

1154075  
<https://www.phoenixcontact.com/us/products/1154075>

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SMD female connector, nominal current: 1.7 A, Test voltage: 500 V AC, number of positions: 20, pitch: 0.8 mm, color: black, contact surface: Au, contact connection type: Socket, mounting: SMD soldering

Your advantages

- Gold-plated contacts ensure transfer quality remains stable over the long term
- Reliable mechanical and electrical connections, thanks to the double-sided ScaleX contact system
- Robustness: ScaleX technology for high tolerance compensation and protection of contacts
- Flexible device design: various numbers of positions, designs, and stack heights with high wipe lengths

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1154075       |
| Packing unit                         | 250 pc        |
| Minimum order quantity               | 250 pc        |
| Sales key                            | AA23          |
| Product key                          | AAWADD        |
| GTIN                                 | 4063151154707 |
| Weight per piece (including packing) | 3.616 g       |
| Weight per piece (excluding packing) | 3.616 g       |
| Customs tariff number                | 85366930      |
| Country of origin                    | CZ            |

# FP 0,8/ 20-FV 10,85 - SMD female connectors



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## Technical data

### Product properties

|                      |                      |
|----------------------|----------------------|
| Product type         | SMD female connector |
| Product family       | FP 0,8/...-FV 10,85  |
| Number of positions  | 20                   |
| Pitch                | 0.8 mm               |
| Number of rows       | 2                    |
| Number of potentials | 20                   |
| Pin layout           | Linear pad geometry  |

### Data management status

|                  |    |
|------------------|----|
| Article revision | 01 |
|------------------|----|

### Electrical properties

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Nominal current $I_N$ | 1.7 A IEC 60512-5-2:2002-02 (at 20°C 80-pos.) |
| Contact resistance    | 25 mΩ                                         |
| Test voltage          | 500 V AC IEC 60512-4-1:2003                   |

### Mounting

|               |                     |
|---------------|---------------------|
| Mounting type | SMD soldering       |
| Pin layout    | Linear pad geometry |

### Processing notes

|                          |                  |
|--------------------------|------------------|
| Process                  | Reflow soldering |
| Moisture Sensitive Level | MSL 1            |

### 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                     | Selective coating                                                                |
| Metal surface contact area (top layer)      | Gold (Au)                                                                        |
| Metal surface contact area (middle layer)   | Nickel (Ni)                                                                      |
| Metal surface soldering area (top layer)    | Tin (Sn)                                                                         |
| Metal surface soldering area (middle layer) | Nickel (Ni)                                                                      |

#### Material data - housing

|                                        |              |
|----------------------------------------|--------------|
| Color (Housing)                        | black (9005) |
| Insulating material                    | LCP          |
| Insulating material group              | IIIb         |
| CTI according to IEC 60112             | 150          |
| Flammability rating according to UL 94 | V0           |

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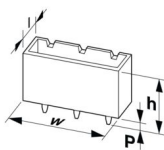
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## Notes

|                                 |                                                                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation              | The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances within the scope of insulation requirements in accordance with IEC 60664-1. |
| Details for soldering processes | The items are suitable for assembly on both sides and for overhead soldering.                                                                                                                                        |

## Dimensions

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Pitch               | 0.8 mm                                                                             |
| Width [w]           | 12.78 mm                                                                           |
| Height [h]          | 11.45 mm                                                                           |
| Length [l]          | 6.9 mm                                                                             |
| Installed height    | 10.85 mm                                                                           |

## Application

|                                            |                                                                                                                                                                              |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact cover                              | 0.8 mm                                                                                                                                                                       |
| Center offset                              | ± 0.7 mm in longitudinal and transverse direction                                                                                                                            |
| Stack height                               | 12 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV 1,15)<br>13.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV 2,65) |
| Wipe length                                | 1.5 mm                                                                                                                                                                       |
| Angular tolerance                          | ± 5 ° in longitudinal and transverse direction (when plugging in)<br>± 5 ° in longitudinal and transverse direction (when plugged in)                                        |
| Axial offset in X direction (longitudinal) | ± 0.3 mm (Tolerance compensation when plugged in)                                                                                                                            |
| Axial offset in Y direction (transversal)  | ± 0.3 mm (Tolerance compensation when plugged in)                                                                                                                            |

