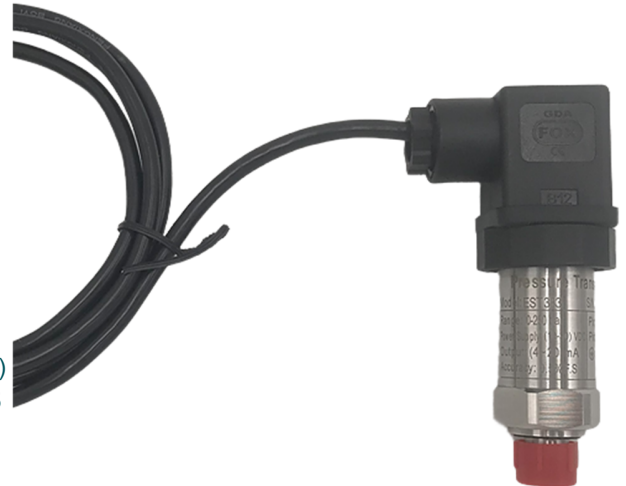


EST380 Thin-Film Heat-resistant Pressure Transmitter

[Thin-Film Sputtering]

- ✓ **Pressure Type:** Gauge/Seal gauge/Absolute Pressure
- ✓ **Working Temperature:** -40°C~150°C
- ✓ **Temperature Compensation:** -20°C -10°C-0°C~120°C
- ✓ **Sensing:** Thin Film Sputtering
- ✓ **Burst Pressure:** 3X-10X
- ✓ **Structure:** All-Welded, No O-rings, No Fluid Filled
- ✓ **Range:** 0~0.4MPa~200MPa; (0~4bar~2000bar)
- ✓ **Accuracy:** $\pm 0.1\%$ F.S, $\pm 0.25\%$ F.S, $\pm 0.5\%$ F.S
【including non-linearity+ repeatability+ hysteresis】
- ✓ **Stability:** 0.25%F.S/Year(typical), 0.4%F.S/Year(maximum)
- ✓ **Signal Output:** 4~20mA, 0~10/20mA, 0/5~10V, I2C/RS485
- ✓ **Power supply:** 3.3V/12~30Vdc



Applications

Construction Machinery | Automobile engines | High-pressure common-rail engine | Hot and Cold environment | Deep well hydraulic detection | Boiler pressure detection | Natural gas storage equipment | Hydraulic lubrication | Pneumatics

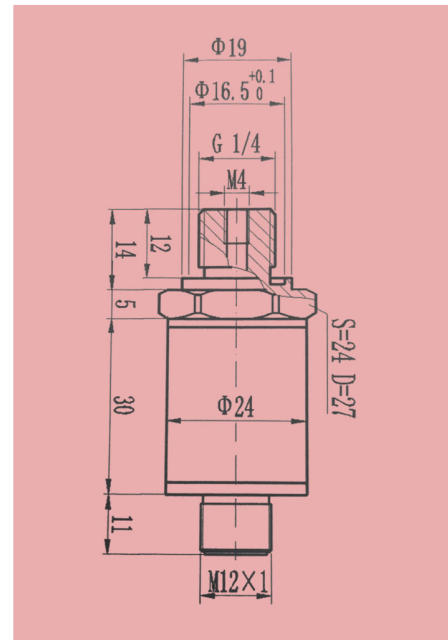
Product Introduction

EST380 series pressure transmitter is a **rod-shaped mini pressure transmitter**. It uses a highly reliable **metal sputtered thin film core** as the sensitive core, and after temperature compensation, digital circuit correction and signal conditioning, it outputs standard industrial application and network signals. The medium measurement part is made of **17-4PH elastic stainless steel**, which has good resistance to media performance.

EST380 is sputter thin film type pressure transmitter, that features heat-resistance (**-40~150°C or even 200°C**), wide range and high accuracy(**0.1%-0.25%/FS**). It includes protective circuits that feature pressure peak damping and load-dump protection, and it is resistant to EMV stability reverse voltage. It is calibrated electronically, ensuring its readings have minimal total error and are reliable over time.

For EST380, the hermetically sealed thin film measuring cell contributes to its long-term resistance to leakage and stability (**no oil fluid filled**). Its stainless-steel membrane, which is vacuum-sealed and highly burst-resistant, suits all standard media in various fields (**hydraulics, pneumatics, environmental and process technologies, semi-conductor technologies, and automotive engineering**), given their compatibility with stainless steel.

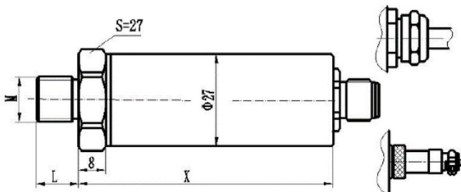
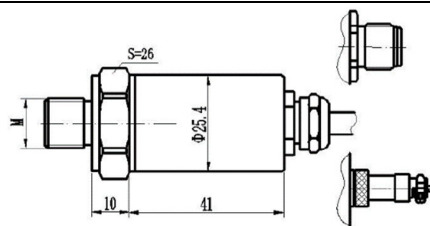
It chiefly serves standard applications in hydraulics and other sectors. Given its high accuracy (**0.1% | 0.25% | 0.5%**) and robust structure (**no O-Ring**), compact design (**short size $\pm 60\text{mm}$**), it is versatile for many industrial uses. You can select from a different pressure range of pressure transmitters (**0-4bar; 0-10bar, 0-500bar, 0-1000bar, 0-2000bar or more**) thanks to the combination of different mechanical and electronic connections.



