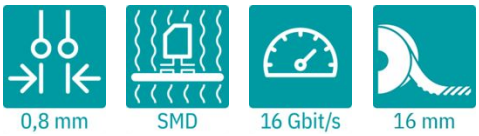
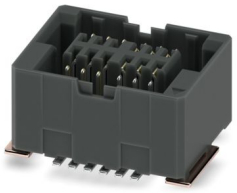
# FP 0,8/ 12-FV 4,85 - SMD female connectors

1061643

https://www.phoenixcontact.com/us/products/1061643

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SMD female connector, nominal current: 1.7 A, test voltage: 500 V AC, number of positions: 12, 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 | 1061643 |
| Packing unit | 500 pc |
| Minimum order quantity | 500 pc |
| Sales key | AA23 |
| Product key | AAWADB |
| GTIN | 4055626715698 |
| Weight per piece (including packing) | 1.64 g |
| Weight per piece (excluding packing) | 0.45 g |
| Customs tariff number | 85366930 |
| Country of origin | CN |

# Technical data

## Product properties

| | |
|---|---|
| Product type | SMD female connector |
| Product family | FP 0,8/...-FV 4,85 |
| Number of positions | 12 |
| Pitch | 0.8 mm |
| Number of rows | 2 |
| Pin layout | Linear pad geometry |

Fitting of components

| | |
|---|---|
| Partial assembly | No |

## Electrical properties

Properties

| | |
|---|---|
| Nominal current $I_N$ | 1.7 A IEC 60512-5-2:2002-02 (at 20°C 80-pos.) |
| Contact resistance | 20 mΩ |
| Test voltage | 500 V AC IEC 60512-4-1:2003-05 |

Data transmission

| | |
|---|---|
| Data transmission rate | 16 Gbps |

## Mounting

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

Processing notes

| | |
|---|---|
| Process | Reflow soldering |
| Moisture Sensitive Level | MSL 1 |
| Classification temperature $T_c$ | 260 °C |
| Solder cycles in the reflow | 3 |

## 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 (min. 0.5 µm Au) |
| Metal surface contact area (middle layer) | Nickel (1.27 µm - 4 µm Ni) |
| Metal surface soldering area (top layer) | Tin (2 µm - 6 µm Sn) |
| Metal surface soldering area (middle layer) | Nickel (1.27 µm - 4 µm Ni) |

Material data - housing

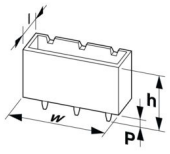
| | |
|---|---|
| Color (Housing) | black (9005) |

| | |
|---|---|
| Insulating material | LCP |
| Insulating material group | IIIb |
| CTI according to IEC 60112 | 150 |
| Flammability rating according to UL 94 | V0 |

## Notes

| | |
|---|---|
| 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] | 9.58 mm |
| Height [h] | 5.45 mm |
| Length [l] | 7.3 mm |
| Installed height | 4.85 mm |

### Application

| | |
|---|---|
| Contact cover | 0.8 mm |
| Center offset | ± 0.7 mm in longitudinal and transverse direction |
| Stack height | 6 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV 1,15) |
| | 7.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV 2,65) |
| | 12 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV 7,15) |
| | 13.5 mm Tolerance: +1,5 mm (in combination with Range of articles:FP 0,8/...-MV 8,65) |
| 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 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 |

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

## Environmental and real-life conditions

Durability test

| | |
|---|---|
| Specification | IEC 60512-9-1:2010-03 (following) |
| Contact resistance $R_1$ | 20 mΩ |
| Contact resistance $R_2$ | 20 mΩ |
| Insertion/withdrawal cycles | 500 |
| Insulation resistance, neighboring positions | ≥ 5 GΩ |

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 ... 60.1 Hz) |
| Acceleration | 200 m/s² (58 Hz ... 2000 Hz) |
| Test duration per axis | 2.5 h |
| Test directions | X-, Y- and Z-axis |

Shocks

| | |
|---|---|
| Specification | IEC 60068-2-27:2008-02 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 490 m/s² |
| Shock duration | 11 ms |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |

Railway application: Oscillation/broadband noise

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2022-06 |
| | IEC 61373:2010-05 |
| Spectrum | Long life test category 2, bogie-mounted |
| Frequency | $f_1$ = 5 Hz to $f_2$ = 250 Hz |
| ASD level | 6.12 (m/s²)²/Hz |
| Acceleration | 30.6 m/s² |
| Test duration per axis | 5 h |
| Test directions | X-, Y- and Z-axis |

| | |
|---|---|
| Contact interruption | < 1 µs |
| Result | Test passed |

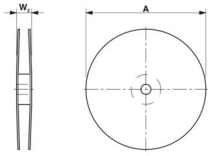
Railway application: Shocks

| | |
|---|---|
| Specification | DIN EN 50155 (VDE 0115-200):2022-06 |
| | IEC 61373:2010-05 |
| Pulse shape | Semi-sinusoidal |
| Acceleration | 490 m/s² |
| Shock duration | 11 ms |
| Number of shocks per direction | 3 |
| Test directions | X-, Y- and Z-axis (pos. and neg.) |
| Contact interruption | < 1 µs |
| Result | Test passed |

