



Process Instrumentation

# OYSTER 700

## Submersible Pressure Transducer for water depths up to 2,000 feet.

The **Oyster 700 Series** provide accurate and reliable level measurement utilizing the latest miniature microprocessor technology. The transmitter contains a piezo-resistive sensor that outputs a signal proportional to the hydrostatic pressure on the diaphragm. This signal is compared to the atmospheric pressure via the vent tube and compensated to the water temperature to produce an accurate level measurement.

The benefit of an Oyster submersible pressure transducer is the ease of installation. Just strap the transmitter to a pipe and lower to the desired zero (0) level. That's it. No calibration required! Connect the 2-wire loop powered 4-20mA output and you're done!

This technology is ideal for pump stations, fuel tanks, ship ballast, storage vessels and all types of water and wastewater applications. The open face ceramic diaphragm avoids clogging or build-up from slurry and wastewater sludge. The optional titanium or PVDF housing with the Tefzel cable are ideal for corrosive environments or saltwater installations.



- All Welded SS 316L, Titanium or PVDF
- Molded Polyurethane or Tefzel Cable
- Pre-calibrated to Specified Water Column Range
- General Purpose or FM/CSA Approved Intrinsically Safe
- Integral Temperature Compensation

### Most Popular

- \* Oyster 701 - General Purpose
- Oyster 711 - Intrinsically Safe
- Standard Submersible Transducer

Range: 10 inch to 350 ft W.C.  
Accuracy:  $\pm 0.25\%$  FS (BSL)  
316L SS or Titanium Housing  
1" diameter x 5.75" length  
Polyurethane or Tefzel Vented Cable



### Smallest Diameter

- \* Oyster 705 - General Purpose
- Extra Slim Body Submersible
- Pressure Transducer

Range: 0 to 1000 ft W.C.  
Accuracy:  $\pm 0.1\%$  FS (BSL)  
Stainless Steel 316L  
Sensor: 0.39" diameter X 3.40" Length  
Amplifier: 0.95" diameter X 5.00" Length  
Polyurethane Vented Cable, Kevlar Reinforced



### Most Accurate

- \* Oyster 703 - General Purpose
- Oyster 713 - Intrinsically Safe
- High Accuracy Submersible Transducer

Range: 10 inch to 800 ft W.C.  
Accuracy:  $\pm 0.1\%$  FS (BSL)  
Titanium Housing  
3/4" diameter x 7.25" length  
Polyurethane or Tefzel Vented Cable



### Corrosive Resistant

- \* Oyster 706 - General Purpose
- Highly Chemical Resistant
- Submersible Transducer

Range: 40" to 830 ft W.C.  
Accuracy:  $\leq \pm 0.5\%$  FS ( $\geq 7$  psi FS)  
 $\leq \pm 1.0\%$  FS ( $\geq 7$  psi FS)  
PVDF Housing, PTFE Vented Cable  
Vitron, EPDM, or Kalrez Seals  
1.1" diameter x 5.5" length



# Technical Specifications: Oyster 700



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TECHNOLOGY / OPERATION	
Measuring Principle	Submersible Pressure Transducer
Measuring Range	Version Dependent, up to 2,000 ft W.C.
PERFORMANCE	
Accuracy (combined non-linearity, hysteresis & repeatability)	±0.25% FS (BSL) Standard Version ±0.1% FS (BSL) High Accuracy Version
Overpressure	Full scale ranges up to 20 psi - 10X, Above 20 to 150 psi - 4X
Compensated Temperature Range	30° to 85° F (-2° to +30° C)
Compensated Temperature Accuracy	±1.5% TEB > 5 psi - Standard Version ±0.3% TEB > 5 psi - High Accuracy Version
Power Supply	12-40 VDC, 2-wire system
OUTPUTS	
Analog	1 4-20mA, Loop-powered output
ENVIRONMENT	
Temperature Range	-10° to +175°F (-20° to +80°C)
Outdoor Rating	NEMA 6P (IP 68) Submersible
DESIGN	
Dimensions	Version Dependent
Housing Material	Stainless Steel 316L, Titanium or PVDF (all with Ceramic Face)
Weight	Approximate 1/2 lb (excluding cable)
APPROVALS	
Standard	General Purpose
Hazardous Areas (Optional- requires I.S. Barrier)	FM & CSA Approved Class I, II; Div. I, II; Grp A-G
WARRANTY	
Product Warranty	1 Year

Our policy is one of constant development and improvement. ECHO reserves the right to amend details as necessary. Environmental conditions can affect accuracy slightly.

## Accessories

### Dri-Box Termination Enclosure with Desiccant

NEMA 4X enclosure with terminals, breather vent, desiccant module and moisture status indicator.

*Please specify 799-Dri-Box*



### Surge Protector

DIN rail mounted surge protector designed to 20kA. The module mounts within the Dri-Box and must be ordered at the same time.

*Please specify 799-Surge*



### Cable Hanger

This provides an easy cable support for submersible transducers hanging in a well.

*Please specify 799-Hanger*



### Moisture Protection Balloon

This provides total isolation of the vent tube from atmosphere with a 3" diameter Mylar sphere which changes volume and barometric pressure.

*Please specify 799-Balloon*



### Stainless Steel Cage

This provides a protected cage and sink weight for transducers installed on the bottom of tanks and pump stations. It is 4" height x 4" diameter and approx 3 lbs.

*Please specify 799-Cage*



### Vent Filter

The Vent Filter provides moisture protection of the vent tube with an inline 6" x 3/4" dia. desiccant tube which changes color when maintenance is required.

*Please specify 799-Vent Filter*



#### PART NUMBER CONFIGURATOR

OYSTER 7XX (TYPE) - (SENSOR MATERIAL) - (CABLE MATERIAL) - (CABLE LENGTH FT) - (WATER COLUMN FT/PSI)