SHDP & SHGP series Differential and Pressure Transmitters

Metal capacitive pressure sensor
High accuracy ±0.1%FSO, ±0.2%FSO, 0.5%FSO
For General Industrial Applications

General Information

SHDP and SHGP series smart differential pressure and pressure transmitters made from high-quality metal capacitive differential pressure sensor. These series smart transmitter is suitable for measuring flow, liquid level and pressure (differential pressure, gauge pressure and absolute pressure). Smart pressure transmitter is microprocessor-based pressure-sensing instrument, it have high performance and reliability with the flexibility of digital electronics.

Applications

Be suitable to measure liquid, gas or steam flow as well as liquid level, density and pressure.
Process control systems
Chemical industry
Energy industry
Machine building

Features

- Suitable for measurement of differential pressure, gauge pressure and absolute pressure
- Accuracy: ±0.1%FSO, ±0.2%FSO, 0.5%FSO
- Calibrated and temperature compensated
- Metal capacitive pressure sensor design
- Support HART protocols& MODBUS RS485
- Excellent long-term stability

Pressure sensor Range & URL

Table 1

Range	Type	Min	Max	Lower Limit	Overpressure*
0-1.6KPa	Low DP	0.16KPa	1.6KPa	-1.6KPa	2Mpa
0-6KPa	DP	1.6KPa	6KPa	-6KPa	4MPa
	High static pressure	1.6KPa	6KPa	-6KPa	10MPa
	Gauge pressure	1.6KPa	6KPa	-6KPa	1MPa
0-40KPa	DP	6KPa	40KPa	-40KPa	10MPa
	High static pressure	6KPa	40KPa	-40KPa	16/25/32MPa
	Gauge pressure	6KPa	40KPa	-40KPa	1MPa
0-200KPa	DP	40KPa	200KPa	-200KPa	10MPa
	High static pressure	40KPa	200KPa	-200KPa	16/25/32MPa
	Gauge pressure	40KPa	200KPa	-200KPa	2MPa
	Absolute Pressure	40KPa	200KPa	4KPa A	2MPa
0-1MPa	DP	180Kpa	1MPa	-1MPa	10MPa
	High static pressure	180Kpa	1MPa	-1MPa	16/25/32MPa
	Gauge pressure	180Kpa	1MPa	-1MPa	4MPa
	Absolute Pressure	180Kpa	1MPa	4KPa A	4MPa
0-2.5MPa	DP	0.8MPa	2.5MPa	-2.5 MPa	10MPa
	High static pressure	0.8MPa	2.5MPa	-2.5 MPa	16/25 MPa
	Gauge pressure	0.8Mpa	2.5Mpa	-2.5 Mpa	4Mpa
	Absolute Pressure	0.8Mpa	2.5Mpa	4Kpa A	4Mpa
0-10Mpa	DP	2MPa	10MPa	-10MPa	10MPa
	Gauge pressure	2MPa	10MPa	-10MPa	15MPa
	Absolute Pressure	2MPa	10MPa	4Kpa A	15MPa
0-20MPa	Gauge pressure	8MPa	20MPa	-20MPa	30MPa
	Absolute Pressure	8MPa	20MPa	4Kpa A	30MPa

When it is for differential or high static differential, overpressure means static pressure limit.

Electrical Specifications

Sensor Type	Metal capacitive pressure sensor
Pressure Type	Gauge pressure, differential pressure, absolute pressure, high static pressure
Accuracy	0.1%, 0.2%,0.5%
Measuring Range	0~20Mpa
Stability	≤± 0.2 % /URL (12 months)
Effect of Mounting position:	Position effect can be adjusted by zero clean
Effect of static pressure	≤± 0.2% /URL/1Mpa
Temperature drift	≤±0.2% F.S/10 ˚C
Response Time	0.25s
Effect of Power supply:	≤± 0.005% /URL/V
Effect of Vibration	≤± 0.25% /URL/g

Operation Condition

Environmental temp.:	-40...+105˚C
Storage temperature:	-40...+85˚C
Humidity	≤ 95% RH

Transmitter Module

Output	4-20mA,4-20mA+HART,MODBUS RS485
Display	LCD display
Power supply	10-32V, HART needs≥18.5V
Diagnostic Function	Output alarm current if instruments is broken
View of units	Pa, kPa, Mpa, bar, mbar,%, psi, mmH_2O