## PCB design

|              |            |
|--------------|------------|
| Pad geometry | 0.5 x 3 mm |
|--------------|------------|

## Electrical tests

### Thermal test | Test group C

|                            |                       |
|----------------------------|-----------------------|
| Specification              | IEC 60512-5-2:2002-02 |
| Tested number of positions | 80                    |

### Insulation resistance

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

### Air clearances and creepage distances |

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|                                                   |         |
|---------------------------------------------------|---------|
| Insulating material group                         | IIIb    |
| Minimum value for clearance and creepage distance | 0.25 mm |

## Environmental and real-life conditions

### Vibration test

|                        |                                          |
|------------------------|------------------------------------------|
| Specification          | IEC 60068-2-6:2007-12                    |
| Frequency              | 10 - 2000 - 10 Hz                        |
| Sweep speed            | 1 octave/min                             |
| Amplitude              | 1.5 mm (10 Hz ... 58 Hz)                 |
| Acceleration           | 200 m/s <sup>2</sup> (58 Hz ... 2000 Hz) |
| Test duration per axis | 2.5 h                                    |
| Test directions        | X-, Y- and Z-axis                        |

### Durability test

|                                              |                                   |
|----------------------------------------------|-----------------------------------|
| Specification                                | IEC 60512-9-1:2010-03 (following) |
| Contact resistance R <sub>1</sub>            | 25 mΩ                             |
| Contact resistance R <sub>2</sub>            | 25 mΩ                             |
| Insertion/withdrawal cycles                  | 500                               |
| Insulation resistance, neighboring positions | ≥ 5 GΩ                            |

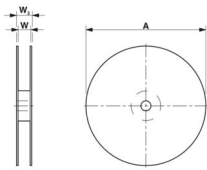
### Shocks

|                 |                                   |
|-----------------|-----------------------------------|
| Specification   | IEC 60068-2-27:2008-02            |
| Pulse shape     | Semi-sinusoidal                   |
| Acceleration    | 490 m/s <sup>2</sup>              |
| Shock duration  | 11 ms                             |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

### Ambient conditions

|                                         |                   |
|-----------------------------------------|-------------------|
| Ambient temperature (operation)         | -55 °C ... 125 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C  |
| Relative humidity (storage/transport)   | 30 % ... 70 %     |
| Ambient temperature (assembly)          | -5 °C ... 100 °C  |

## Packaging specifications

|                             |                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing         |  |
| Type of packaging           | 24 mm wide tape                                                                      |
| [W] tape width              | 24 mm                                                                                |
| [W2] coil overall dimension | 30.4 mm                                                                              |
| [A] coil diameter           | 330 mm                                                                               |
| Outer packaging type        | Transparent-Bag                                                                      |

