

# SPE-T1-M8MSM-180 - SPE PCB connector



1163793

<https://www.phoenixcontact.com/us/products/1163793>

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SPE PCB connector, design: IEC 63171-5, degree of protection: IP20, number of positions: 2, 10 Gbps, CAT B (ISO/IEC 63171), material: Plastic, connection method: THR solder connection, Single Pair Ethernet

## Your advantages

- Connectors in accordance with IEC 63171-2
- THR solderable
- Data transmission up to 600 MHz
- Packaging available for automated pick and place assembly
- Reduced mounting costs thanks to two-piece device connector

## Commercial data

Item number	1163793
Packing unit	100 pc
Minimum order quantity	100 pc
Sales key	AB13
Product key	ABNBDA
GTIN	4063151176617
Weight per piece (including packing)	5.75 g
Weight per piece (excluding packing)	5.64 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
Sensor type	Single Pair Ethernet
Number of positions	2
Connection profile	SPE M8
Type of packaging	Tape and Reel
Number of slots	1
Type	Socket
Shielded	yes
Thread type	M8

### Data management status

Article revision	02
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### Insulation characteristics

Overvoltage category	I
Degree of pollution	2

### Electrical properties

Rated voltage (III/2)	72 V DC
Rated surge voltage	2250 V DC
Rated surge voltage (III/2)	1500 V
Rated surge voltage	1000 V DC
Rated current	4 A
Frequency range	5 Hz ... 500 Hz
Insulation resistance	> 1 TΩ
Contact resistance	20 mΩ (in accordance with IEC 63171)
Transmission medium	Copper
Transmission characteristics (category)	CAT B (ISO/IEC 63171)
Transmission speed	1 Gbps
Power transmission	PoDL

### Output data

Transmission frequency	600.00 MHz
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### Connection data

#### Connection technology

Connection method	THR solder connection
Locking mechanism tightening torque	0.20 Nm

### Dimensions

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Width	10.1 mm
Height	24 mm
Length	14.5 mm
Installed height	21.50 mm
Orientation to	180.00 °

## Material specifications

Material	LCP
Flammability rating according to UL 94	V0
Housing material	Plastic
Housing surface material	LCP
Contact material	Copper alloy
Contact surface material	Gold

## Cable/line

Test voltage Core/Core	1000 V DC
Test voltage Core/Shield	2250.00 V DC
Halogen-free	yes
Resistance to oil	yes
Flame resistance	yes

## 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)
Locking mechanism tightening torque	0.20 Nm

## Environmental and real-life conditions

### Test specification

Specification	IEC 63171
Cold stress	-40°C
Thermal stress	85°C
Corrosive stress	IEC 60512-11-7

### Test specification

Specification	IEC 60068-2-6
Frequency	5-500 Hz
Sweep speed	1 octave/min
Amplitude	0.75 mm
Acceleration	100.00 m/s <sup>2</sup>
Test duration	20.00 s

### Test specification

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Specification	IEC 60068-2-27
Acceleration	500.00 m/s <sup>2</sup>
Number of shocks per direction	18.00

## Test specification

Specification	IEC 60999-1
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## Ambient conditions

Degree of protection	IP65/IP67 (in combination with M8 housing screw connection) IP20
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Resistance to oil	yes

## Standards and regulations

Flame resistance	yes
Resistance to oil	yes

## Mounting

Mounting type	PCB mounting
Thread type	()

## Processing notes

Process	Reflow
Moisture Sensitive Level	MSL 1
Solder cycles in the reflow	3

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## Classifications

### ECLASS

ECLASS-11.0	27440390
ECLASS-13.0	27460201
ECLASS-12.0	27440390

### ETIM

ETIM 9.0	EC002637
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### 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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## Accessories

### SACC-FP-M-M8/M10 SMD - Housing screw connection

1412502

<https://www.phoenixcontact.com/us/products/1412502>



Housing screw connection, Pin, M8, Front mounting, M10 x 0.75

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### SACC-BP-M-M8/M12 SMD - Housing screw connection

1412505

<https://www.phoenixcontact.com/us/products/1412505>



Housing screw connection, Pin, Rear mounting, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1239002

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