

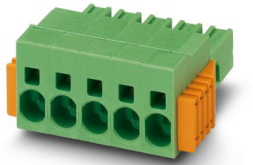
# SPC 5/ 3-STCL-7,62 SO - PCB connector



1705706

<https://www.phoenixcontact.com/us/products/1705706>

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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                          | 1705706       |
| Packing unit                         | 50 pc         |
| Minimum order quantity               | 50 pc         |
| Product key                          | AADFBF        |
| GTIN                                 | 4046356795524 |
| Weight per piece (including packing) | 16.154 g      |
| Weight per piece (excluding packing) | 16.154 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 mΩ |
| 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 mm² ... 1.5 mm²     |
| 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 mm²; Length: 10 mm ... 15 mm  |
|                                                              | Cross section: 0.75 mm²; Length: 10 mm ... 15 mm |
|                                                              | Cross section: 1 mm²; Length: 10 mm ... 15 mm    |
|                                                              | Cross section: 1.5 mm²; Length: 12 mm ... 15 mm  |
|                                                              | Cross section: 2.5 mm²; Length: 12 mm ... 15 mm  |
|                                                              | Cross section: 4 mm²; Length: 12 mm ... 15 mm    |
|                                                              | Cross section: 6 mm²; 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 mm²; Length: 10 mm ... 15 mm  |
|                                                           | Cross section: 0.75 mm²; Length: 12 mm ... 15 mm |
|                                                           | Cross section: 1 mm²; Length: 12 mm ... 15 mm    |
|                                                           | Cross section: 1.5 mm²; Length: 12 mm ... 15 mm  |
|                                                           | Cross section: 2.5 mm²; Length: 12 mm ... 15 mm  |
|                                                           | Cross section: 4 mm²; 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 - 8 µm Sn)                                                                |
| Metal surface contact area (top layer)   | Tin (4 - 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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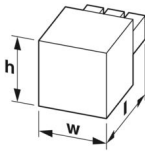
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|                                                                   |        |
|-------------------------------------------------------------------|--------|
| Temperature for the ball pressure test according to EN 60695-10-2 | 125 °C |
|-------------------------------------------------------------------|--------|

## 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

### 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       | 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 |

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|                                   |              |
|-----------------------------------|--------------|
| Thermal stress                    | 100 °C/168 h |
| Power-frequency withstand voltage | 3.31 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 | 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 |
|-------------------|---------------------|

