

SPE-T1-M12FSF-180-SMD - SPE PCB connector



1363344

<https://www.phoenixcontact.com/us/products/1363344>

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SPE PCB connector, design: SPE, degree of protection: IP65/IP67, number of positions: 2, material: LCP, connection method: SMD, cable outlet: straight, color: black, Single Pair Ethernet

Your advantages

- Easily integrated: M12 male and female versions for established inductive sensors and flying leads
- Cross-application: range of up to 1000 m, data rates of up to 1 Gbps, and power of up to 50 W
- Totally protected: Advanced Shielding Technology provides a reliable shield connection for network cables, even under extreme environmental conditions
- Future-proof: standardized connectors and cables in accordance with IEC 63171-5

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1363344 |
| Packing unit | 80 pc |
| Minimum order quantity | 80 pc |
| Sales key | AB13 |
| Product key | ABNBEB |
| GTIN | 4063151708115 |
| Weight per piece (including packing) | 6.684 g |
| Weight per piece (excluding packing) | 2.18 g |
| Customs tariff number | 85366930 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-----------------------------|------------------------------|
| Product type | Data connector (device side) |
| Type | SPE |
| Number of positions | 2 |
| Type of packaging | Tape and Reel |
| [W] tape width | 44.00 mm |
| [A] coil diameter | 330.00 mm |
| [W2] coil overall dimension | 38.40 mm |
| Number of slots | 1 |
| Cable outlet | straight |
| Thread type | M12 |

Insulation characteristics

| | |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution | 2 |

Electrical properties

| | |
|---|---|
| Maximum load current | 4 A |
| Rated voltage (III/2) | 72 V DC |
| Rated surge voltage | 2250 V DC |
| Rated surge voltage (III/2) | 1500 V |
| Rated current | 4 A |
| Frequency range | 600 MHz |
| Insulation resistance | min. 1 TΩ |
| Contact resistance | 20 mΩ |
| Transmission medium | Copper |
| Transmission characteristics (category) | CAT B (IEC 63171) |
| Transmission speed | 1 Gbps |
| Power transmission | PoDL in accordance with IEEE standard 802.3bt |

Output data

| | |
|------------------------|------------|
| Transmission frequency | 600.00 MHz |
|------------------------|------------|

Connection data

Connection technology

| | |
|-------------------|-----|
| Connection method | SMD |
|-------------------|-----|

Interfaces

| | |
|----------------------|----------------------|
| Signal type/category | Single Pair Ethernet |
| Transmission speed | 1 Gbps1 Gbps |

Dimensions

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| | |
|--------------------|----------|
| Width | 12.1 mm |
| Height | 16.2 mm |
| Length | 15.3 mm |
| Installed height | 21.60 mm |
| Orientation to PCB | 180.00 ° |

Material specifications

| | |
|--|----------|
| Color | black |
| Color of the housing part | black |
| Flammability rating according to UL 94 | V0 |
| Housing material | LCP |
| Housing surface material | LCP |
| Contact material | Cu alloy |
| Contact surface material | Au/Ni |

Cable/line

| | |
|--------------------------|----------------------|
| Signal type/category | Single Pair Ethernet |
| Test voltage Core/Core | 1000 V DC |
| Test voltage Core/Shield | 2250.00 V DC |
| Test voltage, cable | 300 V |

Mechanical properties

Mechanical data

| | |
|-------------------------------------|--|
| Insertion/withdrawal cycles | > 100 |
| Insertion force per signal contact | < 30.00 N (in accordance with IEC 63171) |
| Extraction force per signal contact | < 30 N (in accordance with IEC 63171) |
| Smallest bending radius | 21,2 mm |

Environmental and real-life conditions

Test specification

| | |
|---------------|------------------------|
| Type of test | Vibration test |
| Specification | IEC 60068-2-6 |
| Frequency | 10-500 Hz |
| Sweep speed | 1 octave/min |
| Amplitude | 0.35 mm |
| Acceleration | 50.00 m/s ² |
| Test duration | 2.00 h |

Test specification

| | |
|-----------------------------------|----------------|
| Specification | IEC 63171 |
| Corrosive stress | IEC 60512-11-7 |
| Contact resistance R ₁ | 20.00 mΩ |

Test specification

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| | |
|---------------|---|
| Type of test | Mechanical service life with corrosion test |
| Specification | DIN EN 60512-9-1 |

Test specification

| | |
|--------------------------------|-------------------------|
| Type of test | Shock testing |
| Specification | IEC 60068-2-27 |
| Acceleration | 150.00 m/s ² |
| Number of shocks per direction | 2000.00 |

Ambient conditions

| | |
|---|--------------------------------------|
| Degree of protection | IP65/IP67 |
| Ambient temperature (operation) | -40 °C ... 85 °C (Harsh environment) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C (DIN EN 60512-6-3) |
| Resistance to UV radiation | yes |

Mounting

| | |
|---------------|--------------|
| Mounting type | PCB mounting |
|---------------|--------------|

Processing notes

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

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Classifications

ECLASS

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

ETIM

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

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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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com