

SGM/S

Smart Differential Pressure Transmitter
Monocrystalline silicon differential pressure sensor
Mass production, automated calibration

Features

- The highest accuracy be $\pm 0.065\%$
- Overload pressure up to 10MPa
- Excellent overvoltage performance
 - overpressure of 1kPa nominal range chip: 1MPa
 - overpressure of 6kPa nominal range chip: 2MPa
- Flexible range of compression Range ratio up to: 100:1
- Excellent operability & convenient use
- Five-digit LCD with backlight
- View of units (Pa, kPa, MPa, bar, mbar, %, psi, mmH₂O)
- Quickly adjusted through built-in three buttons



Application

- Be suitable to measure liquid, gas or steam flow as well
- Process control systems
- Chemical industry
- Energy industry
- Machine building

Technical data

Performance

Accuracy*	0.065%FS@25°C(Min.) 0.1%FS@25°C(Typ.)	*Linearity (best straight line) + Hysteresis + Repeatability
Operating Temperature	-40 to 85°C	
Storage temperature	-40 to 90°C	
Temp. coeff - Zero	$\pm(0.08\% \text{range} + 0.055\% \text{ upper limit of range})$	
Temp. coeff - Span	$\pm(0.08\% \text{range} + 0.055\% \text{ upper limit of range})$	
Vibration	20 g RMS(20 to 2000Hz)	
Shock	100 g(10ms)	
Cycles	10×10^5	
Effect of overpressure	$\pm(0.065\% \text{ upper limit of range})/5\text{MPa}$	
Long Term Stability	$\pm 0.05\% \text{ upper limit of range/year}$	

Electrical @25°C

Output signal / Supply	2-wire 4...20mA+HART / $V_s = 10.5... 45\text{VDC}$	*Intrinsic safety explosion-proof DC10.5~26V
Load resistance	250~600 DC 24V, include cable resistance	
Insulation Resistance	100 M Ω @100VDC	
Load capacity	0.55mF	
Load inductance	3.3mH	
Spacing above power line	15cm(please avoid parallel wiring)	
Saturation current	Upper limit 20.8mA, lower limit 3.8mA	
Adjustment function	The zero & full span point can be adjusted in situ through three-button from the top of the housing or be adjusted remotely through configuration software.	
EMC Test	IEC61000-6-2/IEC61000-6-3	
Effect of Power supply	$\pm 0.005\% / 1\text{V}$	
Damp	The time constant can be adjusted from 0 to 99.9 seconds	
Reverse polarity protection	No damage – no function	

Physical Specifications

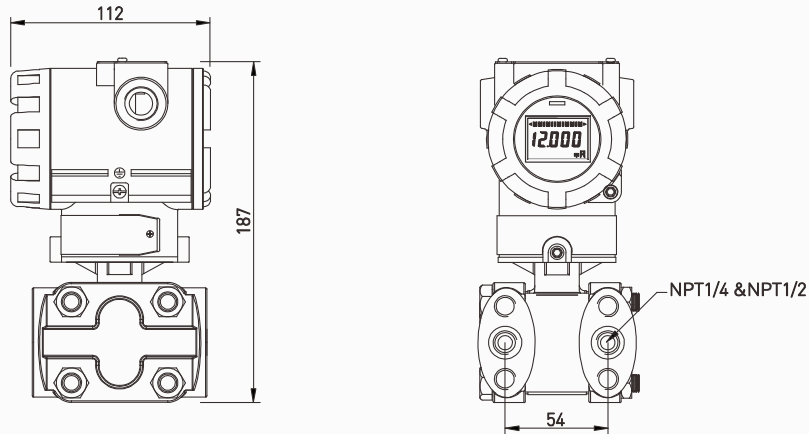
Housing	Low copper aluminum die casting + polyurethane coating
Diaphragm	SUS316LSS, Hastelloy C-276, Tantalum
Sealing	NBR or Viton O-ring
Oil Filling	Silicone oil
Protection	IP67
Weight	~4.2kg(without cable)

The listed specifications and dimensions are subject to change without prior notice