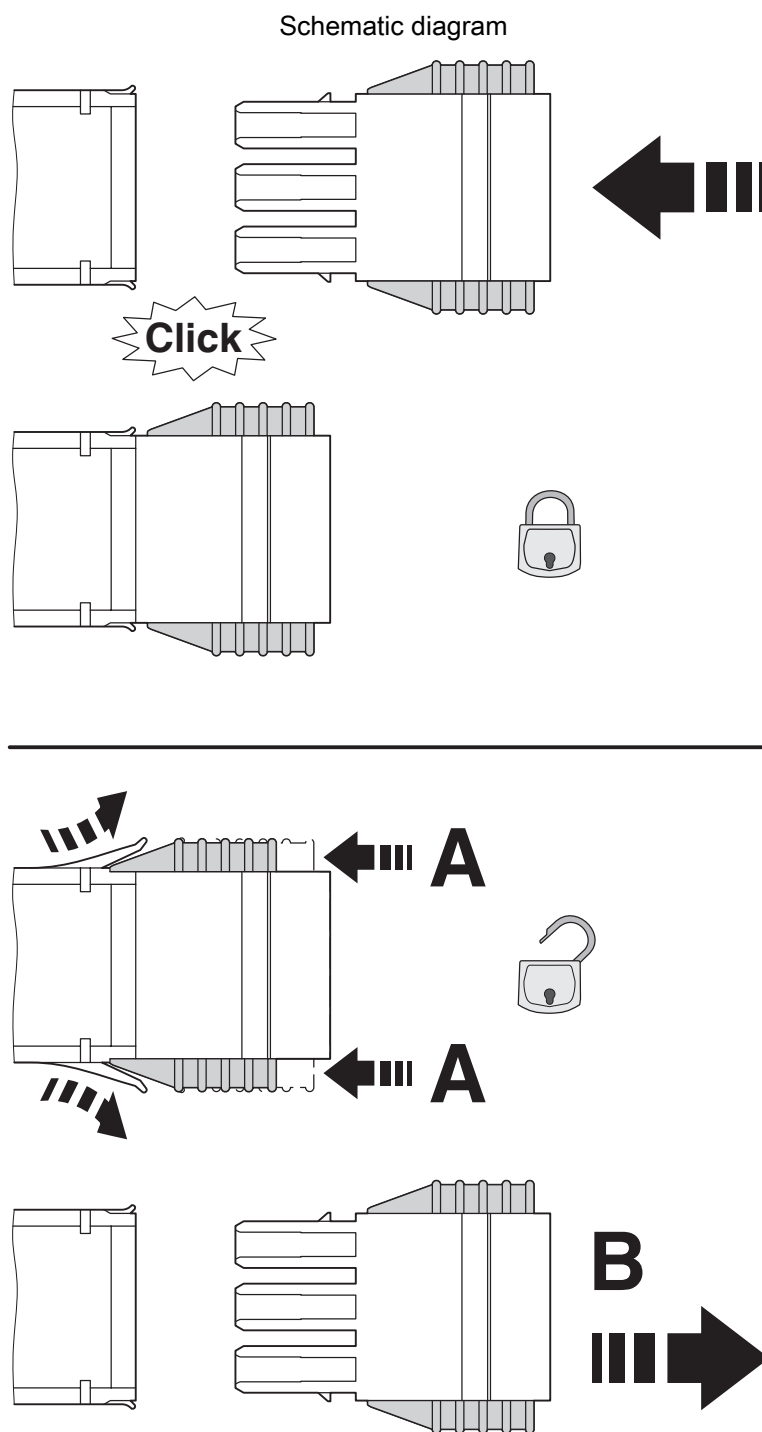
# SPC 5/ 3-STCL-7,62 SO - PCB connector

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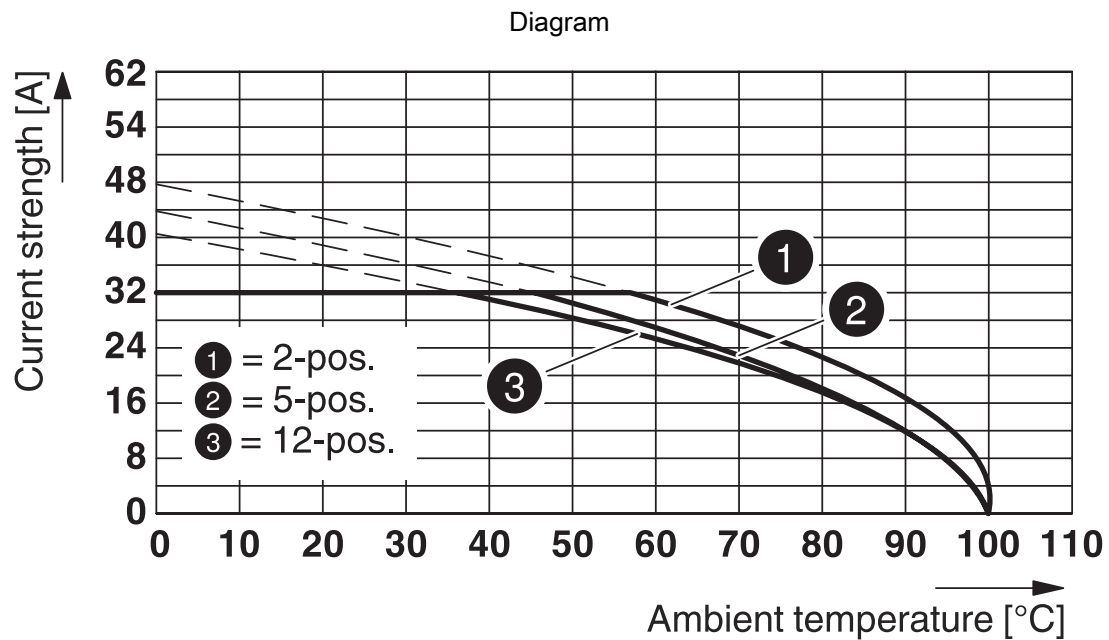
<https://www.phoenixcontact.com/us/products/1705706>



