

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



PCB TWIN plug, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Sn, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 12, product range: TMSTBP 2,5/...-ST, pitch: 5.08 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting method: without, type of packaging: packed in cardboard, The plug allows conductors to be looped through from module to module.

## Your advantages

- Well-known connection principle allows worldwide use
- Potentials can be easily looped through – ideal for BUS applications
- Quick and convenient testing using integrated test option
- Allows connection of two conductors

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1853052       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Sales key                            | AA03          |
| Product key                          | AACAGN        |
| GTIN                                 | 4017918109257 |
| Weight per piece (including packing) | 20.15 g       |
| Weight per piece (excluding packing) | 19.263 g      |
| Customs tariff number                | 85366990      |
| Country of origin                    | PL            |

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

## Technical data

### Product properties

|                       |                       |
|-----------------------|-----------------------|
| Product type          | PCB TWIN plug         |
| Product family        | TMSTBP 2,5/...-ST     |
| Product line          | COMBICON Connectors M |
| Type                  | Bus plug component    |
| Number of positions   | 6                     |
| Pitch                 | 5.08 mm               |
| Number of connections | 12                    |
| Number of rows        | 1                     |
| Number of potentials  | 6                     |
| Mounting type         | without               |

### Electrical properties

#### Properties

|                             |        |
|-----------------------------|--------|
| Nominal current $I_N$       | 12 A   |
| Nominal voltage $U_N$       | 320 V  |
| Contact resistance          | 1.2 mΩ |
| Rated voltage (III/3)       | 250 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

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

#### Interlock

|               |         |
|---------------|---------|
| Locking type  | without |
| Mounting type | without |

#### Conductor connection

|                                    |                                             |
|------------------------------------|---------------------------------------------|
| Connection method                  | Screw connection with tension sleeve        |
| Conductor/PCB connection direction | 0 °                                         |
| Conductor cross-section rigid      | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section flexible   | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section AWG        | 24 ... 12                                   |

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

|                                                                                           |                          |
|-------------------------------------------------------------------------------------------|--------------------------|
| 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 2.0 mm / 2.4 mm |
| Stripping length                                                                          | 7 mm                     |
| Drive form screw head                                                                     | Slotted (L)              |
| Tightening torque                                                                         | 0.5 Nm ... 0.6 Nm        |

## Specifications for ferrules without insulating collar

|                           |                    |
|---------------------------|--------------------|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
|---------------------------|--------------------|

## Specifications for ferrules with insulating collar

|                           |                    |
|---------------------------|--------------------|
| recommended crimping tool | 1212034 CRIMPFOX 6 |
|---------------------------|--------------------|

## Material specifications

### 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

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

## Dimensions

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch               | 5.08 mm                                                                            |
| Width [w]           | 32.48 mm                                                                           |
| Height [h]          | 28.9 mm                                                                            |
| Length [l]          | 21.5 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. |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Mechanical tests

### Test for conductor damage and slackening

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
| Result        | Test passed         |

### Pull-out test

|                                                                             |                                         |
|-----------------------------------------------------------------------------|-----------------------------------------|
| Specification                                                               | IEC 60999-1:1999-11                     |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | 0.2 mm <sup>2</sup> / solid / > 10 N    |
|                                                                             | 0.2 mm <sup>2</sup> / flexible / > 10 N |
|                                                                             | 2.5 mm <sup>2</sup> / solid / > 50 N    |
|                                                                             | 2.5 mm <sup>2</sup> / flexible / > 50 N |

### Insertion and withdrawal forces

|                                     |                        |
|-------------------------------------|------------------------|
| Specification                       | IEC 60512-13-2:2006-02 |
| Result                              | Test passed            |
| No. of cycles                       | 25                     |
| Insertion strength per pos. approx. | 8 N                    |
| Withdraw strength per pos. approx.  | 6 N                    |

### Torque test

|               |                     |
|---------------|---------------------|
| Specification | IEC 60999-1:1999-11 |
|---------------|---------------------|

### Resistance of inscriptions

|               |                        |
|---------------|------------------------|
| Specification | IEC 60068-2-70:1995-12 |
| Result        | Test passed            |

### Polarization and coding

|               |                        |
|---------------|------------------------|
| Specification | IEC 60512-13-5:2006-02 |
| Result        | Test passed            |

