EST386 Thin-Film Pressure Transducer for Cryogenic

- ✓ Accuracy: ±0.2%F. S |: ±0.5%F. S
- ✓ Range: 0~0.1bar~2000bar
- ✓ Sensing: Thin-Film
- ✓ Stability: ±0.2%F. S
- ✓ All-Welded Stainless-Steel
- ✓ Ultralow Temperature for Cryogenic Industry: -196~85℃
- ✓ Medium: Liquid Oxygen (LOX) | Hydrogen | Nitrogen

Applications

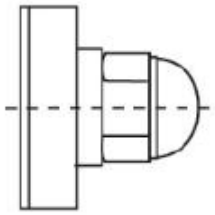
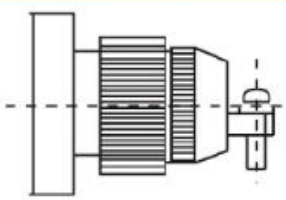
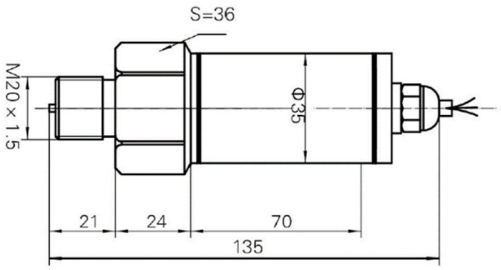
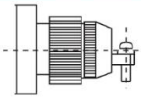
Cryogenic Science Laboratory, Liquid Oxygen, Liquid Nitrogen, Liquid Hydrogen, Liquid Helium, Cooling Tanks, Cryogenic Storage Tanks, Pressure Cryogenic Measurement of Propellants, Cryogenic Storage Tanks for Aerospace, Aviation, Ships, etc.

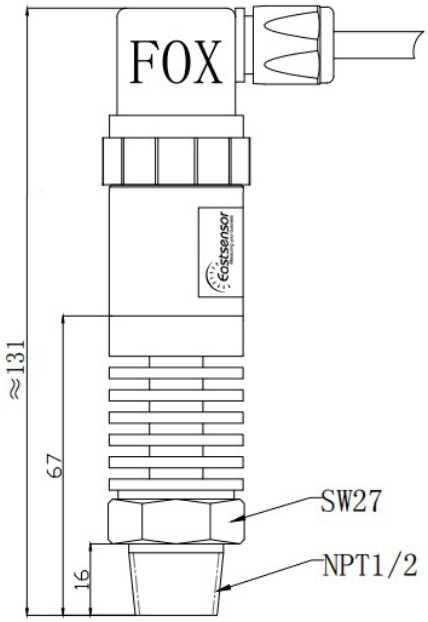
Product Introduction

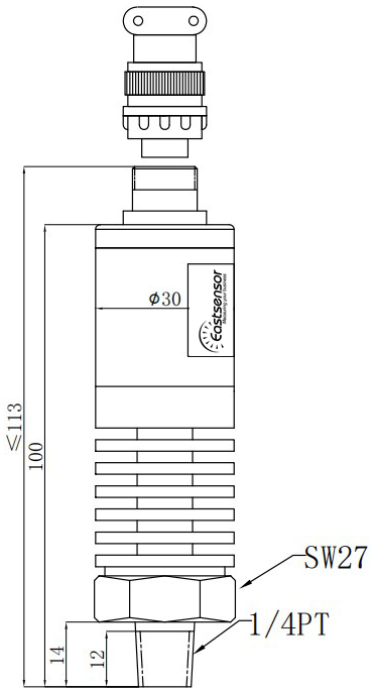
EST386 Sputtered Thin Film Pressure Transducer was designed for cryogenic service; it can operate in temperatures from -196°C to +85°C (-320°F to +138°F.) Yet, even in these difficult temperatures, it provides outstanding accuracy, long-term calibration stability and reliability. Static accuracy can be ±0.2%, and thermal zero and sensitivity shifts over the compensated range of -196°C to +27°C (-320°F to +80°F) are less than ±0.01%/°F. The all-welded stainless-steel pressure cavity and double-isolated case ensures reliability in the tough environments normal to cryogenic service.

Eastsensor's thin film technology makes this premium performance possible. The strain gages are sputter-deposited, forming a molecular bond with the substrate. There is virtually no shift, drift, or creep to cause the transducer's calibration to change.

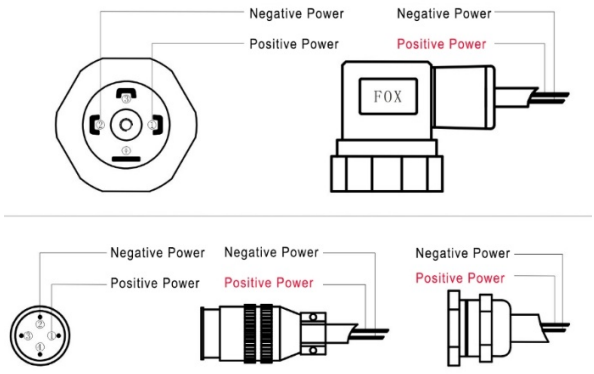
Electrical Connections and Dimensional Drawings

