

# SH316-C Series Ceramic Pressure Sensor

## Overview

The SH316-C pressure sensor features an imported ceramic capacitive pressure sensor as its core measurement component, specifically designed for applications in the pulp and paper industry. This pressure sensor offers various process connection options, ensuring that the diaphragm is flush with the container or pipeline wall. This design effectively eliminates clogging issues caused by crystallization, polymerization, or sedimentation in high-viscosity processes commonly found in pulp and paper manufacturing. Additionally, the SH316-C supports HART digital communication protocol, enabling quick and convenient range reconfiguration, calibration, and troubleshooting.

#### Applications

- Water Supply System
- food processing
- Gas Compression Equipment
- Wastewater Treatment Control
- Vacuum Equipment
- Fire Water System

#### **Technical Specifications**

Performance	
Pressure type	Gauge pressure, absolute pressure
Range	0~2.5Kpa7Mpa
Accuracy	0.075%,0.1%
Stability	≤± 0.1% 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	-20~80 °C
Overload resistance	500% of full range

#### **Applicable Operation Conditions**

Operation temperature	Fluids Temperature (-40~60°C) Ambient Temperature (-40~85°C)
Storage temperature	-40~85°C
Humidity	≤95% RH

#### Transmitters

Output	4-20mA,4-20mA +HART,MODBUS RS485		
Display	No display, LCD display		
Power supply	10-32V DC(4-20mA,HART)		
	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		

#### Sensor range and limit

	Minimum range	Upper range limit	Lower range limit	
Pango soction	Gauge pressure	Gauge pressure	Gauge pressure	Gauge pressure
Range Section	absolute pressure	absolute pressure	absolute pressure	(negative pressure)
0-2.5KPa	0.25KPa	2.5KPa	0	-2.5KPa
0-10KPa	1KPa	10KPa	0	-10KPa
0-20KPa	2KPa	20KPa	0	-20KPa
0-40KPa	4KPa	40KPa	0	-40KPa
0-100KPa	10KPa	100KPa	0	-100KPa
0-200KPa	20KPa	200KPa	0	-
0-400KPa	40KPa	400KPa	0	-100KPa
0-1MPa	100KPa	1MPa	0	-100KPa
0-2MPa	200KPa	2MPa	0	-100KPa
0-4MPa	400KPa	4MPa	0	-100KPa
0-7MPa	700KPa	7MPa	0	-100KPa

# Material

Housing	Alumina ceramic
Sensor seal material	FFKM,FKM,DPDM
process connection material	SS316(Std.),PP,PVDF

## Dimensions

Unit:mm





Process connection	L	
	Dimensions	
G1/2	136	
M20*1.5	136	
NPT1/2	136	
NPT1/4	131	

Process connection	L Dimensions	
M42*1.5	106	
M44*1.5	106	
G11/2	106	
G2	106	

#### **Model Selection**

Item	Code	Description		
Product model	SH316-C	Ceramic Pressure Sensor		
	А	Absolute pressure		
Pressure Type	G	Gauge Pressure		
	Υ	Gauge pressure (also for negative pressure)		
Digital Display	1	Without Display		
Digital Display	3	Digital Display		
	01	0-2.5 Kpa	G/Y	
	02	0-10 Кра	G/A/Y	
	03	0-20 Kpa	G/A/Y	
06	04	0-40 Кра	G/Y	
	05	0-100 Kpa	G/A/Y	
	06	0-200 Kpa	G	
	07	0-400 Kpa	G/A/Y	

	08	0-1Mpa	G/Y	
	09	0-2Mpa	G/Y	
	10	0-4Mpa	G/Y	
	11	0-7Мра	G/Y	
	E	4-20mA		
Output signal	S	4-20mA+HART		
	М	Modbus RS485		
Electrical connection	2	Hirschmann PG9		
	3	Direct line		
	0	M20* 1.5 (M)		
	1	G1/2 (M)		
Process connections	2	NPT1/2-14 (M)		
	3	M42 *1.5		
	4	M44 *1.25		
	Т	Others(please specify )		
Drassa Correction	В	SUS 316L (Std.)		
Matorial	С	PP		
Material	D	PVDF		

Note:

1. Oxygen measurement is limited to fluorine oil filling liquid, fluorine rubber sealing ring, less than 6MP, less than 60°C.

2. Users must consider the corrosive of the material of the liquid contact part and the medium. Inappropriate materials may cause unexpected corrosive medium leakage, causing serious damage to the human body and factory equipment. Selection must pay attention to: if the medium is highly corrosive such as acid, sulfuric acid, H2S, sodium hypochlorite, etc. or high-temperature steam above 150°C, the current design requirements must be followed.

3. If the above individual parameters do not meet your requirements, please contact silverinstruments.com.