

## SPT-1105-Series Pressure Transmitter



### Product Information:

The SPT Series Pressure Transmitter is a compact, high-reliability pressure sensing solution featuring a precision silicon piezoresistive sensor core. Integrated temperature compensation, digital calibration, and advanced signal conditioning ensure accurate, stable, and industry-standard output signals for demanding industrial applications. Each unit undergoes rigorous validation, aging, and environmental testing to ensure long-term stability, durability, and dependable performance.

### Features:

- Pressure Types: Gauge, Absolute, and Sealed Gauge
- Wide Pressure Range: 0kPa~7kPa...100MPa
- High Accuracy up to  $\pm 0.1\%$ FS (customizable)
- Output: 4–20mA, 0–5V, 0–10V, I<sup>2</sup>C, RS485
- Fast Response Time  $\leq 3$ ms
- Stainless Steel Wetted Parts (SS304 / SS316L compatible)
- Excellent Long-Term Stability and Reliability
- Suitable for Industrial Automation and Process Control Applications

### Application:

- Mining and Coal Industry
- Environmental Monitoring Systems
- Oil & Gas Industry
- Medical and Healthcare Equipment
- Chemical Processing Industry
- Water Management and Treatment Systems
- Industrial Safety and Explosion-Control Systems
- Marine and Shipping Applications

## Supply Voltage & Output Signal :

TYPE	SUPPLY	OUTPUT
Current(2 wire)	12V-30VDC	4mA-20mA
Voltage(3 wire)	6V-24VDC	0V-5VDC
	12V-30VDC	0V-10VDC
I <sup>2</sup> C(4 wire)	3.3V-5VDC	I <sup>2</sup> C
RS485(4 wire)	5V-30VDC	RS485

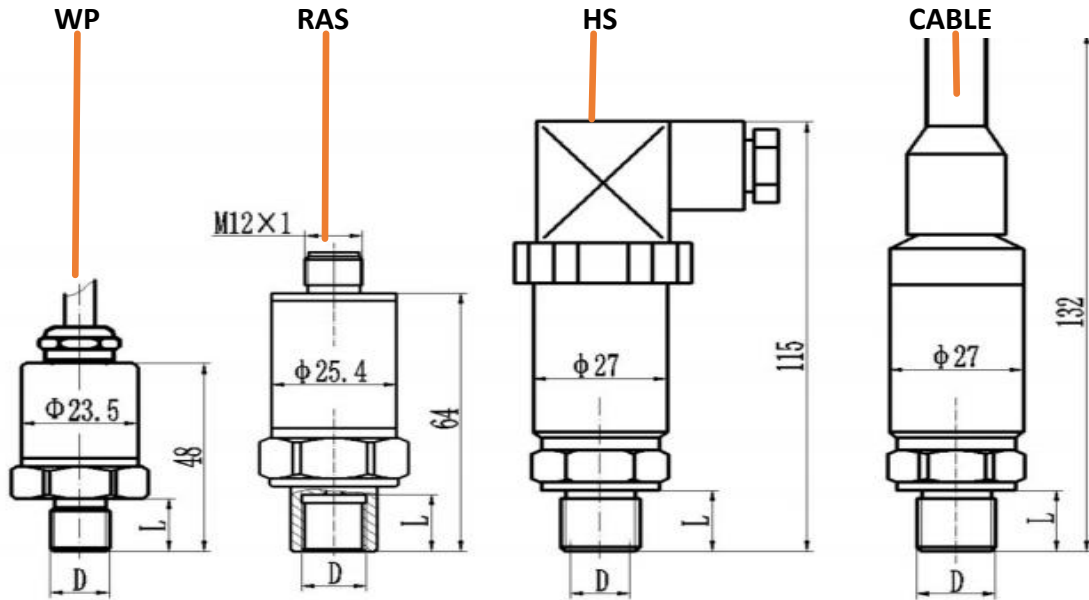
## Technical Specification:

