



SH316-W Series Sanitary Pressure Sensor

Overview

The SH316-W Compact sanitary Pressure Transmitter features a compact structure and easy installation. It utilizes a high-performance pressure sensor as the core sensing element, combined with advanced circuit processing and temperature compensation technology, converting pressure measurements into a standard 4-20mA two-wire DC signal output. All wetted components of the product are manufactured using a fully welded and polished process, ensuring no sanitary dead zones, and comply with relevant hygienic design standards.

Applications

- Pharmaceutical industry
- Food processing industry
- brewing industry

Technical Specifications

Performance	
Pressure type	Gauge pressure, absolute pressure, Seal gauge pressure
Range	0~2.5Kpa.....7Mpa
Accuracy	0.2%,0.5%
Stability	≤± 0.2% URL (12 months)
Install position affect	Position affect can be corrected through zero calibration.
Temperature drift	≤± 0.01% F.S/10 °C (within temperature compensation)
Response time	0.25s
Power supply affect	≤± 0.005%/URL/V
Vibration affect	≤±0.25%/URL/g
Temperature compensation	-10~70 °C
Overload resistance	200% of full range

Applicable Operation Conditions

Operation temperature	Fluids Temperature (-20~180°C) Ambient Temperature (-40~85°C)
Storage temperature	-40~85°C
Humidity	≤95% RH

Transmitters

Output	4-20mA, 4-20mA +HART, MODBUS RS485, LED
Display	No display (default), LCD display, LED display
Power supply	10-32V DC(4-20mA, HART Need to be greater than 18.5V) 6-30V DC(MODBUS RS485)
Load range	Current load resistance ≤ (Us-Umin)/0.026
Diagnostic function	Output alarm current when failure occurs.
Display variables	%, current, pa, Kpa, Mpa, mbar, psi, mmH2O, etc

Material

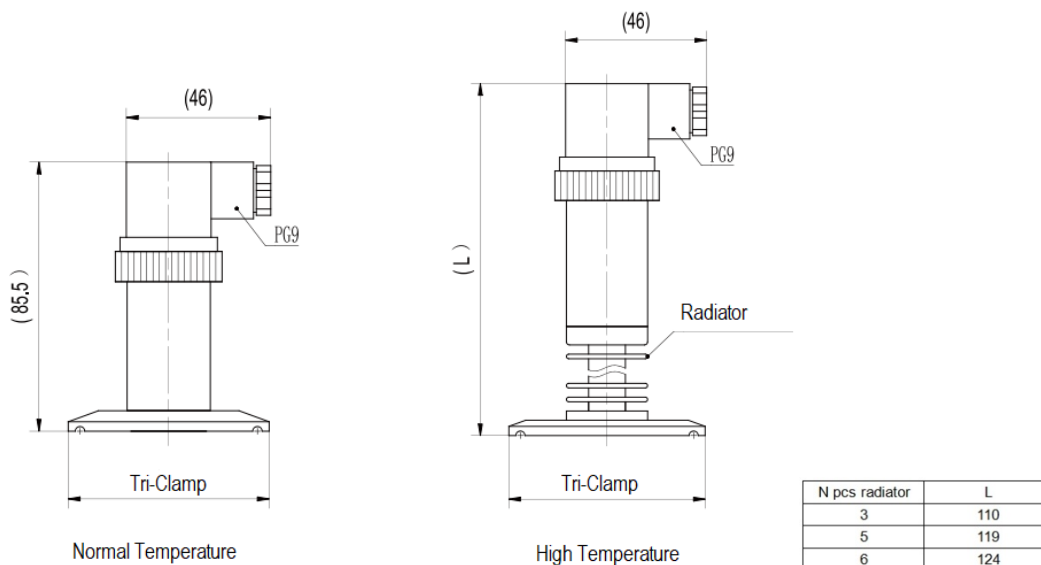
Diaphragm material	SS316L(Std.), HastelloyC-276, Tantalum, Gold plated
Sensor filling fluid	Silicone oil(default), vegetable oil
Sensor seal material	Fluorine rubber
process connection material	SS304(Std.), SS316L

*: For information on the material of special connectors, please contact the silverinstruments.com