# FP 0,8/ 20-FV 10,85 - SMD female connectors



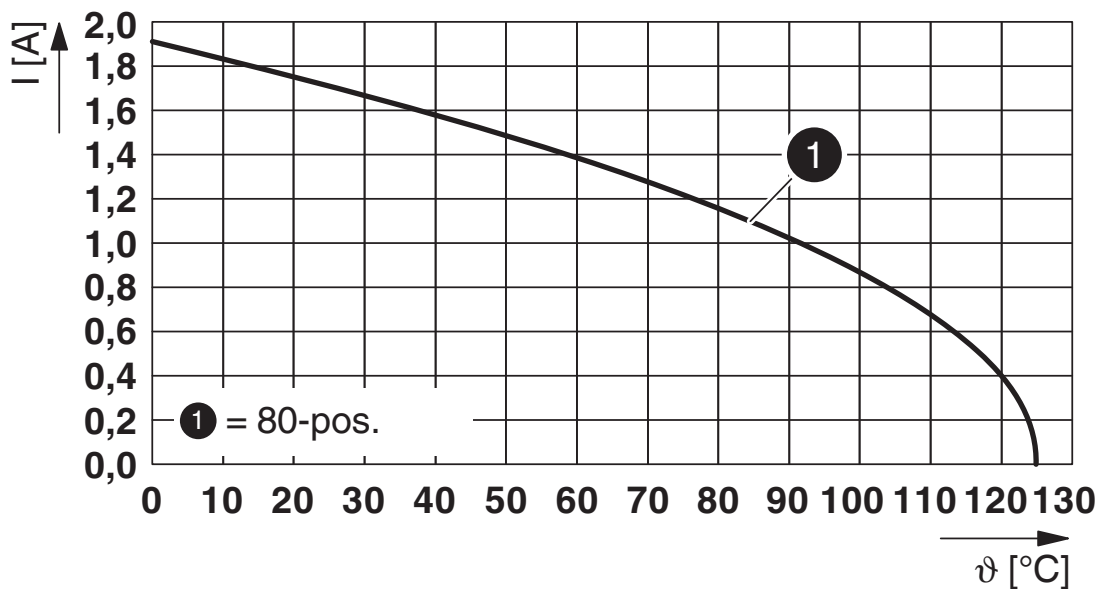
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|               |                                          |
|---------------|------------------------------------------|
| ESD level     | (D) electrostatically conductive         |
| Specification | DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07 |