Category	Parameter		
	Gauge	Absolute	Sealed Gauge
Accuracy	±0.5%FS, ±0.25%FS, ±0.1%FS (Customized)		
Non-linearity	≤±0.1%FS	≤±0.2%FS	≤±0.4%FS
Hysteresis	≤±0.05%FS	≤±0.1%FS	≤±0.1%FS
Repeatability	≤±0.05%FS	≤±0.05%FS	≤±0.1%FS
Long-term Stability	≤±0.1%FS/year	≤±0.2%FS/year	≤±0.5%FS/year
Zero-point Temperature Drift	≤±0.01%FS/°C	≤±0.03%FS/°C	≤±0.05%FS/°C
Sensitivity Temperature Drift	≤±0.01%FS/°C	≤±0.03%FS/°C	≤±0.05%FS/°C
Compensation Temperature	0°C to +50°C (≤200kPa), -10°C to +70°C (>200kPa)		
Medium Temperature	-40°C to +85°C		
Ambient Temperature	-40°C to +85°C		
Storage Temperature	-40°C to +85°C		
Protection Level	IP65 (IP68 customizable)		
Vibration Environment	10g (10Hz ~ 2000Hz)		
Shock Resistance	100g / 11ms		
Service Life	>10 Million Pressure Cycles (within measurement range)		
Power Supply	24V±0.24V, 5V±0.05V		
Reference Temperature	20°C ~ 25°C		
Relative Humidity	45%RH ~ 75%RH		
Installation Direction	Pressure interface facing downward		
Measured Medium	Fluids compatible with SS304 or SS316L		

## Structural Drawing:

The following figures show the typical product structure, WP- water proof with cable, RAS-round aviation socket, HS- Hirschmann socket and Cable model.


Please contact for consultation and customization.



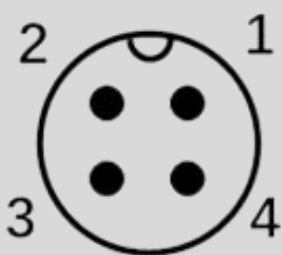
SIZE D	Length L	Size D	Length L
M22x1.5	15 mm	M20x1.5	15 mm
M18x1.5	15 mm	M16x1.5	15 mm
M14X1.5	15 mm	M12x1	15 mm
M10x1	12 mm	M8x1	12 mm
G1/2	15 mm	G3/8	15 mm
G1/4	15 mm	G1/8	12 mm
1/2NPT	18 mm	1/2 PT	18 mm
3/8NPT	15 mm	3/8 PT	15 mm
1/4NPT	15 mm	1/4 PT	15 mm
1/8NPT	12 mm	1/8 PT	12 mm

## Wiring diagram & electrical connection:

### Hirschmann socket

Diagram	Wire	Current (2 wire)	Voltage (3 wire)	I <sup>2</sup> C (4 wire)	RS485 (4 wire)
	1	VCC	VCC	VCC	VCC
	2	Iout	GND	GND	GND
	3	NA	Vout	SCL	RS485A
	⊥	NA	NA	SDA	RS485B

### Round Aviation Socket

	1	VCC	VCC	VCC	VCC
	2	Iout	GND	GND	GND
	3	N/A	Vout	SCL	RS485A
	4	NA	NA	SDA	RS485B

### Cable

	Red	VCC	VCC	VCC	VCC
	Green	Iout	GND	GND	GND
	Yellow	NA	Vout	SCL	RS485A
	Blue	NA	NA	SDA	RS485B
	Black	NA	NA	NA	NA

## Odering information:

SPT1105		Series pressure transmitter				
	<b>Range</b>	Measuring range is -0.1MPa ... 0MPa ~ 0.01MPa ~ 100MPa				
	<b>xxxxx</b>	In kPa,				
	<b>Code name</b>	<b>Form of pressure</b>				
	<b>G</b>	Gauge pressure				
	<b>A</b>	Absolute pressure				
	<b>S</b>	Sealed gauge pressure				
	<b>Code name</b>	<b>Output voltage</b>				
	<b>C</b>	4mA ~ 20mADC				
	<b>V</b>	0VDC ~ 10VDC				
	<b>R</b>	RS485 communication interface				
	<b>H</b>	HART protocol communication				
	<b>I</b>	I <sup>2</sup> C protocol communication				
	<b>Code name</b>	<b>Electrical interface</b>				
	<b>H</b>	Hirschmann socket				
	<b>A</b>	Aviation socket				
	<b>W</b>	Waterproof interface				
	<b>D</b>	Direct cable outlet				
	<b>O</b>	Others				
	<b>Code name</b>	<b>Pressure Port</b>				
	<b>G1/4</b>	G1/4				
<b>G1/2</b>	G1/2					
<b>G1</b>	G1					
<b>M20X1.5</b>	M20X1.5					
<b>SPT1105</b>	<b>100</b>	<b>G</b>	<b>C</b>	<b>H</b>	<b>G½</b>	<b>(Please specify other details)</b>

**Note:** Order model SPT1105 100 G C H G½ refers to the product with SPT, measuring range of 100KPa, gauge pressure, 4-20mA output, Hirschman connector, G1/2 pressure port