SPT Series Wireless Pressure Sensors

The SPT series wireless pressure sensors are industrial-grade sensors designed for pressure monitoring applications such as aerospace, oil and gas, automotive, and medical equipment. These sensors feature low noise, interference resistance, high accuracy, ultra-low power consumption, and robust durability, making them ideal for long-term use in harsh industrial environments.

Equipped with advanced glass micro-fusion technology and a stainless steel pressure chamber, the sensors ensure complete leak prevention. They offer a minimum overload pressure range of 2 to 20 kpsi of the rated pressure and a burst pressure range of 3 to 20 kpsi. Integrated with a high-precision 24-bit digital sampling circuit, the sensors provide accurate and reliable pressure measurements.

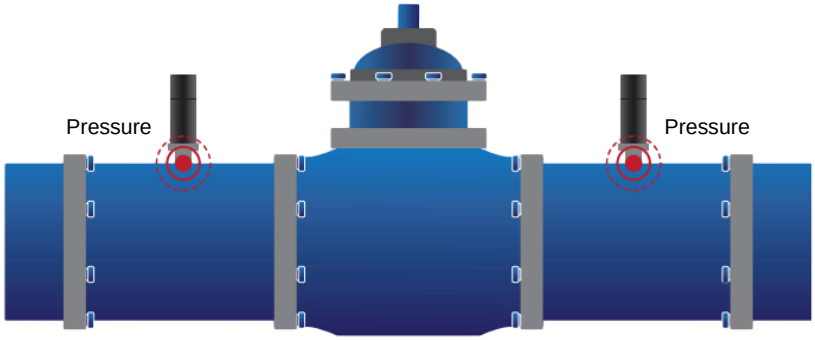
Easy to install with various standard interface options, the sensor data is transmitted wirelessly to remote monitoring system, allowing users to monitor pressure and temperature, receive real-time alerts, and track pressure variations continuously. This ensures safe equipment operation, prevents unplanned downtime, and reduces maintenance time and costs.

Features and Advantages

Accurate	⇨	Low noise, high precision, 24-bit sampling.
Easy-to-install	⇨	Cable-free, compact, and lightweight design with multiple standard interface options.
Wireless	⇨	Reliable data transmission via Bluetooth or LoRa/LoRaWAN.
Low-powered	⇨	Built-in battery with 3 years of life for normal usage.
Ruggedized	⇨	High overload and burst pressure; waterproof, dustproof, shockproof, corrosion-resistant, and intrinsically safe; suitable for harsh industrial environment.
Flexible	⇨	Configurable sampling and communication periods to meet specific requirements.
Accessible	⇨	Remotely accessible anytime, with automatic alerts and maintenance-free operation.
Convenient	⇨	Bluetooth compatible and can be connected via mobile app.

APPLICATIONS

- Hydraulic Pressure
- Oil and Gas Pipelines
- Gas Pressure
- Tanks and Containers
- Pumps and Compressors
- Industrial Process Control



SPT Series Wireless Pressure Sensors

THETA SENSORS CORPORATION

Specifications

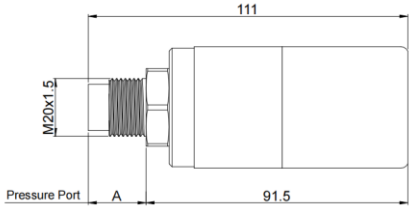
Product Model	SPT510-P	SPT510-L
Order Information	Product Model (Pressure Port Type - Range Code - Interface Code). For example: SPT510-L(H-10M-2)	
Pressure Port Type	H: With hole, suitable for liquids such as water. F: Flat, suitable for slurries, crude oil, asphalt, etc.	
Pressure Precision (Non-linearity/Repeatability)	Hole: ±0.25% F.S. (Full Scale). Flat: ±0.5% F.S. (Full Scale)	
Overall Precision	±2% F.S.	
Compensated Temperature Range	0~70°C	
Pressure Cycles	1 x 10^6	
Overload Pressure	Hole: 2 times rated pressure up to 20kpsi. Flat: 1.5 times rated pressure up to 20kpsi	
Burst Pressure	3 times rated pressure up to 20kpsi	
Long-term Stability	Hole: ±0.25% F.S./year. Flat: ±0.5% F.S./year	
Measurement Range	Hole: 100 ～ 15000 psi. Flat: 150 ～ 10000 psi	
Interface Options	Hole: Interface Codes 1~9. Flat: Interface Codes 2 or 10	
Shock Resistance	50g	
Vibration Resistance	±20g	
Data Acquisition Period	1/2/5/10/15/20/30/60/120/240/360/480/720/1440 minutes	
Communication	SPT510-P: 2.4GHz Wireless Sensor Network (Bluetooth 5.0), line-of-sight range 600m SPT510-L: LoRa/LoRaWAN Wireless Sensor Network, line-of-sight range 3000m	
Battery	65000mAh Li/SOCL2; replaceable	
Dimensions	41mm x 111mm (D x H)	
Weight	315g	
Operating Temperature	-40~85°C	
Operating Humidity	10%~90% RH	
Enclosure	17-4PH stainless steel and polyamide with fiberglass	
Explosion Protection	EX ia IIC T4 Ga	
Ingress Protection	IP67	
Mounting	Threaded	

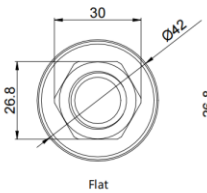
Range Codes

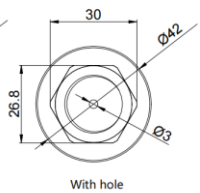
Code	Bar	MPa	Psi
0M7	7	0.7	100
1M0	10	1.0	150
1M7	17	1.7	250
3M5	35	3.5	500
07M	70	7.0	1000
10M	100	10	1500
15M	150	15	2250
20M	200	20	3000
35M	350	35	5000
50M	500	50	7500
70M	700	70	10000
100M	1000	100	15000

Interface Codes

Code	Interface Specification	*Dimension A*
1	G1/4 JIS B2351	*0.472 [11.94]*
2	M20 x 1.5 mm ISO 6149-2	*0.661 [16.8]*
3	1/4-18 NPT	*0.600 [15.24]*
4	7/16-20UNF FEMALE SAE J514 STRAIGHT THREAD WITH INTEGRAL VALVE DEPRESSOR	*0.687 [17.5]*
5	M14 x 1.5 mm ISO 6149-2	*0.433 [11.0]*
6	1/8-27 NPT	*0.390 [9.91]*
7	M12 x 1.5 mm ISO 6149-2	*0.433 [11.0]*
8	M10 x 1.0 mm ISO 6149-2	*0.374 [9.5]*
9	G1/4 DIN 3852 FORM E GASKET DIN3869-14 NBR	*0.472 [11.94]*
10	G1/2 JIS B2351	*0. 790 [20. 00]*







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