<table>
<tr><td>Water-Proof Cable Outlet</td><td>MS Mating Connector</td><td colspan="2">Drawing</td></tr>
<tr><td>  </td><td>  </td><td colspan="2"> 
</td></tr>
<tr><td colspan="2">Water-Proof Cable Outlet</td><td colspan="2">MS Mating Connector</td></tr>
<tr><td>  </td><td>U+ / I+ = Red
U- / I- = Black
S+ = Green / Blue
Shield = Housing /Yellow</td><td>  </td><td>U+ / I+ = B
U- / I- = A
S+ = C
Shield = Housing</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
</table>

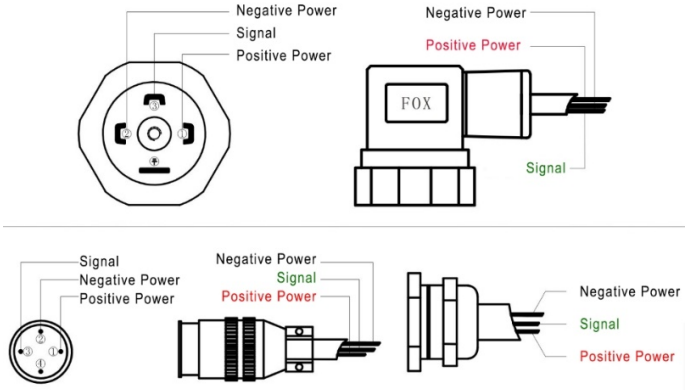


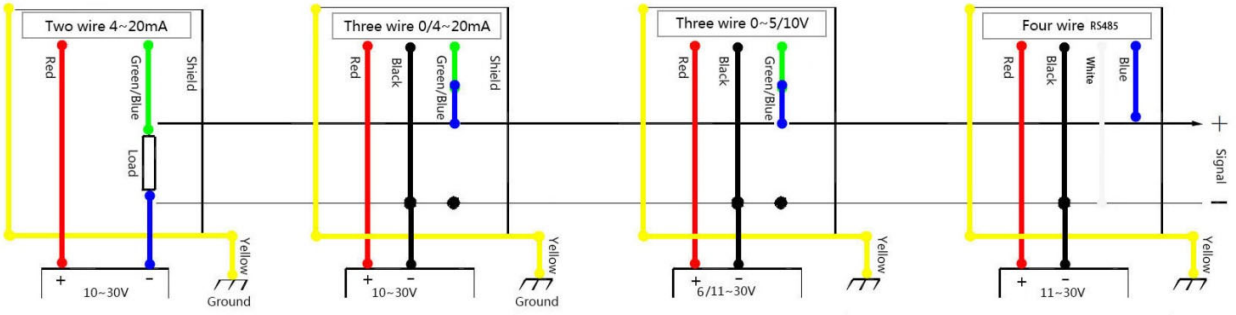


Connection of 4-20mA



Connection of 0-5V/0-10V





Specifications

Measuring Range	0~0.1bar-2000bar			Medium compatibility	Corrosive medium compatible with 1Cr18Ni9Ti
Overload	2 times of rated pressure			Insulation	>500MΩ@250Vdc
Medium	Air/Gas/Liquid			Electric Strength	500V@60second
Accuracy	±0.2%F.S; ±0.5%F.S			Electrical Connections	HSM. DIN4365, IP65/ MS Mating Connector, IP67
Stability	0.25%F.S/Y, 0.4%F.S/Ymax			Process connection	M20x1.5; M14x1.5; NPT½; NPT¼; BSP ½"; BSP ¼";
Working temperature	-60～85℃; -100～85℃; -196～85℃;			Response Time	10ms
Ex-Proof	ExiaIICT6			EMC	EMI：EN50081-1/-2；EMS：EN50082-2
Electrical parameters	Two wire	Three wire			
Output Signal	4~20mA	0/1~5Vdc	0/1~10V		
Power supply	10~30Vdc	6~24Vdc/10~36Vdc	11~30Vdc/20~36Vdc		
Load resistance	(U-10)/0.02(Ω)	＞100K Ω			

1MPa=10bar; 1bar≈14.5PSI; 1PSI=6.8965kPa; 1kgf/cm2=1atm; 1atm≈98kPa

Ordering Procedure

EST	Thin-Film Pressure Transmitter for Cryogenic

Code	Model
386	Universal

Cod	Span
1	-0.1-1500bar
2	1-2000bar

Code	Output Type
A	4~20mA
V	0~5V
V1	0~10V
V05	1~5V
V2	1~10V

Code	Precision
0.5	±0.5%F.S
0.2	±0.2%F.S

Code	Power Supply
DC12	12Vdc
DC24	12~36Vdc

Code	Process connection
M	M20 x 1.5
M14	M14 x 1.5
G2	G1/2
G4	G1/4
N2	NPT1/2
N4	NPT1/4

Code	Electrical Connections
M	MS Mating Connector
C	Waterproof Cable Connection
H	HSM

Code	Cable length XXm=… m

Code	Packing
Bb	Bubble bag
Foa	Plastics foam

EST	386	2	A	0.5	DC12	G4	M	2	Bb