

# DMCC 0,5/ 2-ST-SHL 7,0-2,54 - PCB connector



1150807

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PCB connector, nominal cross section: 0.34 mm<sup>2</sup>, color: black, nominal current: 5 A, rated voltage (III/2): 160 V, contact surface: Au, contact connection type: Socket, number of rows: 2, number of positions: 2, product range: DMCC 0,5/..-ST-SHL, pitch: 2.54 mm, connection method: Crimp connection, conductor/PCB connection direction: 0 °, plug-in system: COMBICON DFMC 0,5 lock & shielded, Electrical properties: shielded, locking: shielded connection, mounting method: Lock & Shield, type of packaging: packed in cardboard, Suitable for CAT5

## Your advantages

- Cost-effective connection of crimped conductors in large quantities
- Gold-plated contacts ensure transfer quality remains stable over the long term
- Contacts arranged in a double row enable high packing density in a compact area
- Tools for manual and automatic crimping available as an option
- Satisfies CAT5 requirements in accordance with EN 50173 and ISO/IEC 11801

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1150807       |
| Packing unit                         | 100 pc        |
| Minimum order quantity               | 100 pc        |
| Sales key                            | AA01          |
| Product key                          | AAAILA        |
| GTIN                                 | 4063151148409 |
| Weight per piece (including packing) | 2.7 g         |
| Weight per piece (excluding packing) | 2.22 g        |
| Customs tariff number                | 85366990      |
| Country of origin                    | CN            |

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## Technical data

### Product properties

|                           |                        |
|---------------------------|------------------------|
| Product type              | PCB connector          |
| Product family            | DMCC 0,5/...-ST-SHL    |
| Product line              | COMBICON Connectors XS |
| Number of positions       | 2                      |
| Pitch                     | 2.54 mm                |
| Number of rows            | 2                      |
| Electrical characteristic | shielded               |

### Electrical properties

#### Properties

|                             |          |
|-----------------------------|----------|
| Nominal current $I_N$       | 5 A      |
| Nominal voltage $U_N$       | 160 V    |
| Contact resistance          | 5.2 mΩ   |
| Rated voltage (III/3)       | 160 V    |
| Rated surge voltage (III/3) | 2.5 kV   |
| Rated voltage (III/2)       | 160 V    |
| Rated surge voltage (III/2) | 2.5 kV   |
| Rated voltage (II/2)        | 320 V    |
| Rated surge voltage (II/2)  | 2.5 kV   |
| Electrical characteristic   | shielded |

#### Data transmission

|                                         |                  |
|-----------------------------------------|------------------|
| Signal type                             | EtherCAT®        |
| Frequency range                         | to 100 MHz       |
| Transmission medium                     | Copper           |
| Transmission characteristics (category) | CAT5 (IEC 11801) |
| Data transmission rate                  | 100 Mbps         |
| Power transmission                      | PoE+             |

### Connection data

#### Interlock

|               |                     |
|---------------|---------------------|
| Locking type  | shielded connection |
| Mounting type | Lock & Shield       |

#### Conductor connection

|                                    |                   |
|------------------------------------|-------------------|
| Connection method                  | Crimp connection  |
| Conductor/PCB connection direction | 0 °               |
| Conductor cross-section AWG        | 26 ... 22         |
| Stripping length                   | 4.1 mm ... 4.5 mm |

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## Material specifications

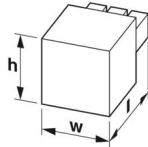
### Material data - contact

|                                        |           |
|----------------------------------------|-----------|
| Contact material                       | Cu alloy  |
| Metal surface contact area (top layer) | Gold (Au) |

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Color (Housing)                                                   | black (9005) |
| 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               | 2.54 mm                                                                              |
| Width [w]           | 7.14 mm                                                                              |
| Height [h]          | 7.85 mm                                                                              |
| Length [l]          | 33 mm                                                                                |