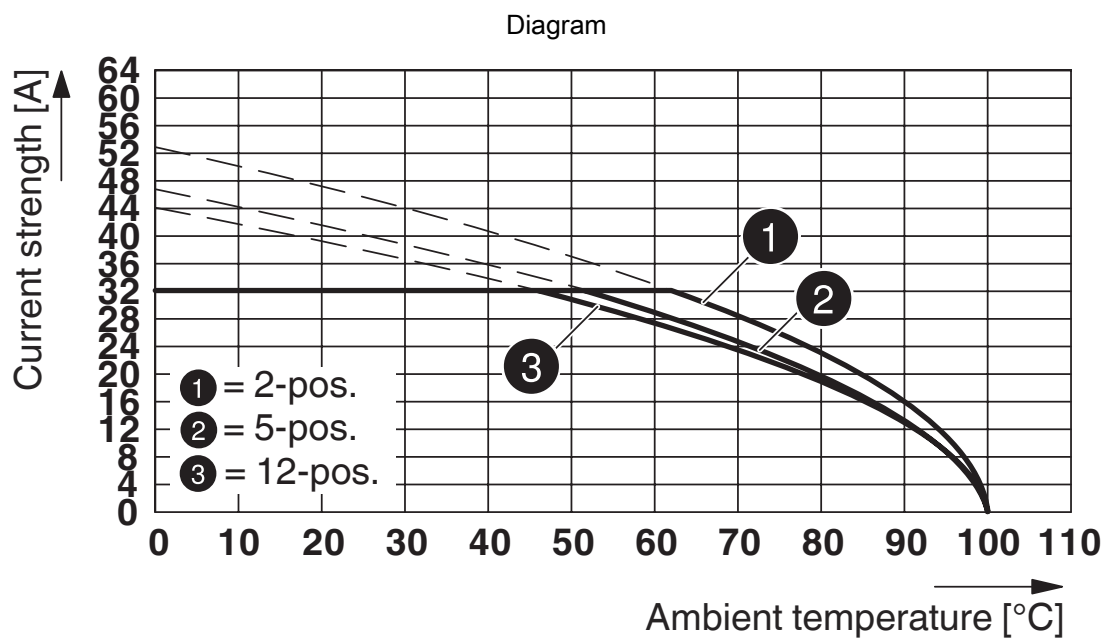
## Drawings



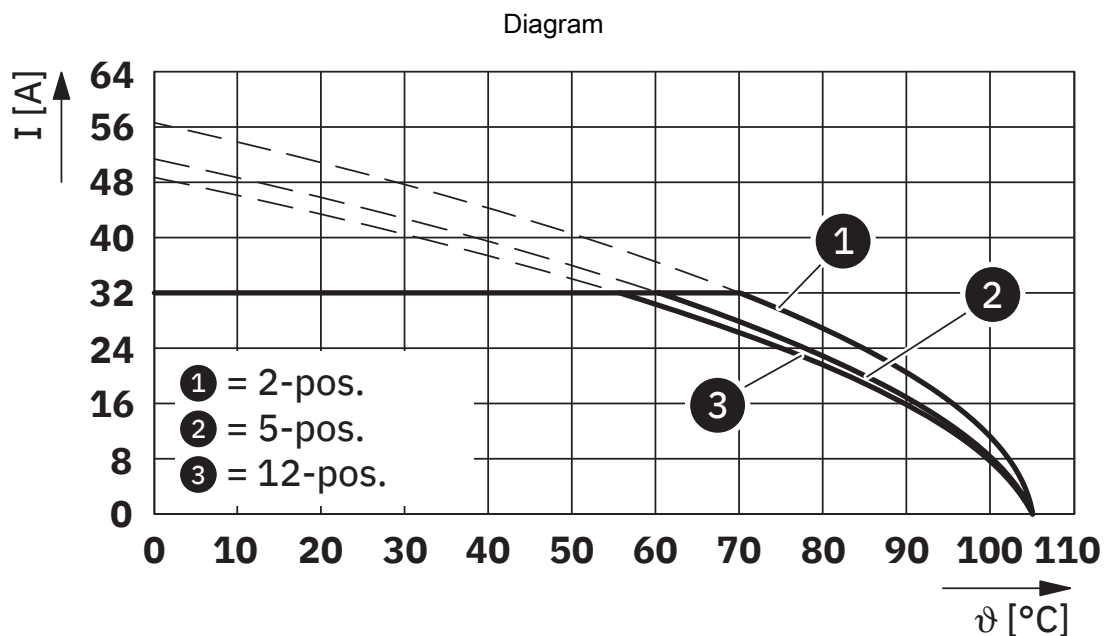
Click and Lock system method of operation



