</sup> |
| Contact connection type | Socket              |

#### Interlock

|                 |                     |
|-----------------|---------------------|
| Locking type    | Snap-in locking     |
| Mounting flange | Self-locking flange |

#### Conductor connection

|                                    |                                             |
|------------------------------------|---------------------------------------------|
| Connection method                  | Crimp connection                            |
| Conductor/PCB connection direction | 0 °                                         |
| Conductor cross section flexible   | 0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG        | 20 ... 14                                   |

### Material specifications

#### Material data - housing

|                 |              |
|-----------------|--------------|
| Color (Housing) | green (6021) |
|-----------------|--------------|

# MSTBC 2,5/23-STZ-5,08-R - PCB connector

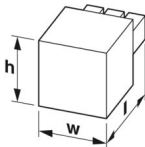


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|                                                                   |        |
|-------------------------------------------------------------------|--------|
| Insulating material                                               | PA     |
| Insulating 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

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch               | 5.08 mm                                                                            |
| Width [w]           | 127.27 mm                                                                          |
| Height [h]          | 10.5 mm                                                                            |
| Length [l]          | 25 mm                                                                              |

## Notes

|                    |                                                                                                                                                                                          |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | 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. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 100 °C (dependent on the derating curve) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Relative humidity (storage/transport)   | 30 % ... 70 %                                       |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |

## Electrical tests

### Air clearances and creepage distances |

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 320 V               |
| Rated surge voltage (III/3)                            | 4 kV                |
| minimum clearance value - non-homogenous field (III/3) | 3 mm                |
| minimum creepage distance (III/3)                      | 4 mm                |
| Rated insulation voltage (III/2)                       | 320 V               |
| Rated surge voltage (III/2)                            | 4 kV                |

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|                                                        |        |
|--------------------------------------------------------|--------|
| minimum clearance value - non-homogenous field (III/2) | 3 mm   |
| minimum creepage distance (III/2)                      | 3 mm   |
| Rated insulation voltage (II/2)                        | 630 V  |
| Rated surge voltage (II/2)                             | 4 kV   |
| minimum clearance value - non-homogenous field (II/2)  | 3 mm   |
| minimum creepage distance (II/2)                       | 3.2 mm |

## Packaging specifications

|                   |                     |
|-------------------|---------------------|
| Type of packaging | packed in cardboard |
|-------------------|---------------------|

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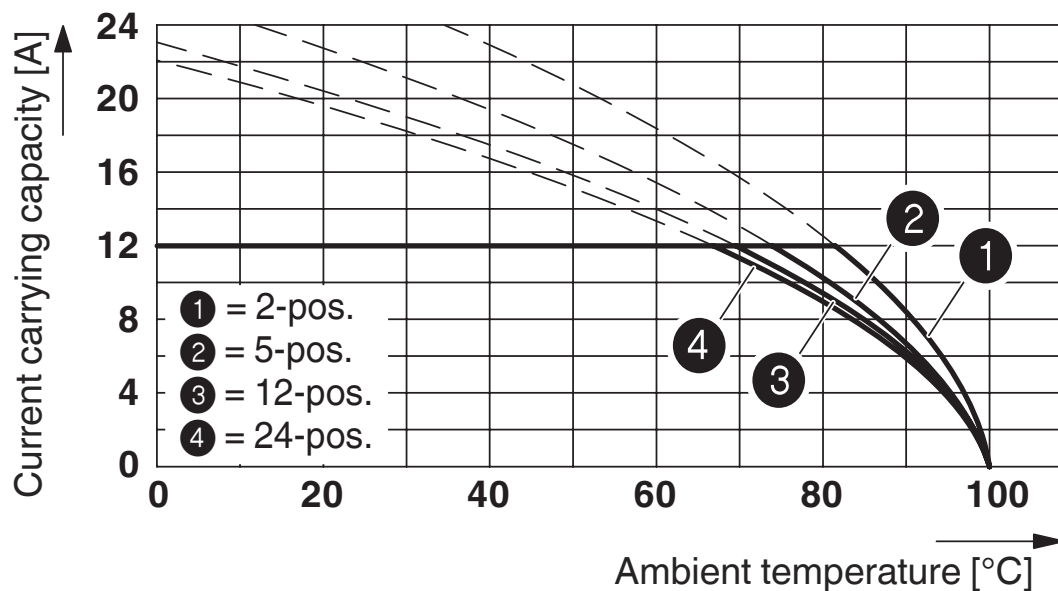


