

## Direct connector - CDDC 2,5/ 9-PV-5,0 - 1016280

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PCB direct plug, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm<sup>2</sup>, number of positions: 9, pitch: 5 mm, connection method: Crimp connection, color: green, contact surface: Tin, mounting: SKEDD - Direct plug-in technology

The figure shows a 10-pos. version with 20 contacts

### Your advantages

- ✓ SKEDD direct plug-in technology enables flexible positioning on the PCB
- ✓ Reduced component and process costs: simple insertion by hand and vibration-resistant connection
- ✓ Contacts arranged in a double row enable high packing density in a compact area
- ✓ Wide range of applications, thanks to suitability for PCBs with chemically tin-plated or Hot Air Leveling (HAL) surface
- ✓ Cost-effective connection of crimped conductors in large quantities
- ✓ Tools for manual and automatic crimping available as an option



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 50 pc                                                                                                   |
| Minimum order quantity               | 50 pc                                                                                                   |
| GTIN                                 | <br>4 055626 497655 |
| GTIN                                 | 4055626497655                                                                                           |
| Weight per Piece (excluding packing) | 2.220 g                                                                                                 |
| Custom tariff number                 | 85472000                                                                                                |
| Note                                 | Made to Order (non-returnable)                                                                          |

### Technical data

#### Item properties

|                           |                  |
|---------------------------|------------------|
| Brief article description | Direct connector |
| Plug-in system            | SKEDD            |
| Range of articles         | CDDC 2,5/...-PV  |
| Pitch                     | 5 mm             |
| Number of positions       | 9                |

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## Technical data

### Item properties

|                       |                                   |
|-----------------------|-----------------------------------|
| Connection method     | Crimp connection                  |
| Mounting type         | SKEDD - Direct plug-in technology |
| Locking               | Self-locking flange               |
| Number of levels      | 2                                 |
| Number of connections | 18                                |
| Number of potentials  | 18                                |

### Electrical parameters

|                             |       |
|-----------------------------|-------|
| Nominal current             | 12 A  |
| Nom. voltage                | 320 V |
| Rated voltage               | 250 V |
| Rated voltage (III/2)       | 320 V |
| Rated voltage (II/2)        | 630 V |
| Rated surge voltage (III/3) | 4 kV  |
| Rated surge voltage (III/2) | 4 kV  |
| Rated surge voltage (II/2)  | 4 kV  |

### Connection capacity

|                                     |                                              |
|-------------------------------------|----------------------------------------------|
| Connection method                   | Crimp connection                             |
| Conductor cross section flexible    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG / kcmil | 26 ... 14                                    |

### Material data - housing

|                                                                   |              |
|-------------------------------------------------------------------|--------------|
| Housing color                                                     | 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       |

### Material data – actuating element

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| Insulating material                                               | PA     |
| 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 for the product

|              |         |
|--------------|---------|
| Length [ l ] | 13 mm   |
| Width [ w ]  | 50.8 mm |

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### Technical data

#### Dimensions for the product

|                             |         |
|-----------------------------|---------|
| Height [ h ]                | 19.6 mm |
| Pitch                       | 5 mm    |
| Height (without solder pin) | 16 mm   |
| Pin spacing                 | 7.00 mm |

#### Packaging information

|                            |                     |
|----------------------------|---------------------|
| Type of packaging          | packed in cardboard |
| Pieces per package         | 50                  |
| Denomination packing units | Pcs.                |

#### General product information

|              |                                                                                                                                                                            |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type of note | Note on the contact                                                                                                                                                        |
|              | Note on application                                                                                                                                                        |
|              | Note on application                                                                                                                                                        |
|              | Note on application                                                                                                                                                        |
|              | Note on application                                                                                                                                                        |
| Note         | 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. |
|              | All laboratory tests are performed in combination with the crimp contacts specified as accessories.                                                                        |
|              | The current depends on the crimp contact and conductor cross section used.                                                                                                 |
|              | The corresponding crimp contacts are to be found in the "Accessories" tab.                                                                                                 |
|              | The crimp contacts may only be processed with approved crimping tools.                                                                                                     |

#### Ambient conditions

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                                    |
| Ambient temperature (assembly)          | -5 °C ... 100 °C                                    |
| Ambient temperature (operation)         | -55 °C ... 105 °C (dependent on the derating curve) |