Ambient conditions

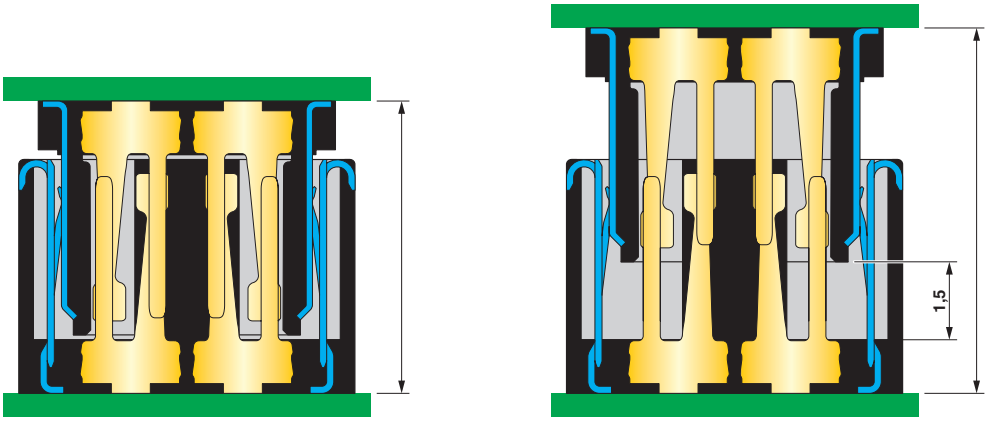
| | |
|---|---|
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Relative humidity (storage/transport) | 30 % ... 70 % |
| Ambient temperature (assembly) | -5 °C ... 100 °C |
| Ambient temperature (operation) | -55 °C ... 125 °C |

## Packaging specifications

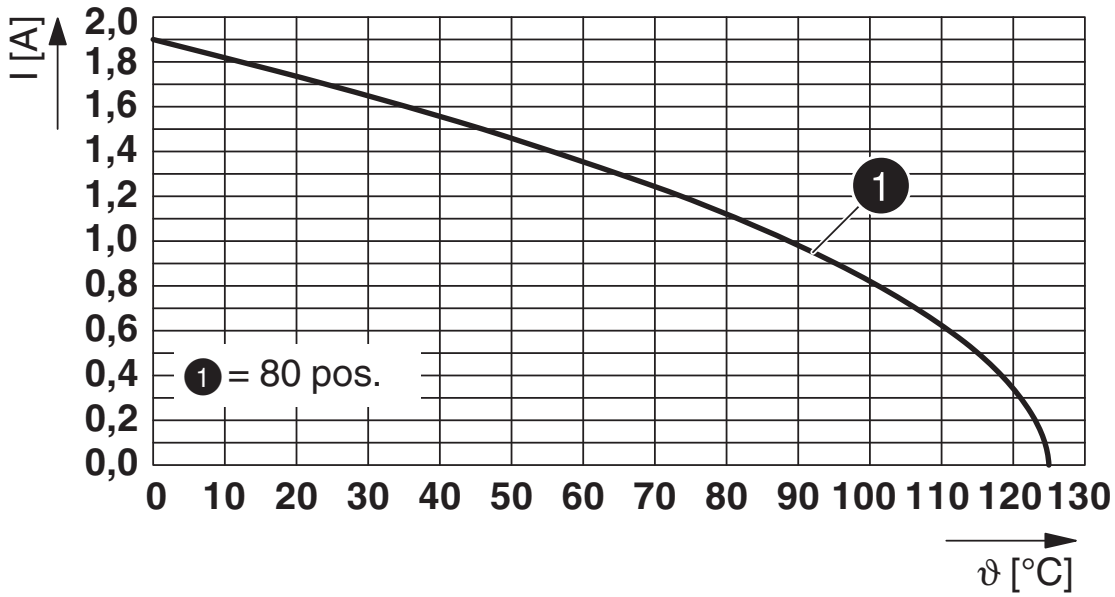
| | |
|---|---|
| Dimensional drawing |  |
| Type of packaging | 16 mm wide tape |
| Note | Tape-on-reel packaging in accordance with standard DIN EN 60286-3 and EIA-481 |
| [W] tape width | 16 mm |
| [W2] coil overall dimension | ≤ 22.4 mm |
| [A] coil diameter | ≤ 330 mm |
| Outer packaging type | Transparent-Bag |

