

SPE-T1-M12FRF-90 - SPE PCB connector



1363341

<https://www.phoenixcontact.com/us/products/1363341>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



SPE PCB connector, design: SPE, degree of protection: IP65/IP67, number of positions: 2, material: LCP, connection method: THR solder connection, 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	1363341
Packing unit	80 pc
Minimum order quantity	80 pc
Sales key	AB13
Product key	ABNBEA
GTIN	4063151706883
Weight per piece (including packing)	9.5 g
Weight per piece (excluding packing)	2.823 g
Customs tariff number	85366930
Country of origin	DE

SPE-T1-M12FRF-90 - SPE PCB connector



1363341

<https://www.phoenixcontact.com/us/products/1363341>

Technical data

Product properties

Product type	Data connector (device side)
Type	SPE
Sensor type	Single Pair Ethernet
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	50.40 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	THR solder connection
-------------------	-----------------------

Interfaces

Transmission speed	1 Gbps1 Gbps
--------------------	--------------

Dimensions

SPE-T1-M12FRF-90 - SPE PCB connector



1363341

<https://www.phoenixcontact.com/us/products/1363341>

Width	15.3 mm
Height	14.4 mm
Length	28.7 mm
Installed height	12.00 mm
Orientation to PCB	90.00 °

Material specifications

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

Cable/line

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

Type of test	Mechanical service life with corrosion test
--------------	---

SPE-T1-M12FRF-90 - SPE PCB connector



1363341

<https://www.phoenixcontact.com/us/products/1363341>

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

SPE-T1-M12FRF-90 - SPE PCB connector



1363341

<https://www.phoenixcontact.com/us/products/1363341>

Classifications

ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

ETIM

ETIM 9.0	EC002637
----------	----------

SPE-T1-M12FRF-90 - SPE PCB connector



1363341
<https://www.phoenixcontact.com/us/products/1363341>

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%

Phoenix Contact 2025 © - all rights reserved
<https://www.phoenixcontact.com>

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