### Visual inspection

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-1:2002-02 |
| Result        | Test passed           |

## Dimension check

|               |                       |
|---------------|-----------------------|
| Specification | IEC 60512-1-2:2002-02 |
| Result        | Test passed           |

## Environmental and real-life conditions

### Vibration test

|                        |                             |
|------------------------|-----------------------------|
| Specification          | IEC 60068-2-6:2007-12       |
| Frequency              | 10 - 150 - 10 Hz            |
| Sweep speed            | 1 octave/min                |
| Amplitude              | 0.35 mm (10 Hz ... 60.1 Hz) |
| Acceleration           | 5g (60.1 Hz ... 150 Hz)     |
| Test duration per axis | 2.5 h                       |
| Test directions        | X-, Y- and Z-axis           |

### Durability test

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level       | 4.8 kV                |
| Contact resistance $R_1$                     | 1.2 mΩ                |
| Contact resistance $R_2$                     | 1.2 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Climatic test

|                                   |                                                                           |
|-----------------------------------|---------------------------------------------------------------------------|
| Specification                     | ISO 6988:1985-02                                                          |
| Corrosive stress                  | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Thermal stress                    | 100 °C/168 h                                                              |
| Power-frequency withstand voltage | 2.21 kV                                                                   |

### 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

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 10                    |

### Insulation resistance

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-3-1:2002-02 |
| Insulation resistance, neighboring positions | > 5 MΩ                |

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

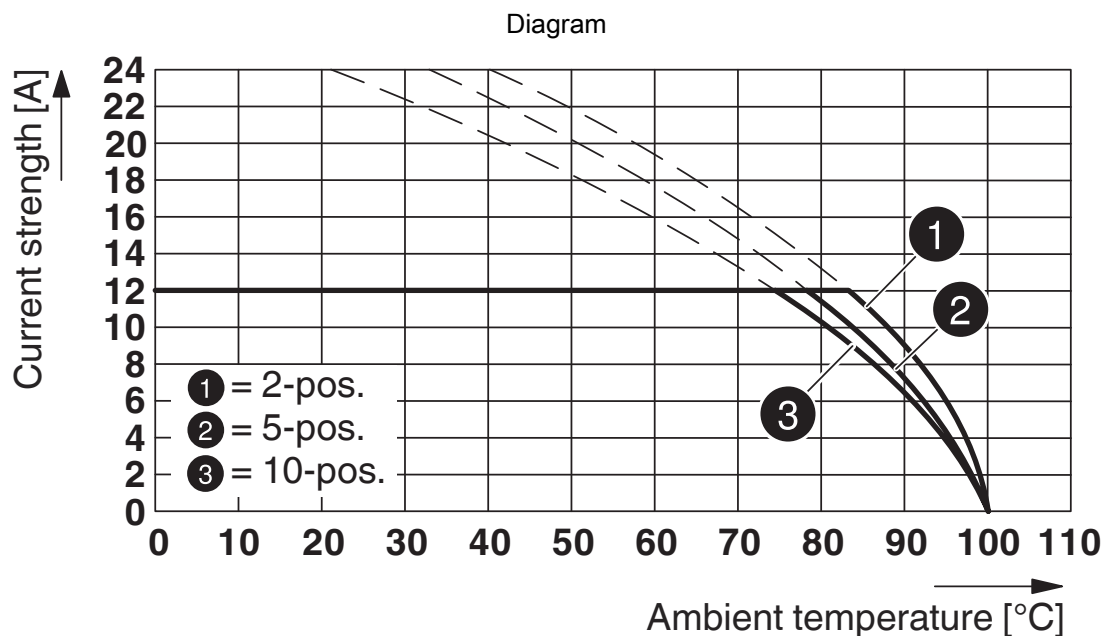
## Air clearances and creepage distances |

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Specification                                          | IEC 60664-1:2007-04 |
| Insulating material group                              | I                   |
| Comparative tracking index (IEC 60112)                 | CTI 600             |
| Rated insulation voltage (III/3)                       | 250 V               |
| Rated surge voltage (III/3)                            | 4 kV                |
| minimum clearance value - non-homogenous field (III/3) | 3 mm                |
| minimum creepage distance (III/3)                      | 3.2 mm              |
| Rated insulation voltage (III/2)                       | 320 V               |
| Rated surge voltage (III/2)                            | 4 kV                |
| 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              |

