



SH316 Pressure Transmitters

General Information

SH316 is made from high-quality silicon piezoresistive sensor. The piezoresistive sensor is packaged in stainless steel housing. The SH316 diffusive silicon pressure transmitter is precision engineered to fit most industrial pressure measurement. The compact and rugged design makes this pressure transmitter suitable for applications including process control systems, hydraulic systems and valves, refrigeration and HVAC controls, level measurement and test equipment.

A wide range of process connection and electrical connection options are available to meet almost requirement.

Applications

Process control systems
Refrigeration and HVAC controls
Hydraulic systems and valve
Machine building
Pumps and compressors

Features

- Measuring ranges from 70mbar to 700bar
- Absolute, gauge and sealed gauge
- Accuracy $\pm 0.2\%$ or $\pm 0.5\%$ FSO
- Calibrated and temperature compensated
- Stainless steel construction
- Piezoresistive pressure sensor design
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0...5V and others

Technical Specification

Table 1

Sensor Type	Silicon piezoresistive sensor
Pressure type	Gauge pressure, absolute pressure, sealed gauge
Accuracy	0.2%, 0.5%
Measuring range	0~7Kpa70Mpa
Stability	$\leq \pm 0.2\%$ /URL (12 months)
Effect of mounting position:	Position effect can be adjusted by zero clean
Temperature drift	$\leq \pm 0.2\%$ F.S/10 °C
Response time	0.25s
Effect of power supply:	$\leq \pm 0.005\%$ /URL/V
Effect of vibration	$\leq \pm 0.25\%$ /URL/g
Temperature compensation	0-50 °C
Overload capacity	200% of URL
Negative pressure range	-100Kpa ~0

Operation Condition

Environmental temp.:	-40...+60°C
Storage temperature:	-40...+85°C
Humidity	≤ 95% RH