#### Termination and connection method

#### Mechanical tests according to standard

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Test specification                  | IEC 61984                          |
| Visual examination                  | Test passed IEC 60512-1-1:2002-02  |
| Dimensional test                    | Test passed IEC 60512-1-2:2002-02  |
| Resistance of marking               | Test passed IEC 60068-2-70:1995-12 |
| Result                              | Test passed                        |
| Specification                       | IEC 60512-13-2:2006-02             |
| No. of cycles                       | 25                                 |
| Insertion strength per pos. approx. | 4 N                                |
| Withdraw strength per pos. approx.  | 3 N                                |
| Polarization and coding             | Test passed IEC 60512-13-5:2006-02 |

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### Technical data

#### Mechanical tests according to standard

|                     |                        |
|---------------------|------------------------|
| Result              | Test passed            |
| Specification       | IEC 60512-15-1:2008-05 |
| Test force per pos. | 20 N                   |

#### Air clearances and creepage distances

|                                                 |                     |
|-------------------------------------------------|---------------------|
| Clearances and creepage distances               | IEC 60664-1:2007-04 |
| Specification                                   | IEC 60664-1:2007-04 |
| Minimum clearance - inhomogeneous field (III/3) | 3 mm                |
| Minimum clearance - inhomogeneous field (III/2) | 3 mm                |
| Minimum clearance - inhomogeneous field (II/2)  | 3 mm                |
| Minimum creepage distance value (III/3)         | 3.2 mm              |
| Minimum creepage distance value (III/2)         | 3 mm                |
| Minimum creepage distance value (II/2)          | 3.2 mm              |

#### Current carrying capacity / derating curves

|               |           |
|---------------|-----------|
| Specification | IEC 61984 |
|---------------|-----------|

#### Mechanical tests (A)

|                                              |             |
|----------------------------------------------|-------------|
| Test specification                           | IEC 61984   |
| Insertion strength per pos. approx.          | 4 N         |
| Withdraw strength per pos. approx.           | 3 N         |
| Polarization when inserted requirement >20 N | Test passed |
| Contact holder in insert requirements >20 N  | Test passed |

#### Durability tests (B)

|                                              |                       |
|----------------------------------------------|-----------------------|
| Specification                                | IEC 60512-9-1:2010-03 |
| Contact resistance $R_1$                     | 1.4 mΩ                |
| Insertion/withdrawal cycles                  | 25                    |
| Contact resistance $R_2$                     | 1.4 mΩ                |
| Impulse withstand voltage at sea level       | 4.8 kV                |
| Power-frequency withstand voltage            | 2.21 kV               |
| Insulation resistance, neighboring positions | > 1.6 TΩ              |

#### Climatic tests (D)

|                                        |                                                                           |
|----------------------------------------|---------------------------------------------------------------------------|
| Specification                          | ISO 6988:1985-02                                                          |
| Cold stress                            | -55 °C/2 h                                                                |
| Thermal stress                         | 105 °C/168 h                                                              |
| Corrosive stress                       | 0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle |
| Impulse withstand voltage at sea level | 4.8 kV                                                                    |
| Power-frequency withstand voltage      | 2.21 kV                                                                   |

#### Environmental and durability tests (E)

|               |                   |
|---------------|-------------------|
| Specification | IEC 61984:2008-10 |
|---------------|-------------------|