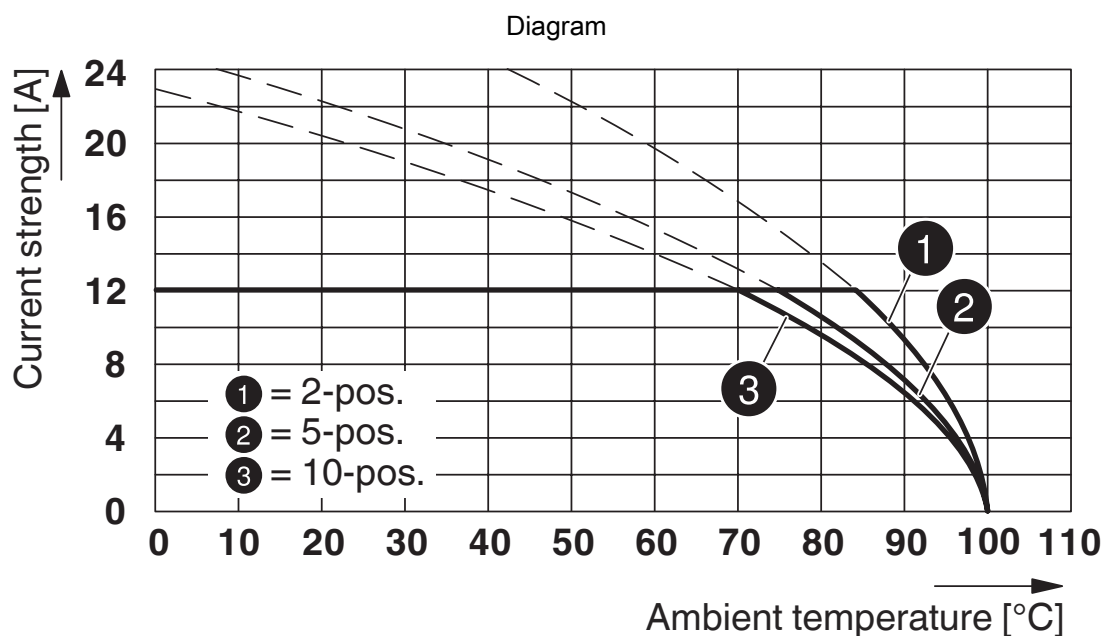
## Packaging specifications

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

## Drawings



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



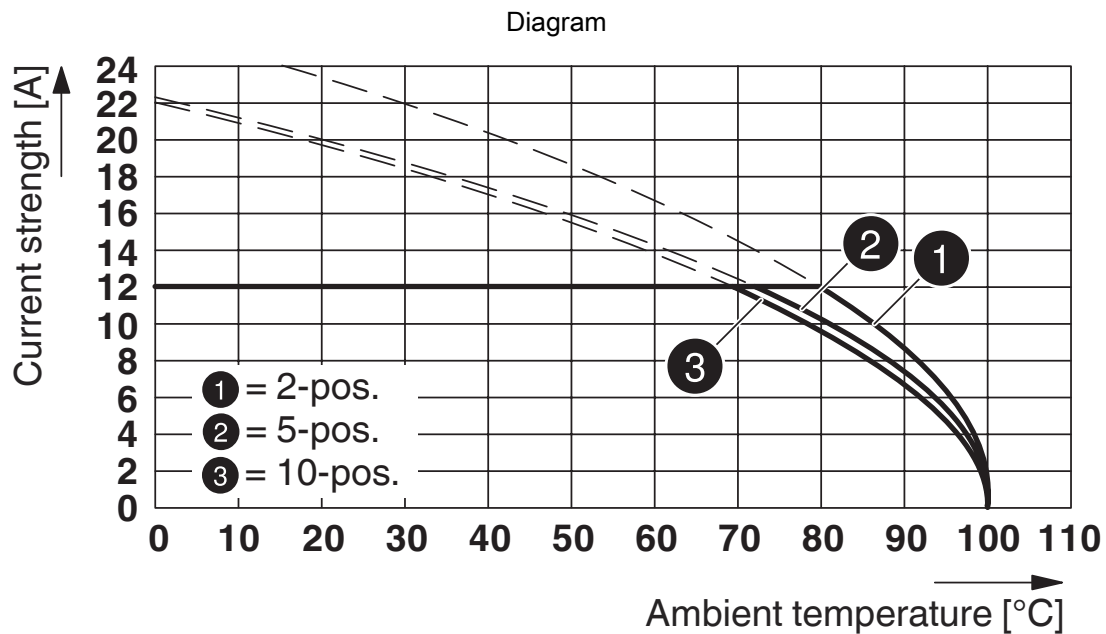
Type: TMSTBP 2,5/...-STF-5,08 with CC 2,5/...-G-5,08 P26THR

