

EST380S-C Thin-Film Pressure Transducer for Cryogenic

- ✓ Accuracy: $\pm 0.2\%$ F. S | $\pm 0.5\%$ F. S
- ✓ Range: 0~1Mpa~300Mpa
- ✓ Sensing: Thin-Film
- ✓ Stability: $\pm 0.2\%$ F. S
- ✓ All-Welded Stainless-Steel
- ✓ Ultralow Temperature for Cryogenic Industry: -196~85°C
- ✓ Medium: Liquid Oxygen (LOX) | Hydrogen | Nitrogen



Applications

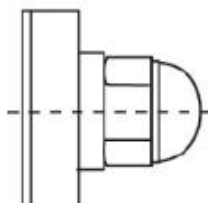
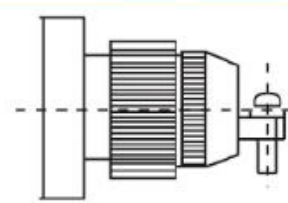
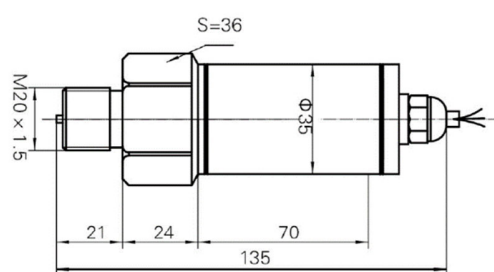

Liquid Oxygen (LOX) | Hydrogen | Nitrogen | Airworthy Liquid engine

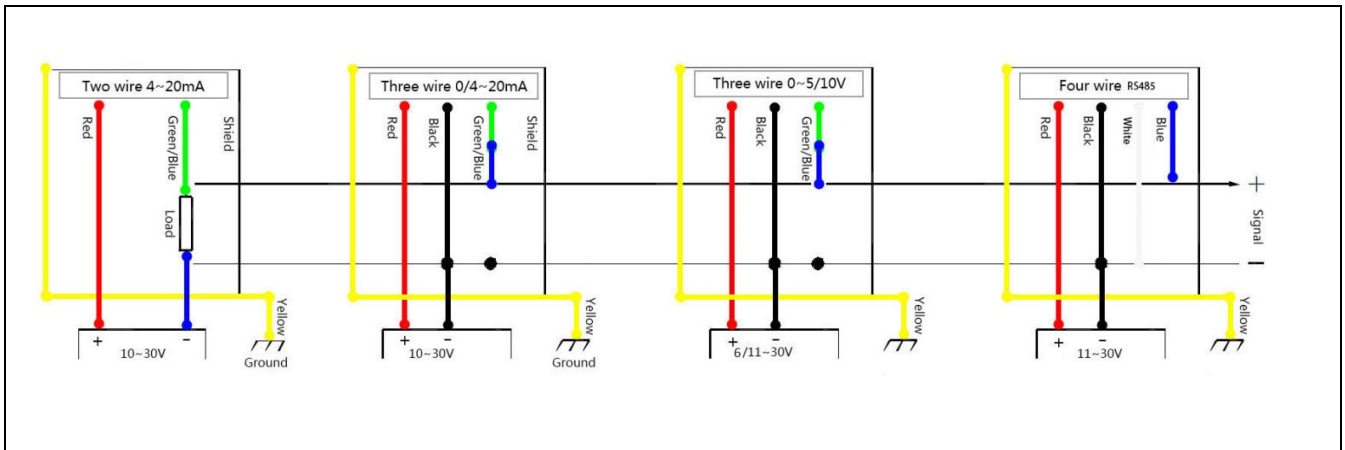
Product Introduction

EST380S-C 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 $\pm 0.2\%$, and thermal zero and sensitivity shifts over the compensated range of -196°C to +27°C (-320°F to +80°F) are less than $\pm 0.01\%/^{\circ}\text{F}$. 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

Water-Proof Cable Outlet	MS Mating Connector	Drawing							
									
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	<table border="1"> <tr> <td>U+ / I+ = Red</td> <td>U+ / I+ = B</td> </tr> <tr> <td>U- / I- = Black</td> <td>U- / I- = A</td> </tr> <tr> <td>S+ = Green / Blue</td> <td>S+ = C</td> </tr> <tr> <td>Shield = Housing / Yellow</td> <td>Shield = Housing</td> </tr> </table>	U+ / I+ = Red	U+ / I+ = B	U- / I- = Black	U- / I- = A	S+ = Green / Blue	S+ = C	Shield = Housing / Yellow	Shield = Housing
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Specifications

Measuring Range	0~1MPa-300Mpa		Medium compatibility	Corrosive medium compatible with 1Cr18Ni9Ti
Overload pressure	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°C; -100~85°C; -196~85°C;		Response Time	10ms
Ex-Proof	ExialICT6		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		
	380S-C	Universal		
		Cod	Span	
		1	-0.1-150MPa	
		2	1-300Mpa	
		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	380S-C	2	A	0.5	DC12	G4	M	2	Bb