## Notes

|                     |                                                                                                                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note on application | The item is qualified for CAT5 Ethernet applications. For this reason, it is suited for use in IoT devices.                                                                                  |
| Note on application | All laboratory tests are performed in combination with the crimp contacts specified as accessories.                                                                                          |
| Note on application | The current depends on the crimp contact and conductor cross-section used.                                                                                                                   |
| Note on the contact | The information on the basic material and the finish properties of the crimp contacts is to be found in the E-Shop in the technical data for the respective crimp contact.                   |
| Note on application | The crimp contacts may only be processed with approved crimping tools.                                                                                                                       |
| Note on the contact | These connectors conform to DIN EN 61984, connectors without switching capacity (COC). When used for their intended purpose, they must not be plugged in or disconnected live or under load. |

## Mechanical tests

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## Tensile strength of crimp connections

|                                                                             |                            |
|-----------------------------------------------------------------------------|----------------------------|
| Result                                                                      | Test passed                |
| Conductor cross-section/conductor type/tractive force setpoint/actual value | AWG 22 / flexible / > 40 N |

## Insertion and withdrawal forces

|                                     |                        |
|-------------------------------------|------------------------|
| Specification                       | IEC 60512-13-2:2006-02 |
| Result                              | Test passed            |
| No. of cycles                       | 100                    |
| Insertion strength per pos. approx. | 2 N                    |
| Withdraw strength per pos. approx.  | 1 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           | 50 m/s <sup>2</sup> (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       | 2.95 kV               |
| Contact resistance R <sub>1</sub>            | 5.2 mΩ                |
| Contact resistance R <sub>2</sub>            | 4.6 mΩ                |
| Insertion/withdrawal cycles                  | 100                   |
| Insulation resistance, neighboring positions | > 5 MΩ                |

### Climatic test

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|                                   |                                                                           |
|-----------------------------------|---------------------------------------------------------------------------|
| 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                    | 80 °C/168 h                                                               |
| Power-frequency withstand voltage | 1.39 kV                                                                   |

## Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (operation)         | -55 °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 | 4                     |

### Insulation resistance

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

### 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)                       | 160 V               |
| Rated surge voltage (III/3)                            | 2.5 kV              |
| minimum clearance value - non-homogenous field (III/3) | 1.5 mm              |
| minimum creepage distance (III/3)                      | 2 mm                |
| Rated insulation voltage (III/2)                       | 160 V               |
| Rated surge voltage (III/2)                            | 2.5 kV              |
| minimum clearance value - non-homogenous field (III/2) | 1.5 mm              |
| minimum creepage distance (III/2)                      | 1.5 mm              |
| Rated insulation voltage (II/2)                        | 320 V               |
| Rated surge voltage (II/2)                             | 2.5 kV              |
| minimum clearance value - non-homogenous field (II/2)  | 1.5 mm              |
| minimum creepage distance (II/2)                       | 1.6 mm              |

## Packaging specifications

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

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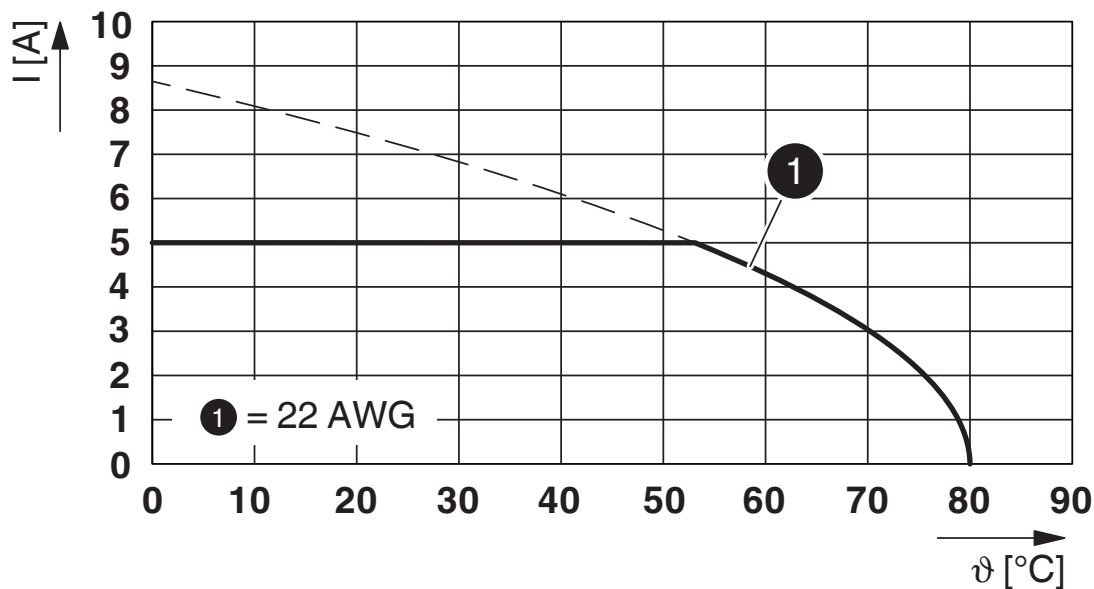


