



From lab to production,  
providing a window into the process



# ECHO™

## MELT PRESSURE SENSORS

*TRUSTED FOR QUALITY, RELIABILITY AND ACCURATE  
PERFORMANCE AT AN AFFORDABLE PRICE*



### Description

Dynisco's 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.

Echo was designed with the best engineering practices and is backed by Dynisco with 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 measurements, Echo Series offer an 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.

### Features

- 2 year warranty
- 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 & 15M psi pressure range capability
- Alternative fill model available

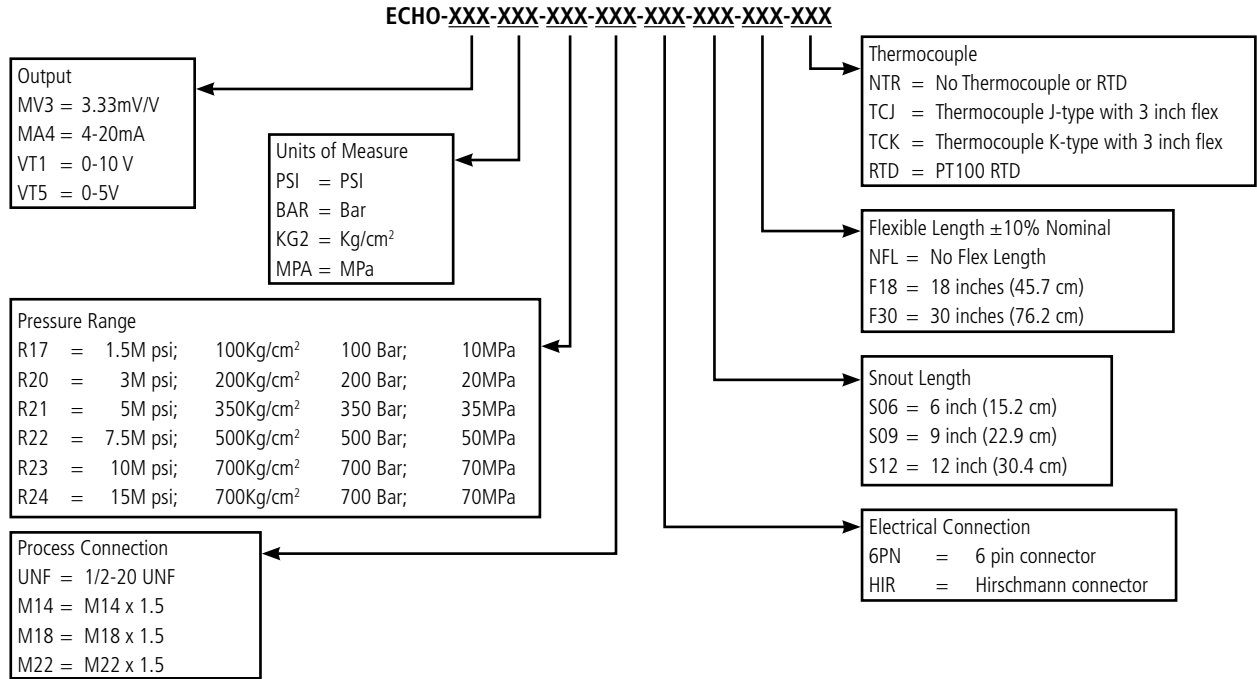
Performance Characteristics	
Input, Excitation:	mV/V: 10VDC recommended, 12VDC max VDC: 16-30VDC mA: 14-30VDC
Output, Analog:	3.33mV/V, 0-10VDC, or 4-20mA
Accuracy*:	±0.5% FS
Repeatability:	±0.2 FSO
Electronics Operating Temp, max:	mV/V: 250°F (120°C); mA, VDC: 185°F (85°C)
Overload Pressure Rating:	1.5 x FSO
Pressure Ranges (psi):	1.5M, 3M, 5M, 7.5M, 10M & 15M
Pressure Units:	PSI, Bar, Kg/cm <sup>2</sup> , MPa, KPA
Zero Balance Adjustment (±% FS):	mV/V: na; VDC: ±15%; mA: ±20%
Zero Balance Setting (±% FS):	mV/V: ±10%; VDC, mA: ±0.5%
Bridge Resistance:	mV/V: 345Ω, min
Insulation Resistance:	mV/V: 1000 MΩ @50VDC; VDC, mA: 100 MΩ @50VDC
Internal Shunt Calibration (R-Cal):	80% FSO ±1.0% FSO
Mechanical & Packaging	
Sensor Technology:	4-arm bonded foil strain gage Wheatstone bridge
Diaphragm Temperature:	662°F (350°C) for Rigid; 752°F (400°C) for Flex
Zero Shift (process temp change) Mercury:	25 psi/100°F (45psi/100°C), nominal
Zero Shift (process temp change) NaK:	43 psi/100°F (90psi/100°C), nominal
Diaphragm Wetted Parts:	17-4 PH SST
Electrical Connection:	6 pin or Hirschmann
Process Connection:	1/2-20 UNF thread (45° conical seal) M14, M18, M22
Mounting Torque:	250 in/lbs, max
Temperature Sensor (optional):	J or K-type thermocouple with 3 inch flex, PT100 RTD
Approvals & Certifications	
CE:	Directive 2004/108/EC
Recommended Accessories	
Mounting Hole Matching Tool Kit:	Part Number 200925
6-pin Bendix Mating Connector:	Part Number 711600
Mounting Bracket (Electronics):	Part Number 200941
Cable Assemblies, Indicators, Controllers:	Consult distributor or Dynisco
Replacement Thermocouples:	
K Type 6" Snout	Item Number HY001715
J Type 6" Snout	Item Number HY001722
J Type 9" Snout	Item Number HY001723
J Type 12" Snout	Item Number HY001724
PT100 RTD 6" Snout	Item Number HY001726

