

FS 0,635/ 20-FV-R- 4,0 - SMD female connectors



1331962

<https://www.phoenixcontact.com/pc/products/1331962>

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SMD female connector, nominal current: 0.5 A, test voltage: 500 V AC, number of positions: 20, pitch: 0.635 mm, color: black, contact surface: Au, contact connection type: Socket, mounting: SMD soldering



Your advantages

- Design-in support during device development using MCAD/ECAD data and a free sample service
- Cost and space savings with the comprehensive portfolio available in various stack heights
- Easy mating with integrated keyways and tolerance compensation for error-free production
- Time savings during the development process with customer-specific simulations for data integrity
- High-speed data transmission up to 30 Gbps for various possible applications

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1331962 |
| Packing unit | 750 pc |
| Minimum order quantity | 750 pc |
| Product key | AAWACA |
| GTIN | 4063151628123 |
| Weight per piece (including packing) | 1.075 g |
| Weight per piece (excluding packing) | 1 g |
| Customs tariff number | 85366930 |
| Country of origin | CN |

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Technical data

Product properties

| | |
|---------------------|-----------------------|
| Product type | SMD female connector |
| Product family | FS 0,635/...FV-R- 4,0 |
| Number of positions | 20 |
| Pitch | 0.635 mm |
| Number of rows | 2 |
| Pin layout | Linear pad geometry |

Electrical properties

| | |
|---------------------------|---|
| Nominal current I_N | 0.5 A IEC 60512-5-2:2002-02 (40-pos. / 60-pos.) |
| Contact resistance | 40 m Ω |
| Test voltage | 500 V AC IEC 60512-4-1:2003-05 |
| Rated voltage (I/1) | 125 V |
| Rated surge voltage (I/1) | 0.8 kV |

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 (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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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. |
|--------------------|--|

Dimensions

| | |
|---------------------|----------|
| Dimensional drawing | |
| Pitch | 0.635 mm |
| Width [w] | 14.22 mm |
| Height [h] | 4.6 mm |
| Length [l] | 6.4 mm |
| Installed height | 4 mm |

Application

| | |
|-------------------|--|
| Contact cover | 0.6 mm |
| Center offset | ± 0.5 mm in longitudinal and transverse direction |
| Stack height | 6 mm Tolerance: +0.6 mm (in combination with Range of articles:FS 0,635/..-MV-R- 5,0) |
| | 9 mm Tolerance: +0.6 mm (in combination with Range of articles:FS 0,635/..-MV-R- 8,0) |
| | 10 mm Tolerance: +0.6 mm (in combination with Range of articles:FS 0,635/..-MV-R- 9,0) |
| Wipe length | 0.6 mm |
| Angular tolerance | ± 10 ° in longitudinal and transverse direction (when plugging in) |
| | ± 2 ° in longitudinal and transverse direction (when plugged in) |

PCB design

| | |
|---------------|---------------|
| Pad geometry | 0.35 x 2.5 mm |
| Hole diameter | 0.9 mm |

Electrical tests

Thermal test | Test group C

| | |
|----------------------------|-----------------------|
| Specification | IEC 60512-5-2:2002-02 |
| Tested number of positions | 60 |

Insulation resistance

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

Air clearances and creepage distances |

| | |
|---------------|---------------------|
| Specification | IEC 60664-1:2007-04 |
|---------------|---------------------|

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| | |
|---|---------|
| Insulating material group | IIIb |
| Minimum value for clearance and creepage distance | 0.19 mm |

Environmental and real-life conditions

Vibration test

| | |
|------------------------|-----------------------|
| Specification | IEC 60068-2-6:2007-12 |
| Frequency | 10 - 55 - 10 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 1.52 mm |
| Acceleration | 181 m/s ² |
| Test duration per axis | 2 h |
| Test directions | X-, Y- and Z-axis |

Durability test

| | |
|--|-----------------------------------|
| Specification | IEC 60512-9-1:2010-03 (following) |
| Contact resistance R ₁ | 40 mΩ |
| Contact resistance R ₂ | 40 mΩ |
| Insertion/withdrawal cycles | 50 |
| Insulation resistance, neighboring positions | ≥ 5 GΩ |

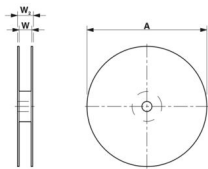
Climatic test

| | |
|-----------------------------------|------------------------|
| Specification | IEC 60068-2-60:2015-06 |
| Corrosive stress | Method 4, 10 days |
| Thermal stress | 125 °C/168 h |
| Power-frequency withstand voltage | 500 V |

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 | 32 mm wide tape |
| [W] tape width | 32 mm |
| [W2] coil overall dimension | 38.4 mm |
| [A] coil diameter | 330 mm |
| Outer packaging type | Transparent-Bag |
| ESD level | (D) electrostatically conductive |

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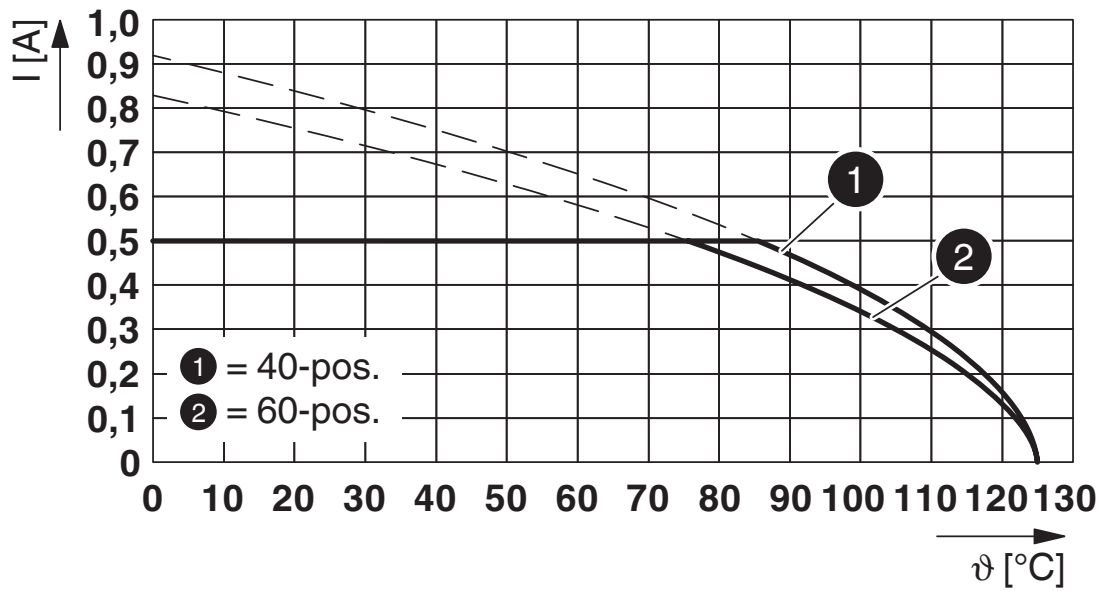
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Specification

DIN EN 61340-5-1 (VDE 0300-5-1): 2008-07

Drawings

Diagram



Type: FS 0,635/...-MV-R- 5,0 with FS 0,635/...-FV-R- 4,0

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1331962>

| | | | | |
|---|--|-----------------------|-------------------|-----------------------------|
|  | cULus Recognized Approval ID: E118976-20230512 | | | |
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 29.9 V | 0.5 A | - | - |

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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 | 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% |
|-------------------------------------|----------------------------|

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