Dimensions

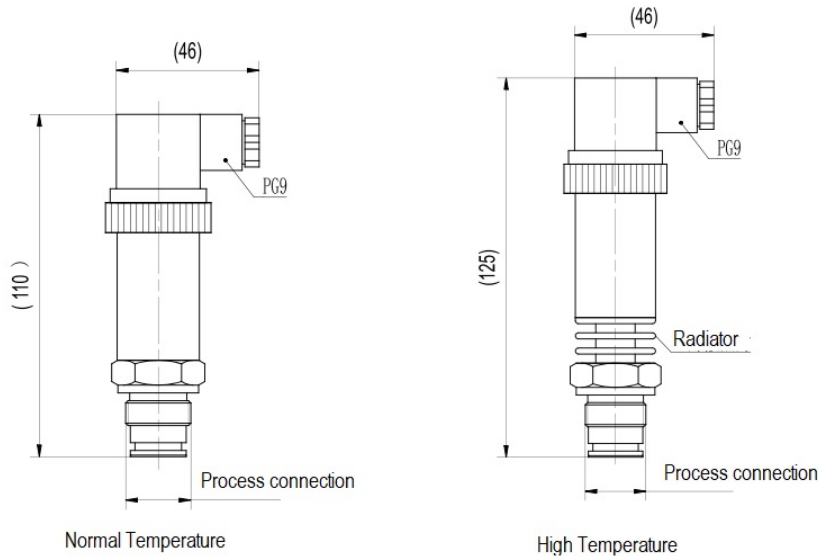
Tri-clamp pressure sensor Dimensions

Unit:mm



Screw connection pressure sensor Dimensions

Unit:mm



Model Selection

Item	Code	Description	
Type	A	4-20mA Output	
	S	4-20mA Output & Hart Protocol	
	R	Modbus RS485	
	V	0-5V	
Product	SH316-W	Sanitary pressure sensor	
Pressure Type	A	Absolute pressure	
	G	Gauge Pressure	
Digital Display	1	Without display	
	3	Digital Display	
Measuring Range & Pressure type	1	0-10 Kpa	G/Y
	2	0-40 Kpa	G/Y
	3	0-100 Kpa	G/Y
	4	0-160 Kpa	G/A/Y
	5	0-400 Kpa	G/A/Y
	6	0-600 Kpa	G/A/Y
	7	0-1 Mpa	G/A/Y
	8	0-1.6 Mpa	G/A/Y
	9	0-2.5 Mpa	G/A/Y
	10	0-4 Mpa	G/A/Y
	11	0-6 Mpa	G/A/Y
	12	0-10 Mpa	G/A/Y
	13	0-25 Mpa	G/A/Y
	14	0-40 Mpa	G/A/Y

	15	0-60 Mpa	G/A/Y
Process connections	1	sanitary Tri-clamp flush diaphragm Ø38mm	
	2	sanitary Tri-clamp flush diaphragm Ø50.5mm	
	3	sanitary Tri-clamp flush diaphragm Ø64mm	
	4	sanitary Tri-clamp flush diaphragm Ø78mm	
	5	Threaded flush diaphragm M20*1.5(M)	
	6	Threaded flush diaphragm G1/2(M)	
	7	Threaded flush diaphragm G1(M)	
	8	Threaded flush diaphragm G1 1/2(M)	
	T	Special specifications	
Explosion proof	N	Non explosion proof	
Electrical Connection	H	Hirschmann PG9 ,IP65 (Std.)	
	H7	Hirschmann PG7,IP65	
	C	Cable outlet,IP67	
	M	M12×1, 4-pin,IP65	
Others (options)	R	High Temp. Radiator:R1=150°C;R2=220°C;R3=260°C	

Options

Project	Code	instruction
Protection level	P7	IP67
Special Fill Fluid	Z	Vegetable oil
Digital Display Module	SX	4-digit LED display

Notes:

- 1 Tri-Clamp installation is available, with a maximum measuring range of 2.5 MPa.
2. When selecting an IP67 protection rating, the Hirschmann connector is not applicable for electrical wiring.
3. For oxygen measurement, the instrument must use fluorinated oil as the fill liquid and fluororubber (FKM) sealing rings. The operating conditions should be limited to pressures below 6 MPa and temperatures below 60°C.
4. If tantalum is selected as the wetted material, the allowable wetted temperature range is -10°C to 200°C.
5. Users must carefully consider the corrosiveness of the process medium when selecting wetted materials. Inappropriate material selection may lead to unexpected corrosive leaks, posing serious risks to personnel safety and factory equipment. Special attention should be given to media with strong corrosivity, such as acids, sulfuric acid, hydrogen sulfide, sodium hypochlorite, or high-temperature steam above 150°C. The selection must comply with actual operating conditions and design requirements.
6. If any of the above specifications do not meet your requirements, please contact silverinstruments.com for customization options.