Material Specifications

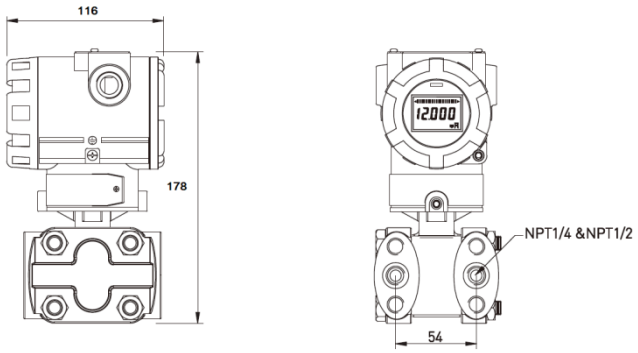
Housing Material	Low copper aluminum die casting (Std), SUS304,SUS316
Sensor diaphragm Material	SUS316L,Hastelloy C-276,Tantalum,Monel,316SS gold plating
Ingress protection	IP65,IP67
Filling oil	Silicon oil, fluorocarbon oil, vegetable oil
Sealing Material	FKM, Teflon, copper
Name Plate Material	SUS304
Process Connection Material	SUS304, SUS316L

Model Selection

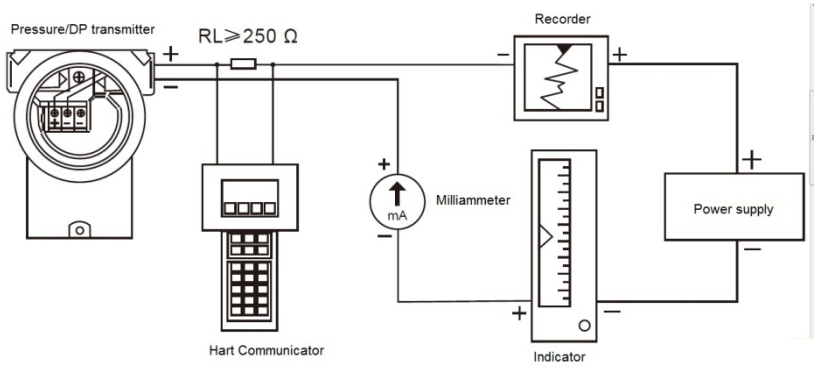
Code						
SH	SH Series Pressure transmitter/DP transmitters					
Code	Types	DR	DP	GP	HP	AP
DR	Low differential pressure	*			*	
DP	Differential Pressure		*			
GP	Gauge Pressure			*		
HP	High Static Pressure				*	
AP	Absolute Pressure					*
Code	Measuring Range	DR	DP	GP	HP	AP
2F	(0-1.6)Kpa	*			*	
3E	(0-6)Kpa		*	*	*	
4E	(0-40)Kpa		*	*	*	*
5E	(0-200)Kpa		*	*	*	*
6E	(0~1)Mpa		*	*	*	*
7E	(0-2.5)Mpa		*	*	*	*
8E	(0-10)Mpa		*	*	*	
0E	(0-20)Mpa			*		
Code	Accuracy					
1	0.1 %					
2	0.2 %					
Code	Explosion Proof					
P	Without Explosion proof (Std.)					
d	Explosion proof Exd II BT4					
i	Intrinsically safe explosion-proofExia IIC T6					
Code	Display					
M5	Digital Display					
Code	Output					
E	(4-20mA)					
S	(4-20mA) & Hart					
M	Modbus RS485					
Code	Material					
	Flange/Connector	Drain/vent valve	Isolation Diaphragm	Filled Liquid		
22	316 sst	316 sst	316L	Silicon oil		
23	316 sst	316 sst	Hastelloy C	Silicon oil		
24	316 sst	316 sst	Monel	Silicon oil		
25	316 sst	316 sst	Tantalum	Silicon oil		
Code	Process Connector					
C0	1/4"NPT (F)					
C1	1/2"NPT(M)					
C2	M20×1.5(M)					
C3	1/2"NPT(F)					
C4	G1/2 (M)					
Code	Mounting Bracket					
B1	Bent Bracket for pipe mounting (2" pipe)					
B2	Bent Bracket for plate mounting					
B3	Flat bracket for pipe mounting (2" pipe)					
Code	Sealing Material					

Code	
01	Fluororubber
02	Copper
03	Others
Code	Sensor Type
C	Metal capacitive pressure sensor

Dimensions (mm)



Electrical Connection Diagram



Installation with Mounting Bracket