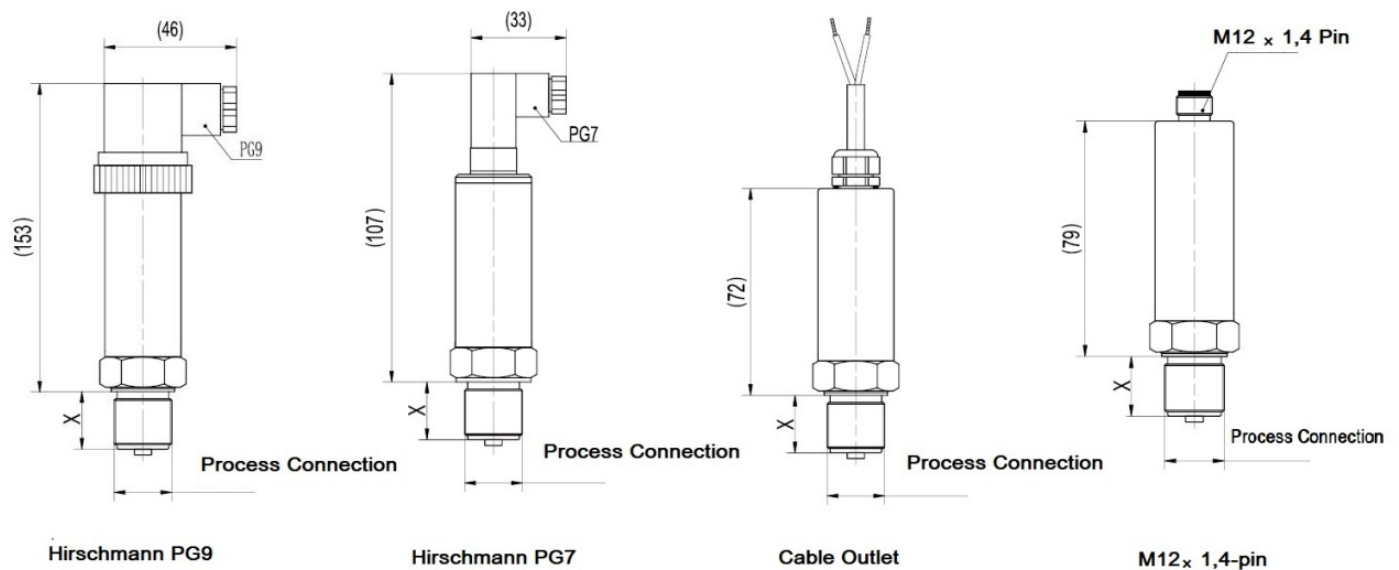
Transmitter Module

Output	4-20mA, 4-20mA+HART, MODBUS RS485
Display	No display or option with LCD display
Power supply	10-32V, HART needs ≥18.5V, 9~30V DC (Modbus RS485)
Diagnostic function	Output alarm current if instruments is broken
View of units	Pa, kPa, Mpa, bar, mbar, %, psi, mmH ₂ O

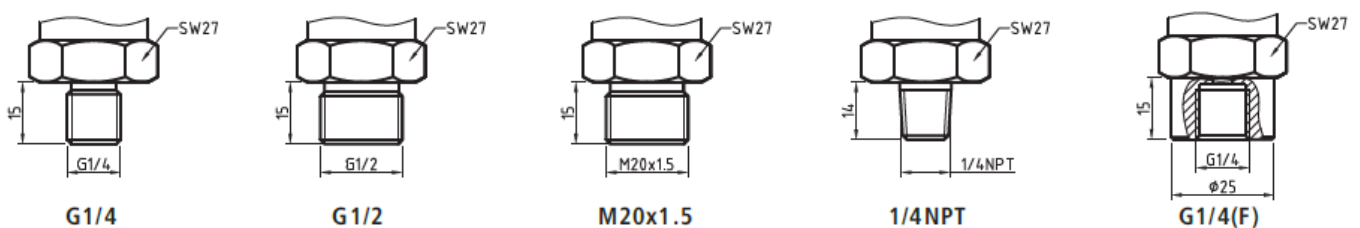
Sensor Specifications

Sensor diaphragm Material	SUS316L, Hastelloy C-276, Tantalum, Titanium
Sealing material	Fluororubber
Process connection material	SUS304 (Std.), SUS316L

Dimension (mm)



Process connection



Model Selection

Table 2

Item	Code	Description
Type	A	4-20mA Output
	S	4-20mA Output & Hart Protocol
	R	Modbus RS485
	V	0-5V
Product	SH316	Diffusive silicon pressure transmitter
Sensor type	A1	Silicon Piezoresistive Sensor
Pressure type	A	Absolute pressure
	G	Gauge Pressure
	Y	Sealed Gauge pressure (also for negative pressure)
Digital display	1	Without display
	3	Digital Display
Measuring range & pressure type	1	0-7 Kpa G/Y
	2	0-10 Kpa G/Y
	3	0-20 Kpa G/Y
	4	0-35 Kpa G/A/Y
	5	0-70 Kpa G/A/Y
	6	0-100Kpa G/A/Y
	7	0-200 Kpa G/A/Y
	8	0-350 Kpa G/A/Y
	9	0-700 Kpa G/A/Y
	10	0-1Mpa G/A/Y
	11	0-2Mpa G/A/Y
	12	0-3.5Mpa G/A/Y
	13	0-7Mpa G/A/Y
	14	0-10Mpa G/A/Y
	15	0-20 Mpa G/A/Y
	16	0-35Mpa G/A/Y
	17	0-70 Mpa G/A/Y
Process connections	1	M20* 1.5 (M)
	2	1/2"NPT (M)
	4	1/2"NPT (F)
	5	G1/2 (M)
	3	Others(please specify)
Explosion proof	N	Non explosion proof
Electrical connection	H	Hirschmann PG9 (Std.),IP65
	H7	Hirschmann PG7,IP65
	C	Cable outlet,IP67
	M	M12×1, 4-pin,IP65
Others (options)	T	Tri-clamp connection (specify size)
	R	High Temp. Radiator:R1=150°C;R2=250°C;R3=350°C
	D	Diaphragm seals (specify size and Type)