

# FP 0,8/ 20-MV 7,15 - SMD male connectors

1154018

<https://www.phoenixcontact.com/pc/products/1154018>

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SMD male connector, nominal current: 1.7 A, Test voltage: 500 V AC, number of positions: 20, pitch: 0.8 mm, color: black, contact surface: Gold, contact connection type: Pin, 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                          | 1154018       |
| Packing unit                         | 300 pc        |
| Minimum order quantity               | 300 pc        |
| Product key                          | AAWGDD        |
| GTIN                                 | 4063151154561 |
| Weight per piece (including packing) | 3.05 g        |
| Weight per piece (excluding packing) | 2.22 g        |
| Customs tariff number                | 85366930      |
| Country of origin                    | CN            |

# FP 0,8/ 20-MV 7,15 - SMD male connectors



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## Technical data

### Product properties

|                     |                     |
|---------------------|---------------------|
| Product type        | SMD male connector  |
| Product family      | FP 0,8/...-MV 7,15  |
| Number of positions | 20                  |
| Pitch               | 0.8 mm              |
| Number of rows      | 2                   |
| Pin layout          | Linear pad geometry |

### Electrical properties

|                       |   |
|-----------------------|---|
| Nominal current $I_N$ | 1.7 A IEC 60512-5-2:2002-02 (at 20°C 80-pos.) |
| Degree of pollution   | 3   |
| 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

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

### Notes

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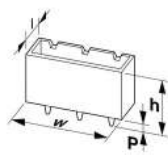


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|                                 |  |
|---------------------------------|--|
| Notes on operation              | The permissible voltage during operation depends on the application, taking into consideration the air clearances and creepage distances 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]           | 11.9 mm  |
| Height [h]          | 12.25 mm   |
| Length [l]          | 6.1 mm   |
| Installed height    | 11.65 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/...-FV 4,85)  |
|  | 15 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 7,85)  |
|  | 18 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-FV 10,85) |
| Wipe length                                | 1.5 mm   |
| Angular tolerance                          | ± 5 ° in longitudinal and transverse direction (when plugging in)                    |
|  | ± 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 2.4 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)                 |
| Sweep speed            | 200 m/s <sup>2</sup> (58 Hz ... 2000 Hz) |
| Test duration per axis | 2.5 h                                    |

### 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  |

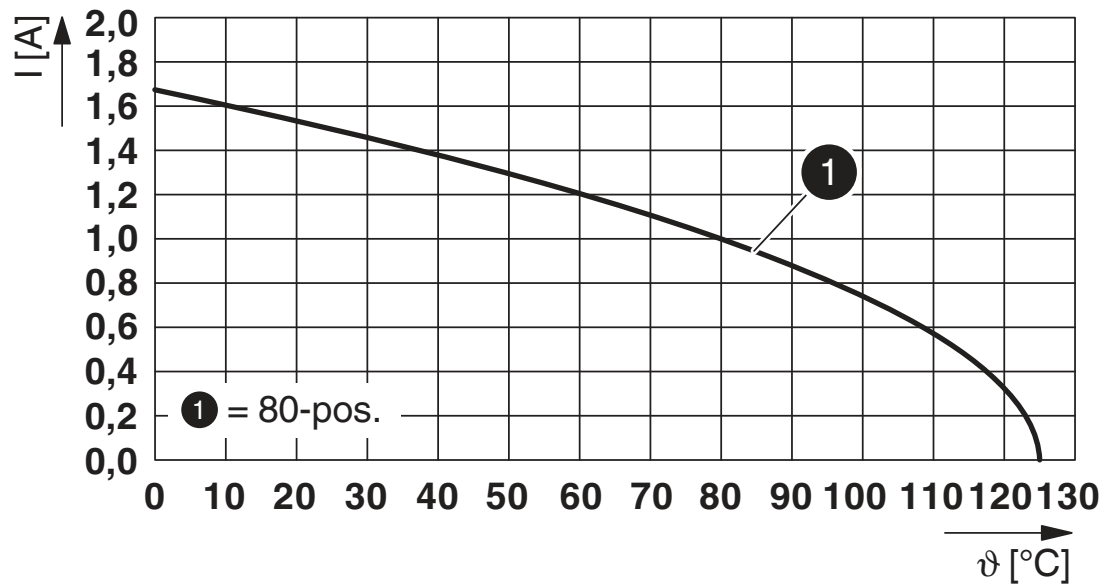
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## Drawings

Diagram



Type: FP 0,8/...-MV 7,15 with FP 0,8/...-FV 4,85

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1154018>



**cULus Recognized**

Approval ID: E118976-20190703

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC002637 |
|----------|----------|

### UNSPSC

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

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## Environmental product compliance

|            |   |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |



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## Mandatory accessories

### FP 0,8/ 20-FH - SMD female connectors

1104541

<https://www.phoenixcontact.com/pc/products/1104541>



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: Gold, contact connection type: Socket, mounting: SMD soldering

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

1154075

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



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: Gold, contact connection type: Socket, mounting: SMD soldering

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## FP 0,8/ 20-FV 4,85 - SMD female connectors

1061660

<https://www.phoenixcontact.com/pc/products/1061660>



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: Gold, contact connection type: Socket, mounting: SMD soldering

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## FP 0,8/ 20-FV 7,85 - SMD female connectors

1061583

<https://www.phoenixcontact.com/pc/products/1061583>



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: Gold, contact connection type: Socket, mounting: SMD soldering

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## Accessories

# FP 0,8/ 20-MV 7,15 - SMD male connectors

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## FP 0,8/ 20-FV 4,85 - SMD female connectors

1061660

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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: Gold, contact connection type: Socket, mounting: SMD soldering

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