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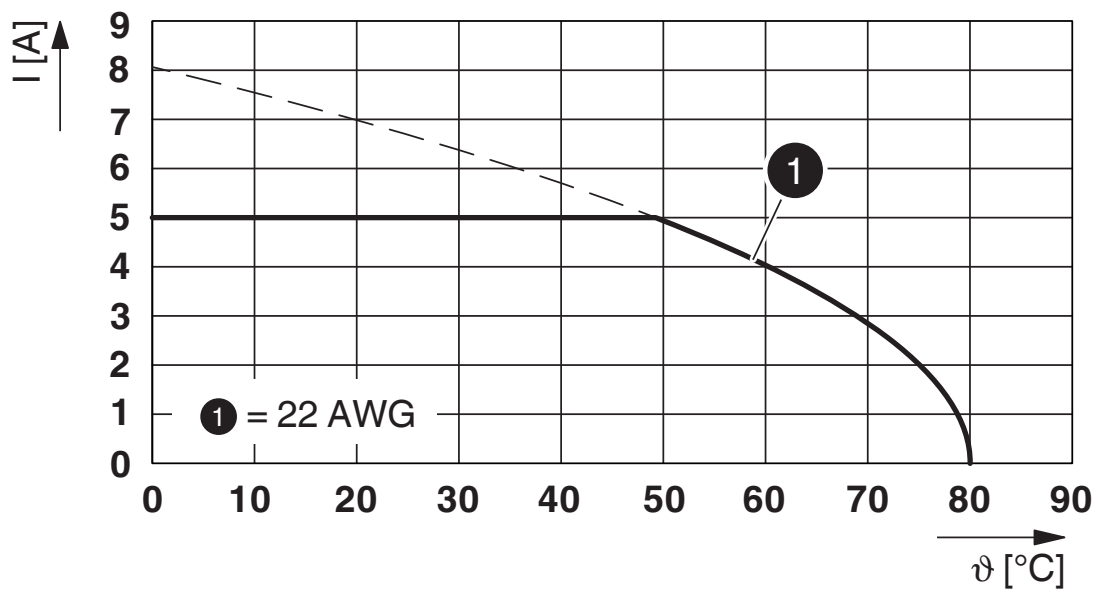
## Drawings

Diagram



Type: DMCC 0,5/...-ST-SHL 7,0-2,54 with DMC 0,5/...-G1SHL-2,54P20THRR...

Diagram



Type: DMCC 0,5/...-ST-SHL 7,0-2,54 with DMCV 0,5/...-G1SHL-2,54P20THR...

# DMCC 0,5/ 2-ST-SHL 7,0-2,54 - PCB connector



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1150807>

|  <b>cULus Recognized</b><br>Approval ID: E60425-19920306 |                       |                       |                   |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                           | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| B                                                                                                                                         |                       |                       |                   |                             |
| Factory wiring                                                                                                                            | 150 V                 | 6 A                   | 26 - 18           | -                           |
| D                                                                                                                                         |                       |                       |                   |                             |
| Factory wiring                                                                                                                            | 150 V                 | 6 A                   | 26 - 18           | -                           |

|  <b>VDE report with production monitoring</b><br>Approval ID: 40042389 |                       |                       |                   |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------------|-----------------------------|
|                                                                                                                                                         | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
| keine                                                                                                                                                   |                       |                       |                   |                             |
|                                                                                                                                                         | 160 V                 | 6 A                   | -                 | 0.14 - 0.75                 |

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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%               |
| EF3.0 Climate Change                    |                                          |
| CO2e kg                                 | 0.092 kg CO2e                            |

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