\*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.

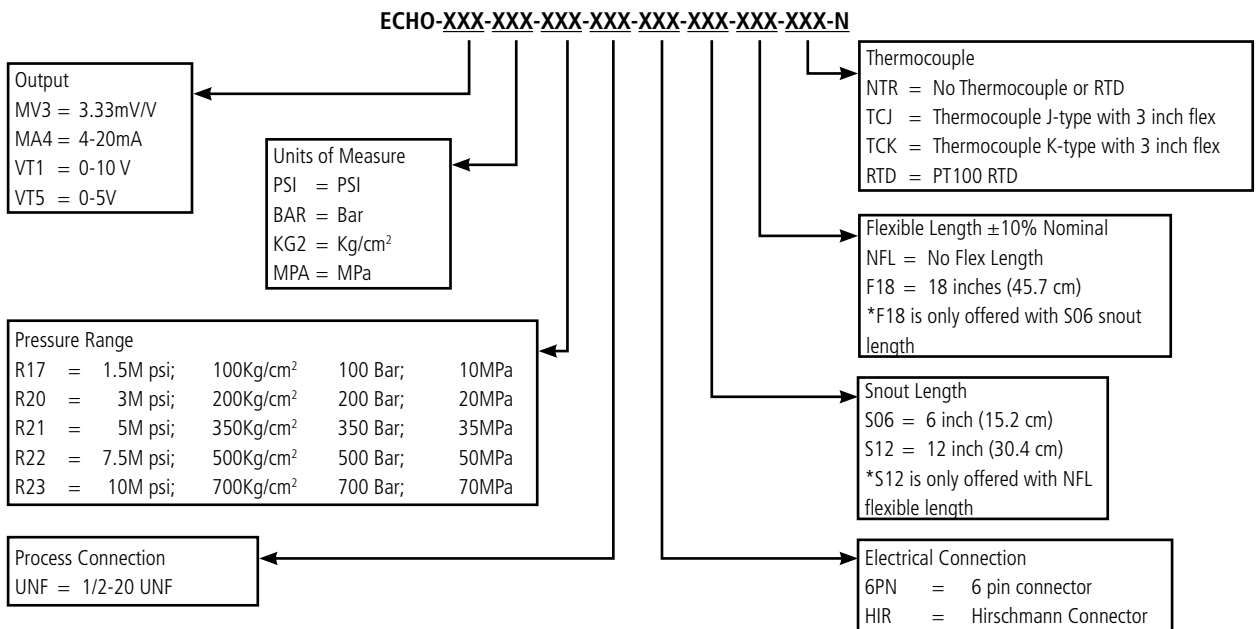
\*\*To avoid bending a 6" snout using a 12" wrench, do not apply more than listed torque without supporting bending moment. When applying torque to a snout longer than 12", counteract the bending moment with a support.