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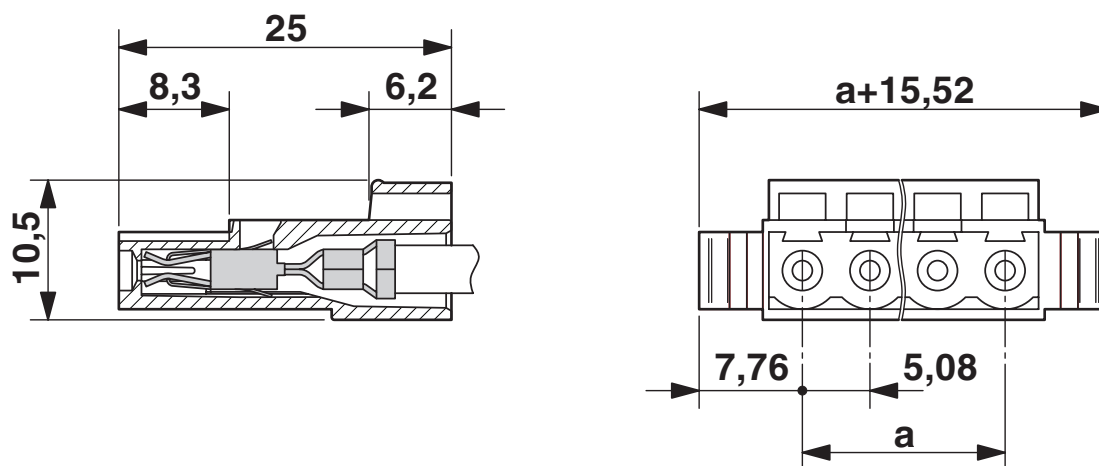
## Drawings

Diagram



Type: MSTBC 2,5/...-ST-5,08 with MSTBA 2,5/...-G-5,08; contact: MSTBC-MT 1,5 - 2,5

Dimensional drawing



# MSTBC 2,5/23-STZ-5,08-R - PCB connector



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1809255>

|                                                                                                                                                       |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>cULus Recognized</b><br/>Approval ID: E60425-19930525</div> |                       |                       |                   |                             |
|                                                                                                                                                       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| Use group B                                                                                                                                           |                       |                       |                   |                             |
|                                                                                                                                                       | 300 V                 | 10 A                  | 20 - 14           | -                           |
| Use group D                                                                                                                                           |                       |                       |                   |                             |
|                                                                                                                                                       | 300 V                 | 10 A                  | 20 - 14           | -                           |

|                                                                                                                                                      |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <div> <b>VDE Zeichengenehmigung</b><br/>Approval ID: 40050648</div> |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27460202 |
| ECLASS-12.0 | 27460202 |
| ECLASS-13.0 | 27460202 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002638 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121400 |
|-------------|----------|

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



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## Environmental product compliance

|                                         |                                          |
|-----------------------------------------|------------------------------------------|
| EU RoHS                                 |                                          |
| Fulfills EU RoHS substance requirements | Yes, No exemptions                       |
| China RoHS                              |                                          |
| Environment friendly use period (EFUP)  | EFUP-E                                   |
|                                         | No hazardous substances above the limits |
| EU REACH SVHC                           |                                          |
| REACH candidate substance (CAS No.)     | No substance above 0.1 wt%               |

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



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## Accessories

### MSTBC-MT 0,5-1,0 - Crimp contact

3190564

<https://www.phoenixcontact.com/us/products/3190564>



Module female contact, is inserted into the plug housing MSTBC after crimping the conductor, for conductors from 0.5 to 1.0 mm<sup>2</sup>

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### MSTBC-MT 0,5-1,0 BA - Crimp contact

3190645

<https://www.phoenixcontact.com/us/products/3190645>



Module female contact, is inserted into the MSTBC connector shell after the conductor has been crimped, for conductors from 0.5 - 1.0 mm<sup>2</sup>, ribbon contact