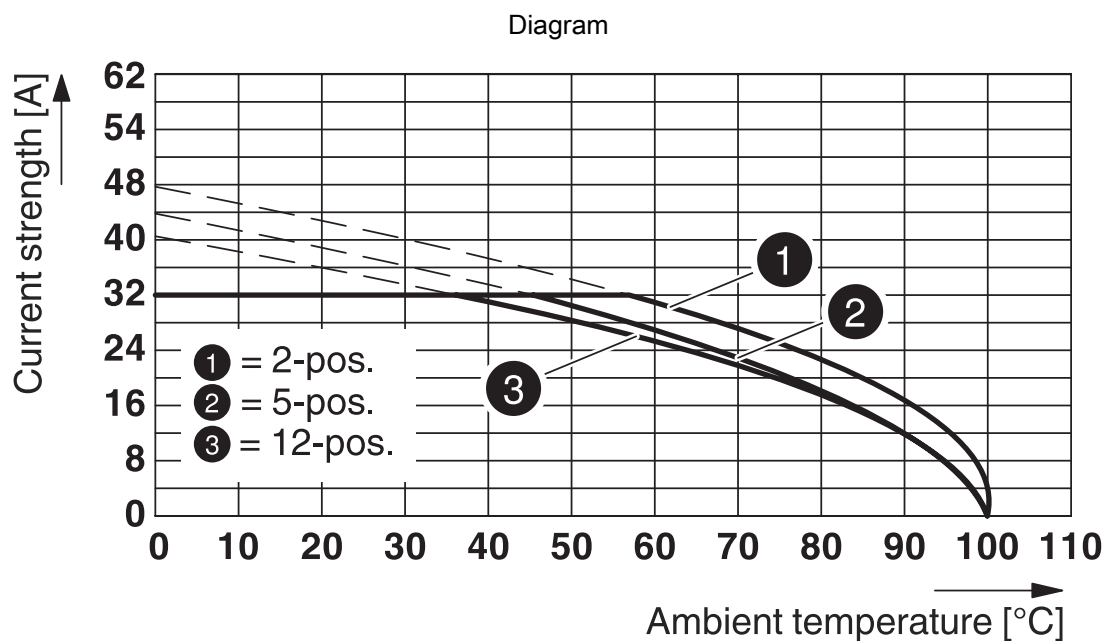
Type: SPC 5/...-STCL-7,62 with PC 5/...-GSF-7,62



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

# SPC 5/ 3-STCL-7,62 SO - PCB connector



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1705706>

|                                                                                                                                                       |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
| <div> <b>cULus Recognized</b><br/>Approval ID: E60425-19920722</div> |                       |                       |                   |                             |
|                                                                                                                                                       | 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            | -                           |

# SPC 5/ 3-STCL-7,62 SO - PCB connector



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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | 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% |
|-------------------------------------|----------------------------|

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