

# ECHO™

**MELT PRESSURE SENSORS**



Trusted for quality, reliability  
and accurate performance at  
an affordable price.

## **SENSORS**

**INCORPORATED**

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Sensorsincorporated.com

### Features

- 2 year warranty and 60 years of Dynisco industry experience
- Accuracy better than  $\pm 0.5\%$
- TiAlN diaphragm coating is standard
- mV/V, 0-10VDC, or mA outputs available
- Integral temperature sensor option
- Available in configurations that fit most extruder applications
- 1.5M, 3M, 5M, 7.5M & 10M psi pressure range capability

### Description

The Echo™ Series of melt pressure sensors offer quality performance and value for plastic processing utilizing standard configurations and pressure ranges. Echo sensors are designed to meet customer requirements by providing a combination of economic value and performance for general extrusion applications while providing a  $\pm 0.2\%$  repeatability when measuring process pressures. Use Echo Series sensors when the application requires a quality measurement for optimized control, but not the costs of all the extra features.

Dynisco has produced field-proven pressure sensors for more than 60 years. Echo was designed with the best engineering practices and is backed by Dynisco with a two full years of warranty – double the protection of comparably-priced sensors.

Echo sensor diaphragms are coated with Titanium Aluminum Nitride, as a standard offering, providing superior performance over less effective Titanium Nitride coatings.

Dynisco technology is widely accepted by OEM's and end users throughout the world. The Echo Series sensors are available with 3.33mV/V, 4-20mA, 0-5VDC or 0-10VDC outputs designed to work with most industrial controls. In addition to melt pressure measurement, Echo Series offer a optional melt temperature measurement with type J, K thermocouples or RTD. The Echo Series are equipped with a 1/2-20 UNF or M18 thread for installation in standard transducer mounting holes. Additional mounting configurations are available.



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## Specifications

### PERFORMANCE CHARACTERISTICS

<b>Input excitation:</b>	mV/V: 10VDC recommended, 12VDC max VDC: 16-30VDC mA: 14-30VDC
<b>Output, Analog:</b>	3.33mV/V, 0-10VDC, or 4-20mA
<b>Accuracy*:</b>	±0.5% FS
<b>Repeatability:</b>	±0.2% FSO
<b>Electronics Operating Temperature, max:</b>	mV/V:250°F(120°C);mA,VDC:185°F(85°C)
<b>Overload Pressure Rating:</b>	1.5 x FSO
<b>Pressure Ranges (psi):</b>	1.5M, 3M, 5M, 7.5M or 10M
<b>Pressure Units:</b>	PSI, Bar, Kg/cm <sup>2</sup> , or MPa
<b>Zero Balance Adjustment (±% FS):</b>	mV/V: na; VDC: +15%; mA: ±20%
<b>Zero Balance Setting (±% FS):</b>	mV/V: ±10%; VDC, mA: ±0.5%
<b>Bridge Resistance:</b>	mV/V: 345Ω, min
<b>Insulation Resistance:</b>	mV/V: 1000 MΩ @50VDC; VDC, mA: 100 MΩ @50VDC,
<b>Internal Shunt Calibration (R-Cal):</b>	80% FSO ±1.0% FSO

\* Accuracy is defined as the combined error expressed as a percentage of full scale output. Combined error includes linearity (BSL), as defined in ISA-S37.1.

### MECHANICAL & PACKAGING CHARACTERISTICS

<b>Sensor Technology:</b>	4-arm bonded foil strain gage Wheatstone bridge
<b>Diaphragm Temperature:</b>	662° F (350°C) for Rigid 752° F (400°C) for Flex
<b>Zero Shift (process temp change):</b>	25 psi/100°F (45psi/100°C), nominal
<b>Diaphragm Wetted Parts:</b>	17-4 PH SST
<b>Electrical Connection:</b>	6 pin or Hirschmann
<b>Process Connection:</b>	1/2-20 UNF thread (45° conical seal) M14, M18, M22
<b>Mounting Torque:</b>	500 in/lbs, max
<b>Temperature Sensor (optional):</b>	J or K-type thermocouple with 3 inch flex, PT100 RTD