## Direct connector - CDDC 2,5/ 9-PV-5,0 - 1016280

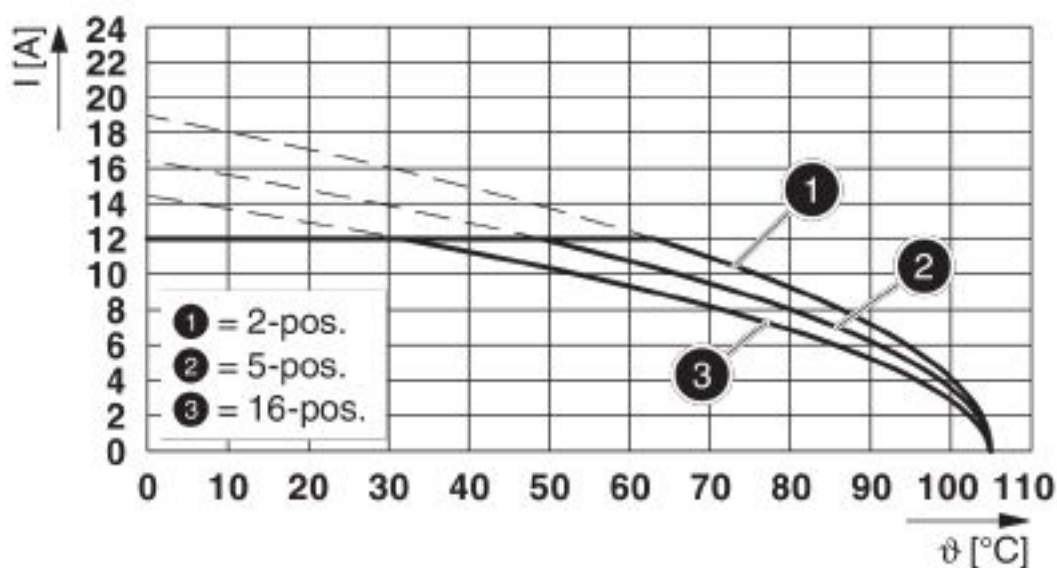
### Technical data

#### Environmental and durability tests (E)

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Result, degree of protection, IP code | Finger safety with IP20 test finger |
|---------------------------------------|-------------------------------------|

### Drawings

Diagram



Type: CDDC 2,5/...-PV-5,0

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27260700 |
| eCl@ss 4.1 | 27260700 |
| eCl@ss 5.0 | 27260700 |
| eCl@ss 5.1 | 27260700 |
| eCl@ss 6.0 | 27260700 |
| eCl@ss 7.0 | 27440309 |
| eCl@ss 8.0 | 27440309 |
| eCl@ss 9.0 | 27440309 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC002637 |
| ETIM 6.0 | EC002638 |
| ETIM 7.0 | EC002638 |

## Direct connector - CDDC 2,5/ 9-PV-5,0 - 1016280

### Approvals

#### Approvals

#### Approvals

cULus Recognized / VDE Zeichengenehmigung / IECCE CB Scheme

#### Ex Approvals

#### Approval details

|                    |                                                                                   |                                                                                                                                                       |                 |
|--------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| cULus Recognized   |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | E60425-20160718 |
|                    | B                                                                                 | D                                                                                                                                                     |                 |
| Nominal voltage UN | 300 V                                                                             | 300 V                                                                                                                                                 |                 |
| Nominal current IN | 12 A                                                                              | 10 A                                                                                                                                                  |                 |
| mm²/AWG/kcmil      | 26-12                                                                             | 26-12                                                                                                                                                 |                 |

|                        |                                                                                     |                                                                                                                                                                                                           |          |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40044617 |
|                        |                                                                                     |                                                                                                                                                                                                           |          |
| Nominal voltage UN     | 320 V                                                                               |                                                                                                                                                                                                           |          |
| Nominal current IN     | 12 A                                                                                |                                                                                                                                                                                                           |          |
| mm²/AWG/kcmil          | 0.14-2.5                                                                            |                                                                                                                                                                                                           |          |

|                 |                                                                                     |                                                           |           |
|-----------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------|
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a> | DE1-63213 |
|-----------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------|

### Accessories

#### Accessories

#### Coding element

Coding profile - CP-PT 1,5 - 1985564

Coding profile, inserted into the hole on the plug, made from red insulating material, diameter: 1.35 mm



## Direct connector - CDDC 2,5/ 9-PV-5,0 - 1016280

### Accessories

#### Additional products

Crimp contact - CDC-MP 0,14-0,5 - 1016664



Crimp contact

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Crimp contact - CDC-MP 0,14-0,5-R - 1016663



Crimp contact

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Crimp contact - CDC-MP 0,5-1,5 - 1016662



Crimp contact

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Crimp contact - CDC-MP 0,5-1,5-R - 1016661



Crimp contact

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Crimp contact - CDC-MP 1,5-2,5 - 1016660



Crimp contact

## Direct connector - CDDC 2,5/ 9-PV-5,0 - 1016280

### Accessories

Crimp contact - CDC-MP 1,5-2,5-R - 1016659



Crimp contact

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