## Drawings

Schematic diagram

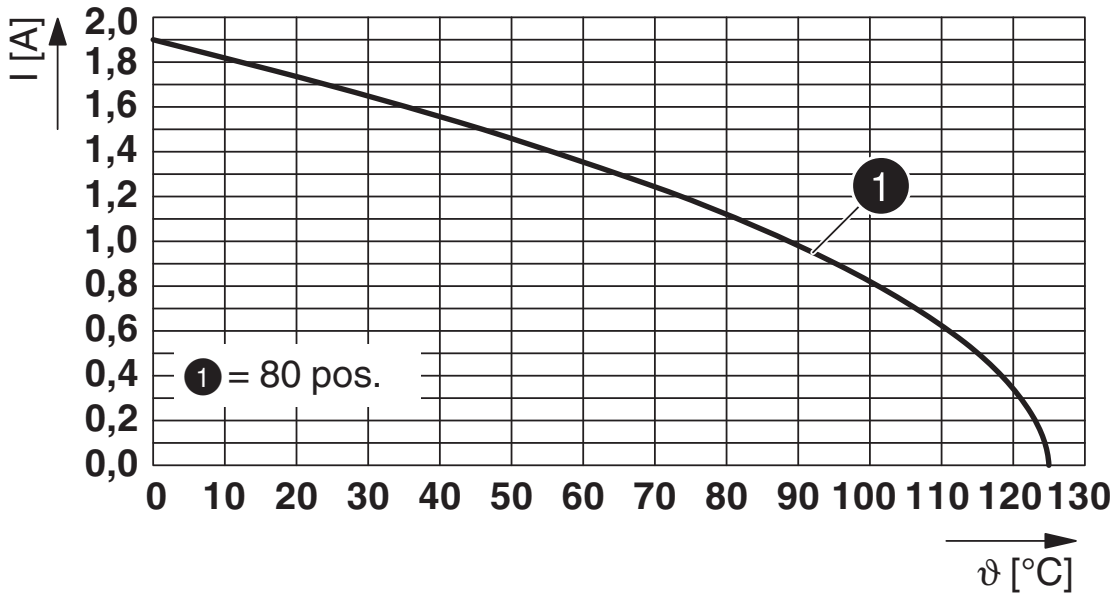



Diagram



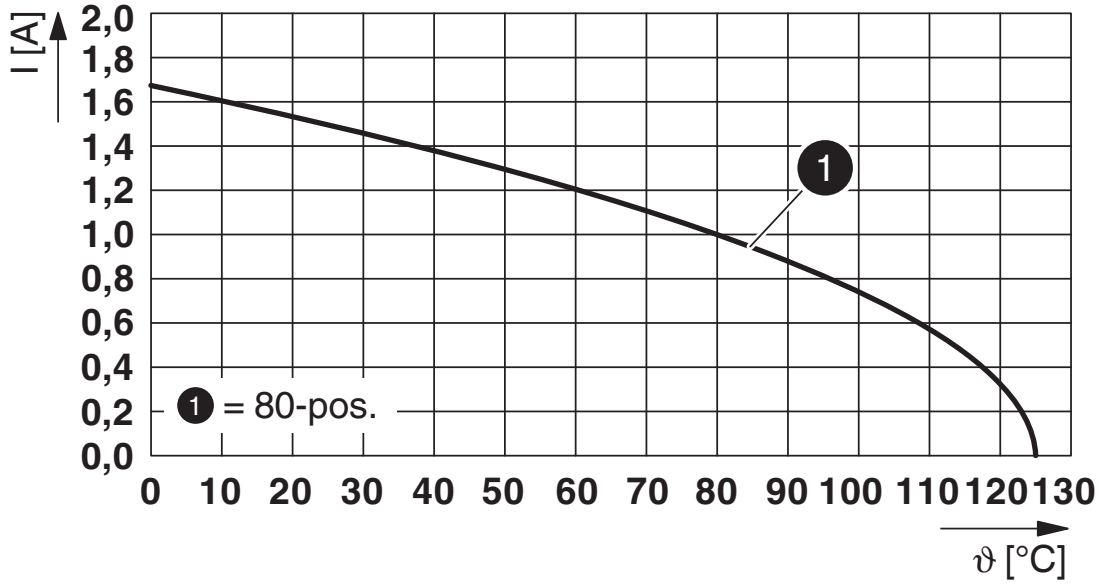

Type: FP 0,8/...-MV 2,65 with FP 0,8/...-FV 4,85

Diagram




Type: FP 0,8/...-MV 1,15 with FP 0,8/...-FV 4,85

Diagram




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

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1061643

**cULus Recognized**
Approval ID: E118976-20190703

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27460201 |
| ECLASS-15.0 | 27460201 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002637 |

### UNSPSC

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

## 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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