

# SPC 5/ 3-STCL-7,62BD:SERD-L SO - PCB connector



1709286

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The figure shows a 5-pos. version of the product

PCB connector, nominal cross section: 6 mm<sup>2</sup>, color: green, nominal current: 32 A, rated voltage (III/2): 1000 V, contact surface: Sn, contact connection type: Socket, number of rows: 1, number of positions: 3, product range: SPC 5/...-STCL, pitch: 7.62 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, pin layout: Linear three-way pinning, locking clip: - without locking clip, plug-in system: COMBICON PC 5, locking: Clip locking, mounting method: Click & Lock latching slide, type of packaging: packed in cardboard

## Your advantages

- Time saving push-in connection, tools not required
- Defined contact force ensures that contact remains stable over the long term
- Clamping space opened by means of fixed screwdriver enables convenient conductor connection
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations
- Optimized for tight installation situations: operation and conductor connection from one direction
- The automatically locking Click and Lock system prevents accidental disconnection
- 600 V UL approval in the smallest of dimensions

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 1709286                        |
| Packing unit                         | 50 pc                          |
| Minimum order quantity               | 50 pc                          |
| Note                                 | Made to order (non-returnable) |
| Product key                          | AADFBF                         |
| GTIN                                 | 4055626079035                  |
| Weight per piece (including packing) | 16.36 g                        |
| Weight per piece (excluding packing) | 16.19 g                        |
| Country of origin                    | IN                             |

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## Technical data

### Product properties

|                     |                             |
|---------------------|-----------------------------|
| Product type        | PCB connector               |
| Product family      | SPC 5/...-STCL              |
| Product line        | COMBICON Connectors L       |
| Number of positions | 3                           |
| Pitch               | 7.62 mm                     |
| Number of rows      | 1                           |
| Mounting type       | Click & Lock latching slide |
| Pin layout          | Linear three-way pinning    |

### Electrical properties

#### Properties

|                             |                |
|-----------------------------|----------------|
| Nominal current $I_N$       | 32 A           |
| Nominal voltage $U_N$       | 1000 V         |
| Contact resistance          | 0.8 m $\Omega$ |
| Rated voltage (III/3)       | 1000 V         |
| Rated surge voltage (III/3) | 8 kV           |
| Rated voltage (III/2)       | 1000 V         |
| Rated surge voltage (III/2) | 8 kV           |
| Rated voltage (II/2)        | 1000 V         |
| Rated surge voltage (II/2)  | 6 kV           |

### Connection data

#### Connection technology

|                         |                   |
|-------------------------|-------------------|
| Type                    | Standard          |
| Connector system        | COMBICON PC 5     |
| Nominal cross section   | 6 mm <sup>2</sup> |
| Contact connection type | Socket            |

#### Interlock

|               |                             |
|---------------|-----------------------------|
| Locking type  | Clip locking                |
| Mounting type | Click & Lock latching slide |

#### Conductor connection

|   |  |
|---|--|
| Connection method   | Push-in spring connection                  |
| Conductor/PCB connection direction                                      | 0 °  |
| Conductor cross-section rigid   | 0.2 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross-section flexible  | 0.2 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross-section AWG   | 24 ... 8                                   |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 0.25 mm <sup>2</sup> ... 6 mm <sup>2</sup> |
| Conductor cross-section, flexible, with ferrule, with plastic sleeve    | 0.25 mm <sup>2</sup> ... 4 mm <sup>2</sup> |

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|   |  |
|---|--|
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Cylindrical gauge a x b / diameter  | 4.3 mm x 4.0 mm / 4.0 mm                     |
| Stripping length  | 15 mm  |

## Specifications for ferrules without insulating collar

|  |   |
|--|---|
| recommended crimping tool                                    | 1212034 CRIMPFOX 6  |
|  | 1213144 CRIMPFOX CENTRUS 6S                                   |
|  | 1213146 CRIMPFOX CENTRUS 6H                                   |
| ferrules without insulating collar, according to DIN 46228-1 | Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm  |
|  | Cross section: 0.75 mm <sup>2</sup> ; Length: 10 mm ... 15 mm |
|  | Cross section: 1 mm <sup>2</sup> ; Length: 10 mm ... 15 mm    |
|  | Cross section: 1.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|  | Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|  | Cross section: 4 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |
|  | Cross section: 6 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |

## Specifications for ferrules with insulating collar

|   |   |
|---|---|
| recommended crimping tool                                 | 1212034 CRIMPFOX 6  |
|   | 1213144 CRIMPFOX CENTRUS 6S                                   |
|   | 1213146 CRIMPFOX CENTRUS 6H                                   |
| ferrules with insulating collar, according to DIN 46228-4 | Cross section: 0.5 mm <sup>2</sup> ; Length: 10 mm ... 15 mm  |
|   | Cross section: 0.75 mm <sup>2</sup> ; Length: 12 mm ... 15 mm |
|   | Cross section: 1 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |
|   | Cross section: 1.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|   | Cross section: 2.5 mm <sup>2</sup> ; Length: 12 mm ... 15 mm  |
|   | Cross section: 4 mm <sup>2</sup> ; Length: 12 mm ... 15 mm    |

## 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 (4 µm - 8 µm Sn)   |
| Metal surface contact area (top layer)   | Tin (4 µm - 8 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          |

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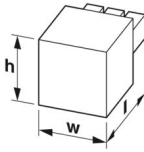
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|   |        |
|---|--------|
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |
|---|--------|

## Material data – actuating element

|  |               |
|--|---------------|
| Color (Actuating element)              | orange (2003) |
| Insulating material                    | PA            |
| Insulating material group              | I             |
| CTI according to IEC 60112             | 600           |
| Flammability rating according to UL 94 | V0            |

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Pitch               | 7.62 mm  |
| Width [w]           | 30.86 mm   |
| Height [h]          | 19.8 mm  |
| Length [l]          | 38.45 mm   |

## Mounting

|            |                          |
|------------|--------------------------|
| Pin layout | Linear three-way pinning |
|------------|--------------------------|

## 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

### Conductor connection

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

### Test for conductor damage and slackening

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

### Repeated connection and disconnection

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

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|  |                                       |
|--|---------------------------------------|
|  | 10 mm <sup>2</sup> / solid / > 90 N   |
|  | 6 mm <sup>2</sup> / flexible / > 80 N |

## Insertion and withdrawal forces

|                                     |                        |
|-------------------------------------|------------------------|
| Specification                       | IEC 60512-13-2:2006-02 |
| Result                              | Test passed            |
| No. of cycles                       | 50                     |
| Insertion strength per pos. approx. | 8 N                    |
| Withdraw strength per pos. approx.  | 6 N                    |

## 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

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

### Durability test

|  |                       |
|--|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Impulse withstand voltage at sea level       | 7.3 kV                |
| Contact resistance R <sub>1</sub>            | 0.8 mΩ                |
| Contact resistance R <sub>2</sub>            | 0.8 mΩ                |
| Insertion/withdrawal cycles                  | 50                    |
| 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 | 3.31 kV   |

### 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)     |

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|                        |                   |
|------------------------|-------------------|
| Test duration per axis | 2.5 h             |
| Test directions        | X-, Y- and Z-axis |

## Ambient conditions

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

## Electrical tests

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-1:2002-02 |
| Tested number of positions | 12                    |

### Insulation resistance

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

### Temperature cycles

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

### 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)                       | 1000 V              |
| Rated surge voltage (III/3)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/3) | 8 mm                |
| minimum creepage distance (III/3)                      | 12.5 mm             |
| Rated insulation voltage (III/2)                       | 1000 V              |
| Rated surge voltage (III/2)                            | 8 kV                |
| minimum clearance value - non-homogenous field (III/2) | 8 mm                |
| minimum creepage distance (III/2)                      | 8 mm                |
| Rated insulation voltage (II/2)                        | 1000 V              |
| Rated surge voltage (II/2)                             | 6 kV                |
| minimum clearance value - non-homogenous field (II/2)  | 5.5 mm              |
| minimum creepage distance (II/2)                       | 5.5 mm              |