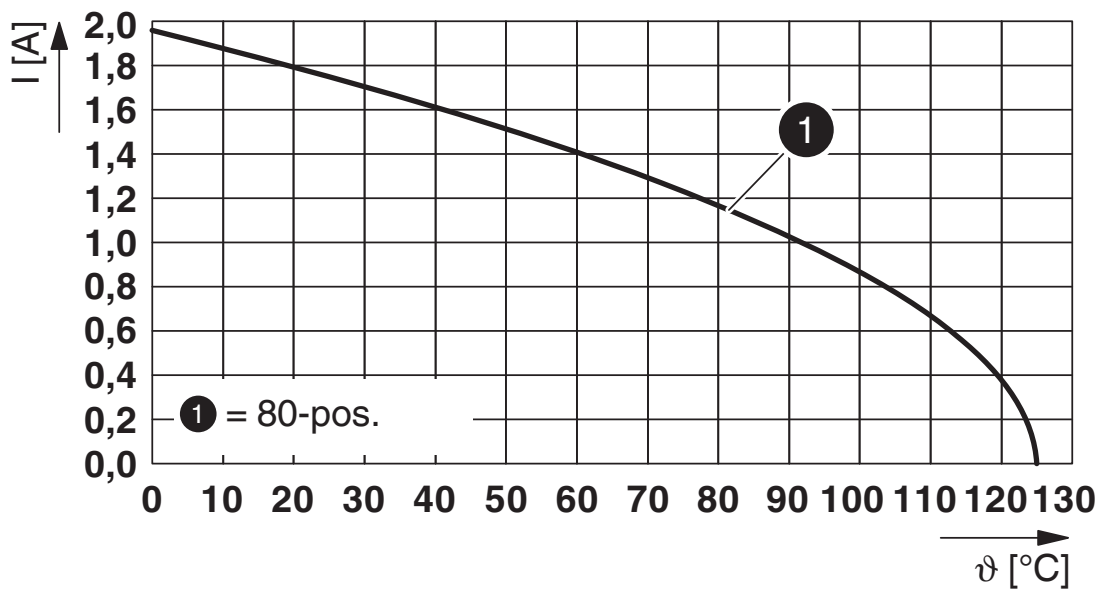
## Drawings

Diagram



Type: FP 0,8/...-MV 8,65 with FP 0,8/...-FV 10,85 – contacts

Diagram



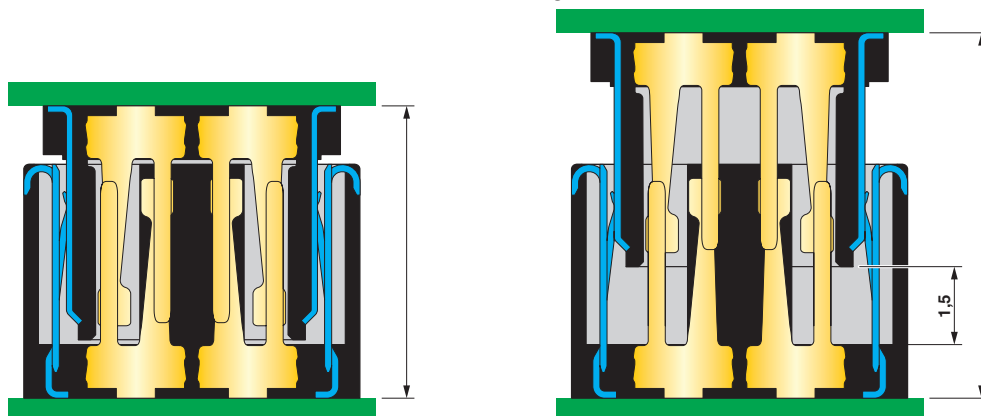
Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 10,85 – contacts

# FP 0,8/ 20-FV 10,85 - SMD female connectors

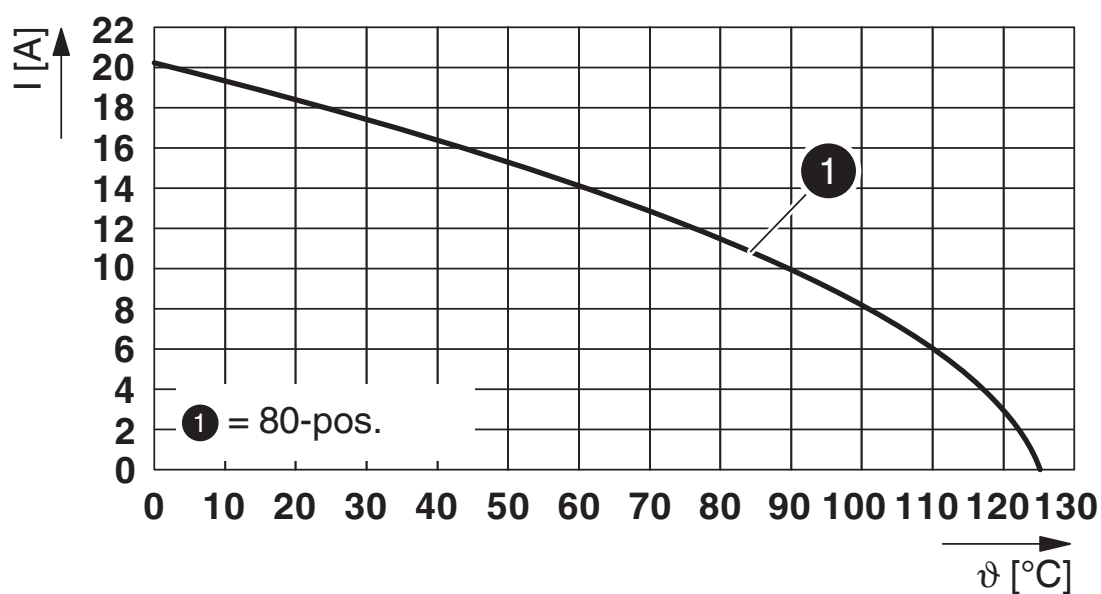
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Schematic diagram