SGM/S

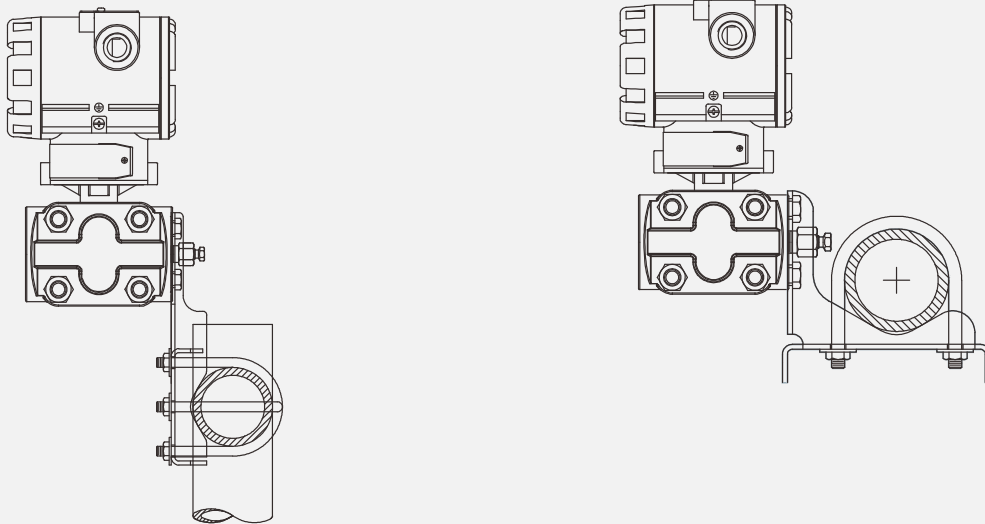
Smart Differential Pressure Transmitter
 Monocrystalline silicon differential pressure sensor
 Mass production, automated calibration

Dimensions (All dimensions in mm)



Code B1
 Flat bracket

Code B2
 Right angle bracket



Standard pressure range & URL

Code	Nominal pressure [bar]	Overpressure [bar]	Static pressure [bar]
S1	0...0.01	10	70
S2	0...0.06	20	70
S3	0...0.4	70	160
S4	0...1	100	250
S5	0...4	100	250
S6	0...40	100	250
S7	0...100	100	250

SGM/S

Smart Differential Pressure Transmitter
Monocrystalline silicon differential pressure sensor
Mass production, automated calibration

Ordering code

Model			
SGM/S			
Code	Pressure range		
S1	10 mbar		
S2	60 mbar		
S3	400 mbar		
S4	1 bar		
S5	4 bar		
S6	40 bar		
S7	100 bar		
99	Customized range		
Code	Pressure Type		
D	Differential		
G	Gauge		
A	Absolute		
Code	Output signal		
A	4...20mA+HART Protocol		
Code	Accuracy		
01	0.065%FS	URL>100mbar	
02	0.1%FS		
03	0.2%FS		
04	0.5%FS		
Code	Materials		
	Membrane	Flange	Filled liquid
22	316LSS	316SS	Silicone oil
23	Hastelloy-C	316SS	Silicone oil
24	Tantalum	316SS	Silicone oil
25	316LSS gold plating	316SS	Silicone oil
26	316LSS	316SS	Fluorocarbon oil
27	Hastelloy-C	Hastelloy-C	Silicone oil
Code	Mounting kit		
B0	No		
B1	L type mounting kit		
Code	Process connection		
D42	1/2 -18NPT Female		
D43	1/2 -14NPT Female		
D44	Customized		
Code	Electrical connection		
E1	M20x1.5		
E2	1/2"NPT		
Code	Meters		
M1	LCD display		
Code	Sealing materials		
01	Fluororubber		
02	NBR		
Code	Mounting bracket		
B1	Flat bracket		
B2	Right angle bracket		
Code	Explosion-proof		
N	No		
IA	Intrinsic safety and dust explosion-proof approval		
D	Flame-proof and dust explosion-proof approval		
Code	Label		
S	Standard		
N	Neutral packing		
C	Custom label		