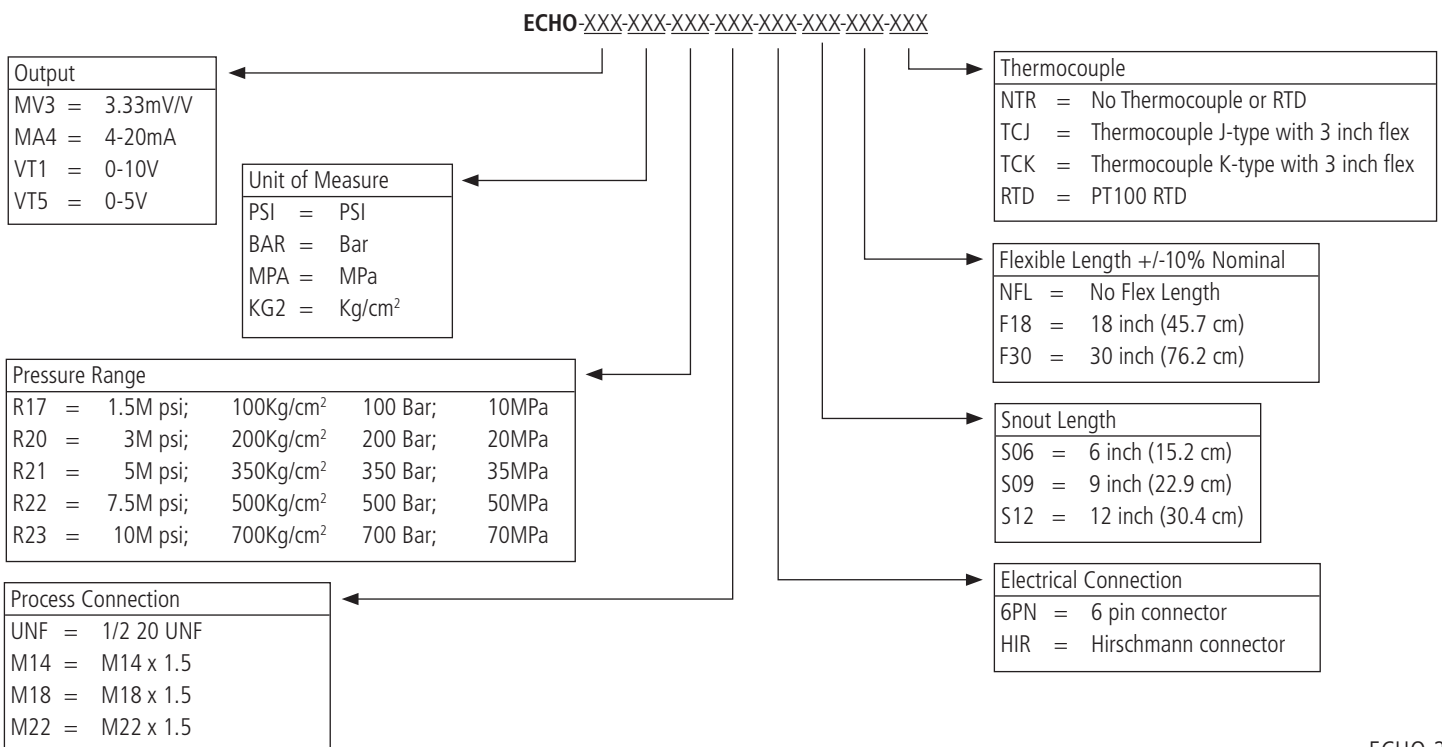
### APPROVALS & CERTIFICATIONS

Marks, Certifications, Registrations: CE

### RECOMMENDED ACCESSORIES

<b>Mounting Hole Machining Tool Kit:</b>	Part Number 200925
<b>6-pin Bendix Mating Connector:</b>	Part Number 711600
<b>Mounting Bracket (Electronics):</b>	Part Number 200941
<b>Cable Assemblies, Indicators, Controllers:</b>	Consult distributor or Dynisco
<b>Replacement Thermocouples:</b>	
<b>K Type 6" Snout</b>	Item Number HY001715
<b>J Type 6" Snout</b>	Item Number HY001722
<b>J Type 9" Snout</b>	Item Number HY001723
<b>J Type 12" Snout</b>	Item Number HY001724
<b>PT100 RTD 6" Snout</b>	Item Number HY001726