Diagram



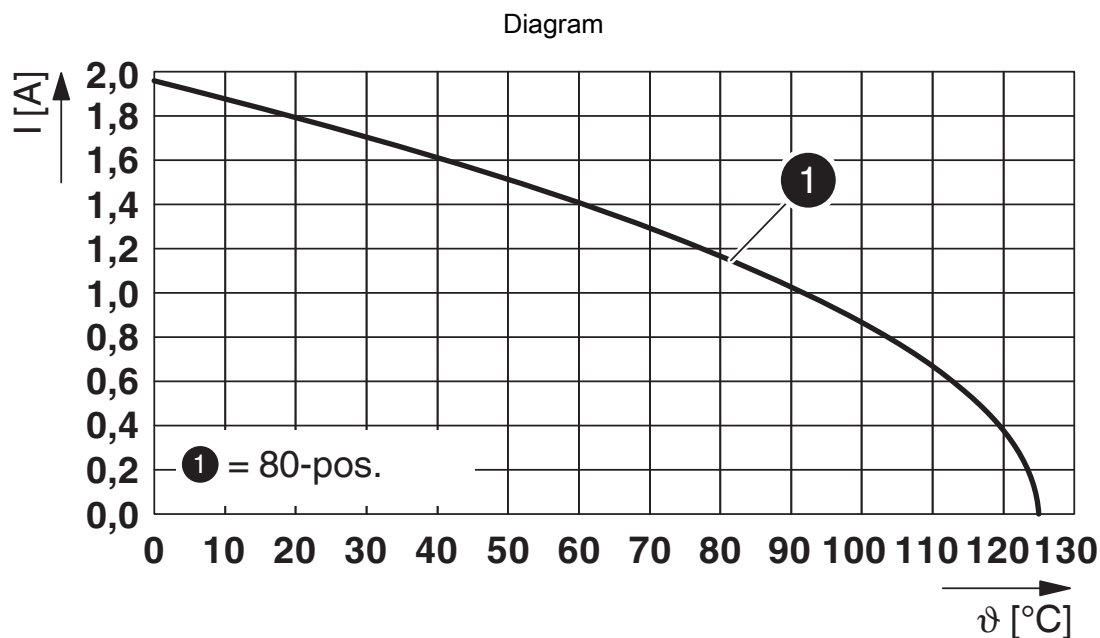
Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 10,85 – shielding plate