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector

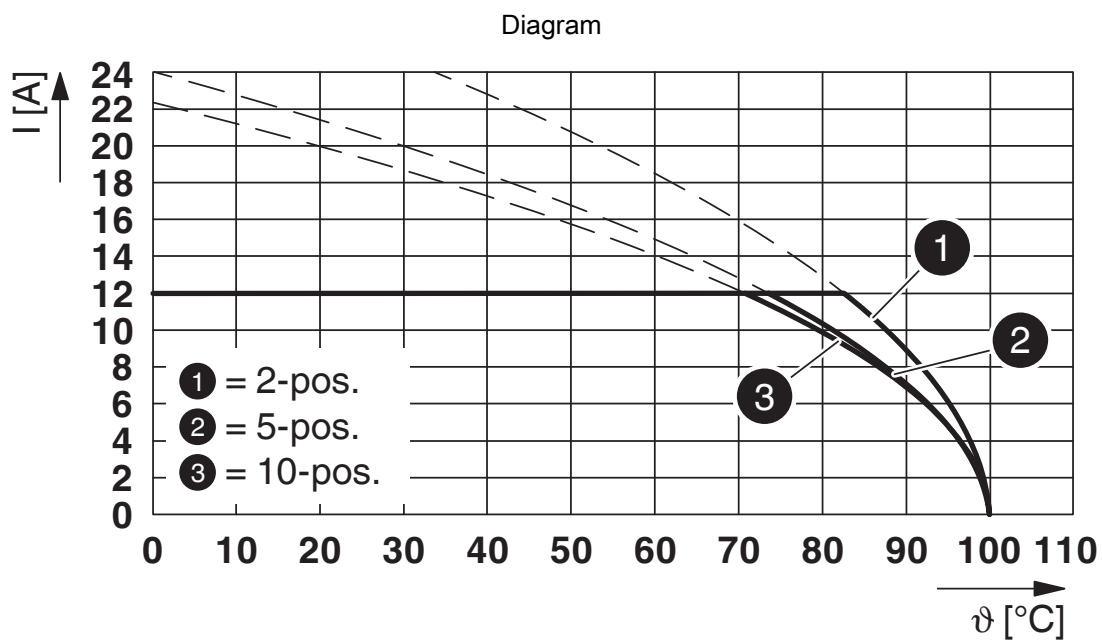


1853052

<https://www.phoenixcontact.com/us/products/1853052>



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



Type: TMSTBP 2,5/...-ST-5,08 with CCVA 2,5/...-G-5,08 P...THR

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1853052>

|  <b>cULus Recognized</b><br>Approval ID: E60425-19931011 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 300 V                 | 15 A                  | 30 - 12           | -                           |
| D                                                                                                                                         |                       |                       |                   |                             |
|                                                                                                                                           | 300 V                 | 10 A                  | 30 - 12           | -                           |

|  <b>VDE Zeichengenehmigung</b><br>Approval ID: 40050694 |                       |                       |                   |                             |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                          | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                    |                       |                       |                   |                             |
|                                                                                                                                          | 250 V                 | 12 A                  | -                 | 0.2 - 2.5                   |

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

## Classifications

### ECLASS

|                     |                      |
|---------------------|----------------------|
| ECLASS-13.0         | 27460202             |
| Filter und Facetten | Leiterplattenstecker |
| Filter und Facetten | Leiterplattenstecker |

### ETIM

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

### UNSPSC

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

# TMSTBP 2,5/ 6-ST-5,08 - PCB connector



1853052

<https://www.phoenixcontact.com/us/products/1853052>

## 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% |
|-------------------------------------|----------------------------|

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.177 kg CO2e |
|---------|---------------|

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)