Electrical Connections and Dimensional Drawings

Electrical Specification			
Current Type(2-wire)		4-20mA	12V-30VDC
Voltage Type (3-wire)		0-5V	6V-24VDC
		0-10V	12V-30VDC
I2C(4-wire)		I2C	3.3V-5VDC
RS485 (4-wire)		RS485	5V-30VDC
Load resistance(R): Current type(2-wire); $R \leq (U-10)/0.02-RD$ (U: power voltage; RD: Internal resistance of cable)			
Current consumption:			
<ul style="list-style-type: none"> Current type(2-wire): < 23mA Voltage type (3-wire): < 5mA 		<ul style="list-style-type: none"> I2C(4-wire): < 1.3mA (Optional Low Consumption: < 5 μ A) RS485 (4-wire): < 5mA (low consumption 1.1mA) 	
Precision Specification			
Reference Accuracy (°C.)	0.1	0.25	0.5
Non-linearity	<=0.1%	<=0.2%	<=0.4%
Hysteresis	<=0.05%	<=0.05%	<=0.1%
Repeatability	<=0.05%	<=0.05%	<=0.1%
Long-term Stability (%FS)	<=0.1%	<=0.2%	<=0.5%
	Including Linearity Hysteresis+ Repeatability from zero; Square root output accuracy=1.5X of the linear		
Temperature. Drift @ Zero	<=0.01%	<=0.03%	<=0.05%
Sensitivity. Drift @ Zero	<=0.01%	<=0.03%	<=0.05%
Reference Temperature: 20~25 °C; relative humidity: 45%RH~75%RH; Voltage: 24V±0.24V; 5V±0.05V			
Environment & Working Conditions			
Compensation Temperature	0°C~+100°C (≤default) , -20°C~120°C (optional)		
Medium Temperature	-40°C~+150°C (regular type) /-40°C~+200°C(with heat radiator)		
Environment Temperature	-40°C~+85°C		
Storage Temperature	-40°C~+125°C		
Note:			
① When the pressure transmitter is operating normally, the medium being measured must not solidify or partially solidify.			
② The specially customized sputtering thin-film sensor part can operate in ultra-low temperature environments of -196 °C or high temperature environments above 150 °C.			
Ingress Protection	IP66		
Atmospheric Pressure	86kPa~106kPa		
Vibration	20g (@10Hz~2000Hz)		
Shock	100g/11ms		
Life-Span/usage	>10 million load cycles (within the measuring range)		

Structure Size Outline Dimension (mm)

The image below shows the typical product structure. For other shapes and structures, please contact us for customization.	
01	02
	

04	21
41	54
	-Customization Available-

Process Connection Thread Data

NPT1/2	NPT1/4	NPT1/8	R1/4
G1/2	G1/4	M20X1.5	M12X1.5

Thread Type	Length	Thread Type	Length	Thread Type	Length
M22X1.5	15mm	NPT1/2	18mm	G1/2	15mm
M20X1.5	15mm	NPT3/8	18mm	G3/8	15mm
M18X1.5	15mm	NPT1/4	15mm	G1/4	15mm
M16X1.5	15mm	NPT1/8	15mm	G1/8	12mm
M14X1.5	15mm	PT1/2	15mm	GSP1/2	15mm
M12X1.	15mm	PT3/8	15mm	GSP3/8	15mm
M10X1	12mm	PT1/4	12mm	GSP1/4	15mm
M8 X1	12mm	PT1/8	12mm	GSP1/8	12mm

Electrical Connection

DIN43650	Terminals	Current (2-wire)	Voltage (3-wire)	IIC(4-wire)	RS485(4-wire)
	1	Vcc	Vcc	Vcc	Vcc
	2	Iout	GND	GND	GND
	3	/	Vout	SCL	RS485A
	⊕	PE	PE	SDA	RS485B
Aviation Plug	Terminals	Current (2-wire)	Voltage (3-wire)	IIC(4-wire)	RS485(4-wire)
	1	Vcc	Vcc	Vcc	Vcc
	2	Iout	GND	GND	GND
	3	PE	Vout	SCL	RS485A
	4	/	PE	SDA	RS485B
Industry Terminals Connection	Terminals	Current (2-wire)	Voltage (3-wire)	IIC(4-wire)	RS485(4-wire)
	Black	PE	PE	PE	PE

Ordering Procedure

EST	Heat-resistant Pressure Transmitter									
	Code	Model								
	380G	Universal								
	380C	With Display								
	Code	Pressure Type								
	G	Gauge								
	A	Absolute								
	Code	Span								
	1	0~0.4...150Mpa								
	2	0~0.4...200MPa								
	Code	Output Type								
	A	4~20mA								
	A1	0~5V /0.5-4.5V								
	A2	0~10V								
	V	I2C								
	V2	RS485								
	Code	Precision								
	0.1	±0.1%F.S [Customization]								
	0.25	±0.25%F.S								
	0.5	±0.5%F.S								
	Code	Power Supply								
	DC11	3.3~5 Vdc								
	DC12	10~30 Vdc								
	Code	Pressure connections								
	M	M20 x 1.5								
	G2	G1/2								
	G	G1/4								
	N2	NPT1/2								
	N	NPT1/4								
	R	R1/2								
	Code	Electrical Connections								
	H	DIN43650A								
	GX	GX16-7								
	C	Waterproof wire jacket connection								
	CW	Waterproof cable conduit connections								
	P	Packard								
	Code	Cable length XXm=... m								
	Code	Packing								
	Bb	Bubble bag								
	Foa	Plastics foam								
EST	380G	G	1	A	0.25	DC12	G	C	1.5m	Bb