# FP 0,8/ 20-FV 10,85 - SMD female connectors

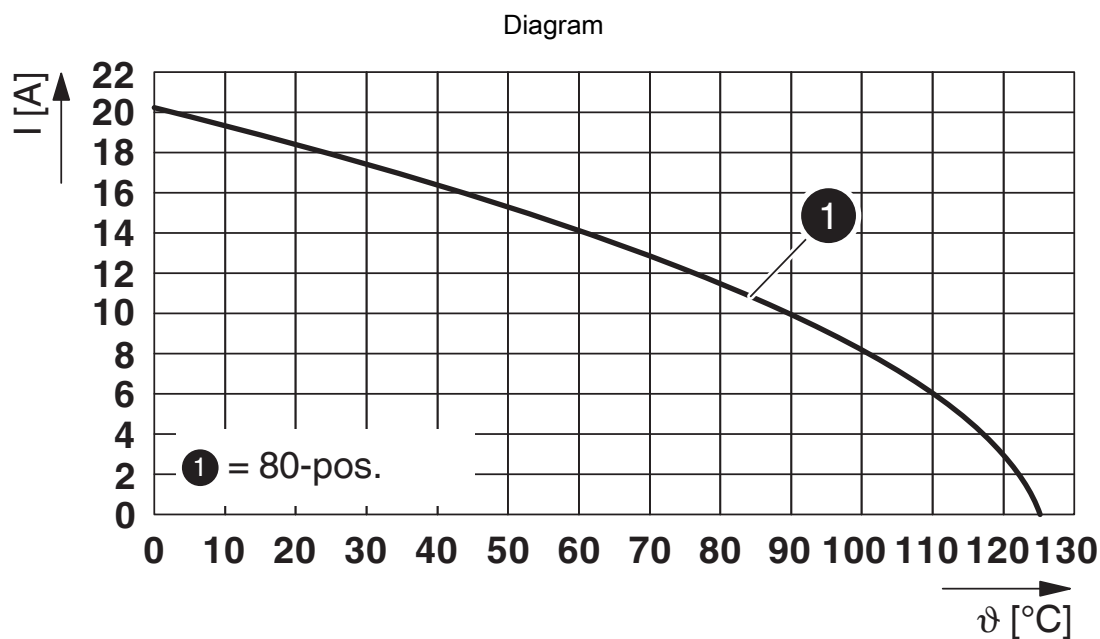


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Type: FP 0,8/...-MV 1,15 with FP 0,8/...-FV 10,85 – contacts



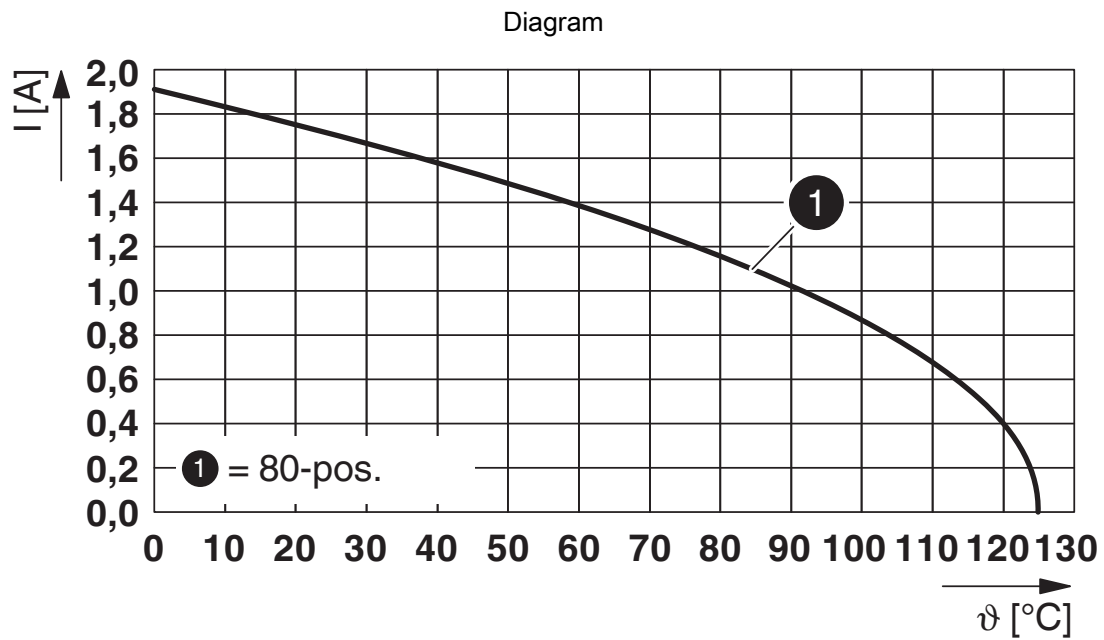
Type: FP 0,8/...-MV 1,15 with FP 0,8/...-FV 10,85 – shielding plate

# FP 0,8/ 20-FV 10,85 - SMD female connectors



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Type: FP 0,8/...-MV 7,15 with FP 0,8/...-FV 10,85 – contacts

# FP 0,8/ 20-FV 10,85 - SMD female connectors



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1154075>



**cULus Recognized**

Approval ID: E118976-20190703

# FP 0,8/ 20-FV 10,85 - SMD female connectors



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27460201 |
| ECLASS-12.0 | 27460201 |
| ECLASS-13.0 | 27460201 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002637 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121409 |
|-------------|----------|

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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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