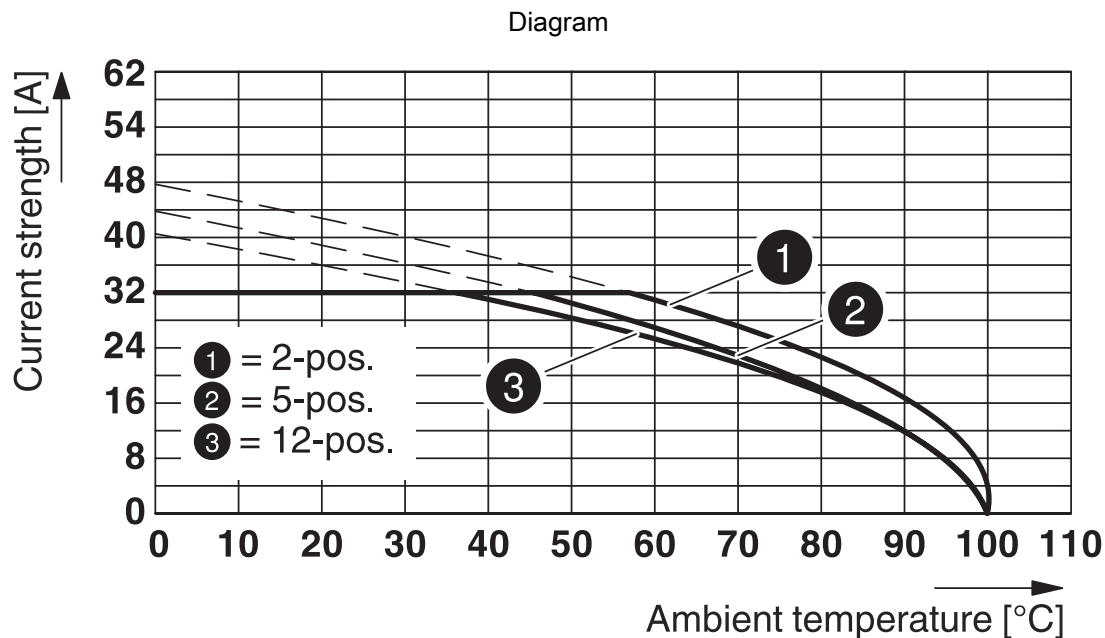
## Packaging specifications

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

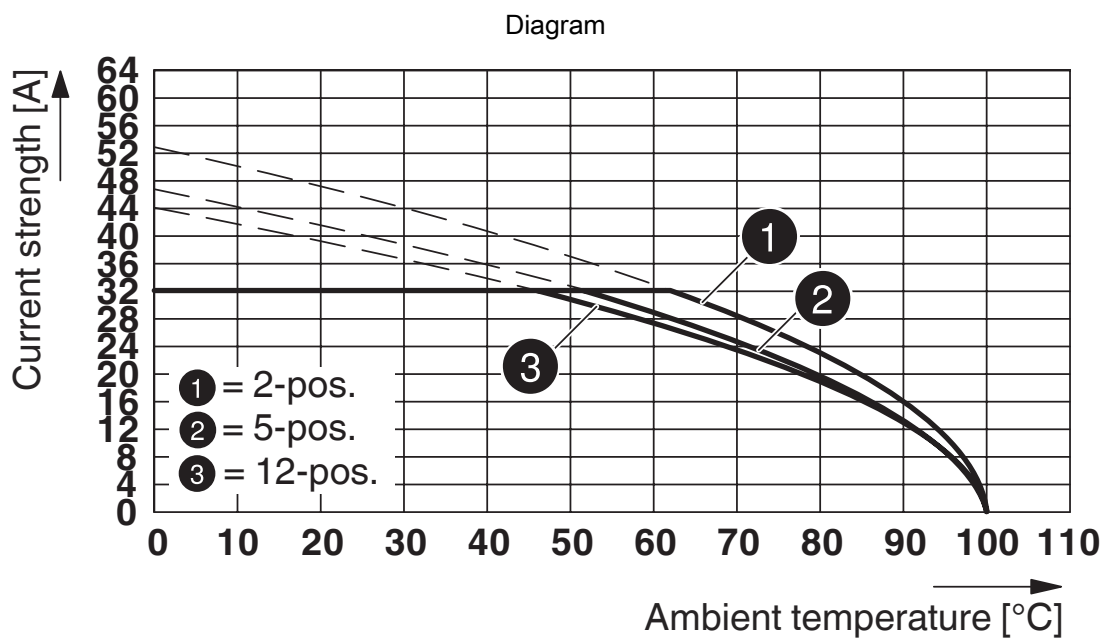
Drawings



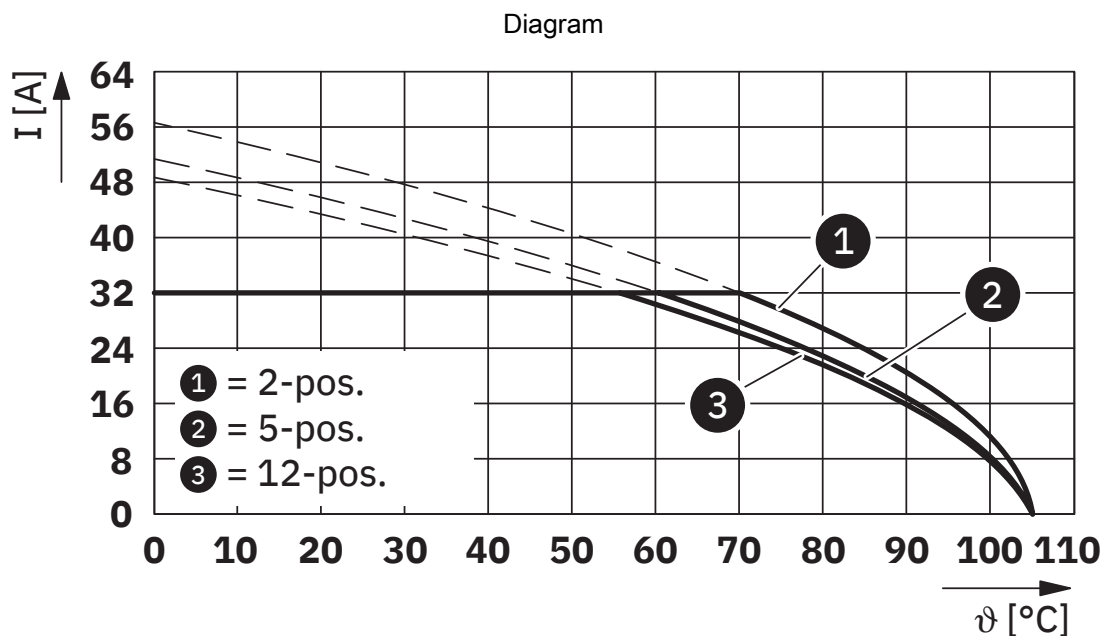
Click and Lock system method of operation



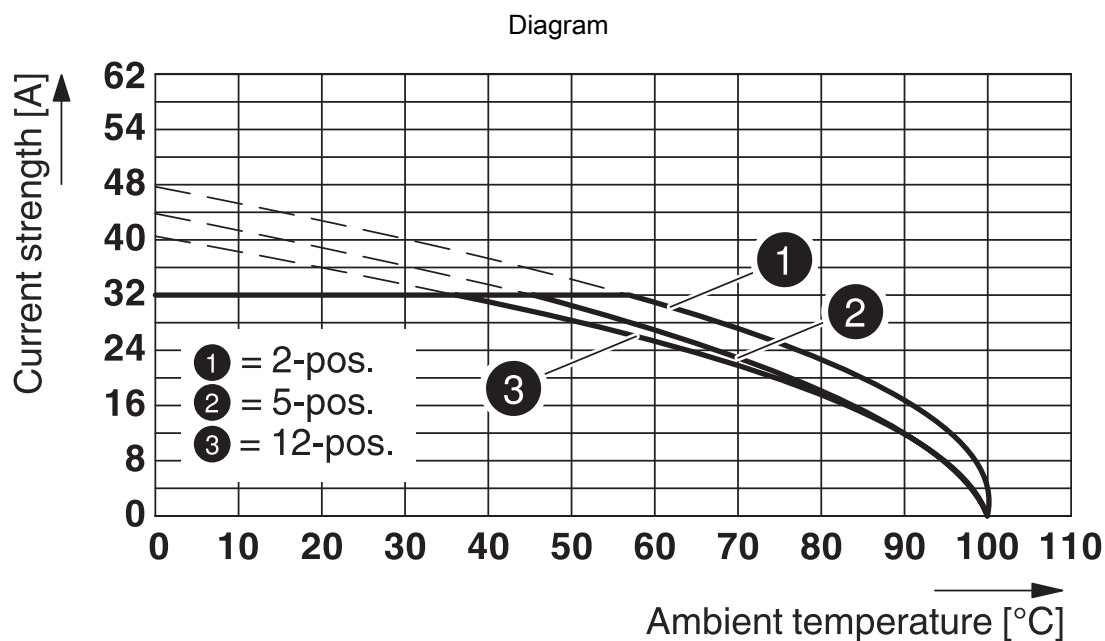
Type: SPC 5/...-STCL-7,62 with PC 5/...-GSF-7,62



Type: SPC 5/...-STCL-7,62 with ISPC 5/...-STGCL-7,62



Type: SPC 5/...-STCL-7,62 with IPC 5/...-STGCL-7,62



Type: SPC 5/...-STCL-7,62 with PC 5/...-GU-7,62

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1709286>

|  <b>cULus Recognized</b><br>Approval ID: E60425-19920722 |  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|---|--|-----------------------|-----------------------|-------------------|-----------------------------|
| B   |  | 600 V                 | 35 A                  | 24 - 8            | -                           |
| C   |  | 600 V                 | 35 A                  | 24 - 8            | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27460202 |
| ECLASS-15.0 | 27460202 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC002638 |
|-----------|----------|

### UNSPSC

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

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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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.141 kg CO2e |
|---------|---------------|

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