# Ordering Guide

## Mercury



## NaK



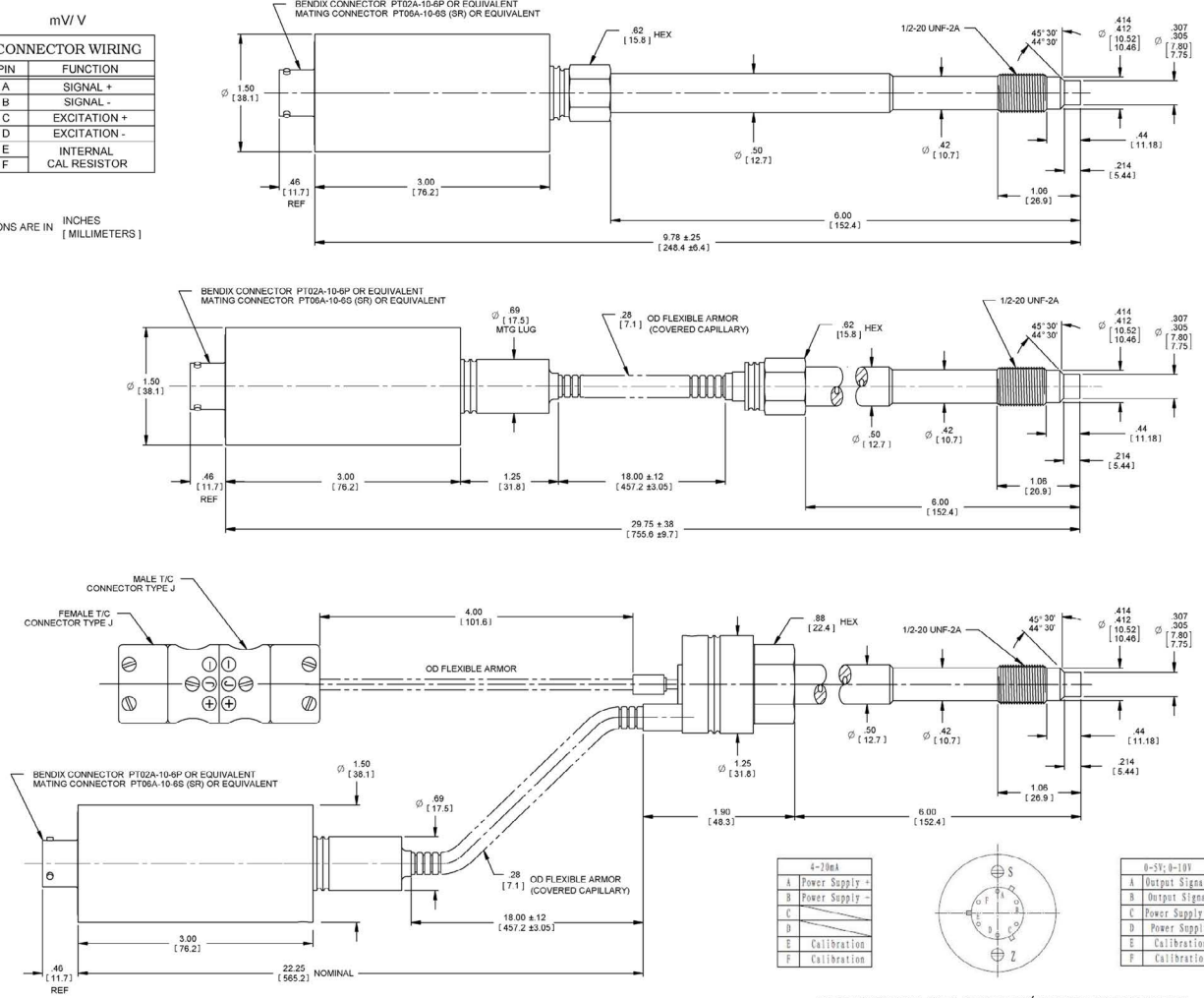
# Dimensions

mV/V

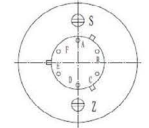
CONNECTOR WIRING	
PIN	FUNCTION
A	SIGNAL +
B	SIGNAL -
C	EXCITATION +
D	EXCITATION -
E	INTERNAL CAL RESISTOR
F	INTERNAL CAL RESISTOR

NOTES  
1. DIMENSIONS ARE IN INCHES [MILLIMETERS]

CONFIGURATION WITH 6 INCH SNUOT LENGTH AND 18 INCH FLEXIBLE LENGTH



4-10mA	
A	Power Supply +
B	Power Supply -
C	Power Supply +
D	Power Supply -
E	Calibration
F	Calibration



0-5V, 0-10V	
A	Output Signal +
B	Output Signal -
C	Power Supply +
D	Power Supply -
E	Calibration
F	Calibration

ELECTRONICS SHELL ON mA VERSION IS Ø 1.50 [38.1] X 3.75 [95.2] LONG.

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[www.dynisco.com](http://www.dynisco.com)



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