## Ordering Guide



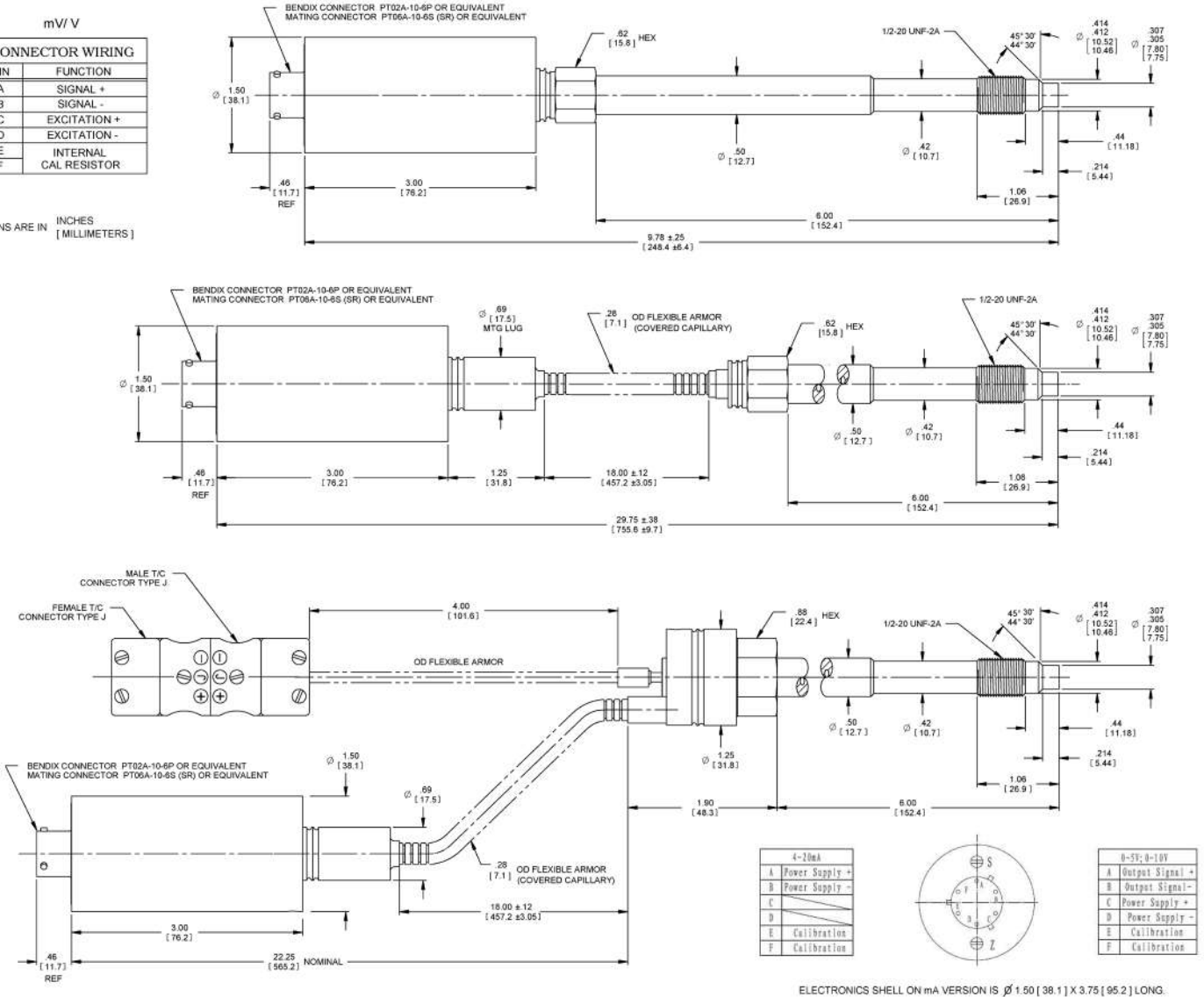
# Dimensions

mV/V

CONNECTOR WIRING	
PIN	FUNCTION
A	SIGNAL +
B	SIGNAL -
C	EXCITATION +
D	EXCITATION -
E	INTERNAL CAL RESISTOR
F	CAL RESISTOR

NOTES  
1. DIMENSIONS ARE IN INCHES [MILLIMETERS]

CONFIGURATION WITH 6 INCH SNOOT LENGTH AND 18 INCH FLEXIBLE LENGTH



ELECTRONICS SHELL ON mA VERSION IS  $\varnothing$  1.50 [38.1] X 3.75 [95.2] LONG.

All dimensions are inches (mm) unless otherwise specified.  
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Refer to www.Dynisco.com for access to Instruction Manual and other support documentation.