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



1809255

<https://www.phoenixcontact.com/us/products/1809255>

## MSTBC-MT 1,5-2,5 - Crimp contact

3190551

<https://www.phoenixcontact.com/us/products/3190551>



Module female contact, is inserted into the plug housing MSTBC after crimping the conductor, for conductors from 1.5 to 2.5 mm<sup>2</sup>

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## MSTBC-MT 1,5-2,5 BA - Crimp contact

3190658

<https://www.phoenixcontact.com/us/products/3190658>



Module female contact, is inserted into the MSTBC connector shell after the conductor has been crimped, for conductors from 1.5 - 2.5 mm<sup>2</sup>, ribbon contact

## MSTBC 2,5/23-STZ-5,08-R - PCB connector

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## CRIMPFOX MT 2,5 - Crimping pliers

1204038

<https://www.phoenixcontact.com/us/products/1204038>



Crimping pliers, for crimping conductors to the module female contacts STG-MTN, crimp range: 0.5-2.5 mm<sup>2</sup>, AWG: 20-14

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## SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/us/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

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<https://www.phoenixcontact.com/us/products/1809255>

## STZ 2-MSTBC-5,08 - Strain relief

1810529

<https://www.phoenixcontact.com/us/products/1810529>



Strain relief for snapping into the latching chambers of the plug components, 2-pos., labeling with ZB 6

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## STZ 4-MSTBC-5,08 - Strain relief

1810532

<https://www.phoenixcontact.com/us/products/1810532>



Strain relief for snapping into the latching chambers of the plug components, 4-pos., labeling with ZB 6

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



1809255

<https://www.phoenixcontact.com/us/products/1809255>

## STZ 8-MSTBC-5,08 - Strain relief

1810516

<https://www.phoenixcontact.com/us/products/1810516>



Strain relief for snapping into the latching chambers of the plug components, 8-pos., labeling with ZB 6

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## STZ 12-MSTBC-5,08 - Strain relief

1810503

<https://www.phoenixcontact.com/us/products/1810503>



Strain relief for snapping into the latching chambers of the plug components, 12-pos., labeling with ZB 6

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



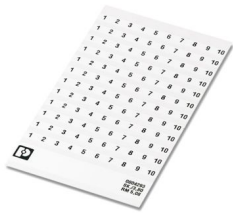
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<https://www.phoenixcontact.com/us/products/1809255>

## SK 5,08/3,8:FORTL.ZAHLEN - Marker card

0804293

<https://www.phoenixcontact.com/us/products/0804293>



Marker 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

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## CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/us/products/1734634>



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

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## MSTBC-MT 0,2-0,5 - Crimp contact

1879531

<https://www.phoenixcontact.com/us/products/1879531>



Module socket contact, is inserted into the plug housing MSTBC after crimping the conductor, for conductors from 0.2 to 0.5 mm<sup>2</sup>

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## MSTBC-MT 0,2-0,5 BAND - Crimp contact

1879544

<https://www.phoenixcontact.com/us/products/1879544>



Module socket contact, is inserted into the plug housing MSTBC after crimping the conductor, for conductors from 0.2 to 0.5 mm<sup>2</sup>

# MSTBC 2,5/23-STZ-5,08-R - PCB connector



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## ICC 2,5/23-STZ-5,08 - PCB connector

1824052

<https://www.phoenixcontact.com/us/products/1824052>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact connection type: Pin, number of potentials: 23, number of rows: 1, number of positions: 23, number of connections: 23, product range: ICC 2,5/...-STZ, pitch: 5.08 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, locking clip: - without locking clip, plug-in system: COMBICON MSTB 2,5, locking: Snap-in locking, mounting: Engagement nose, type of packaging: packed in cardboard, Corresponding male crimp contacts with current [A] and conductor cross section range [mm<sup>2</sup>] data: 10A/ICC-MT 0,5-1,0 (3190577); 10A/ICC-MT 0,5-1,0 BA (3190603); 12A/ICC-MT 1,5-2,5 (3190580); 12A/ICC-MT 1,5-2,5 BA (3190593). BA = Bandkontakte

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