



A New Standard in **Durability**, Environmental Safety, and Reliability



## **Features**

- No fill material
- RoHS compliant for sustainability programs
- Robust, thicker Inconel diaphragm is coated with Dymax<sup>®</sup>
- Available with a thermocouple temperature output
- 0-1,000 to 0-10,000 PSI pressure range capability
- HART<sup>™</sup> digital communication available

# Description

Dynisco's Vertex melt pressure sensor innovation matches or exceeds the performance of the traditional sensor. The big differences are that Vertex is more robust, much faster, and significantly friendlier to the environment.

The direct measurement tip is a simple and elegant design with a more robust diaphragm. Direct measurement of the process reduces errors that are transferred by complicated internal support structures, transmission fill materials, or moving push rods. The diaphragm thickness is pressure range dependent and can be up to 7.5 times thicker than a traditional sensor. Add to these features, a diaphragm composition of Inconel 718 coated with the corrosion and abrasion resistant properties of Dymax® and experience the true definition of a robust sensor that has proven to increase the life of the sensor and significantly lowers the cost of owner-ship.

Vertex design innovation also extends to the speed of response of the sensor. Faster processes and controls demand faster sensing measurements. Vertex is many times faster than traditional sensors improving real time production.

Environmental regulations and community conscientiousness are driving sustainability policies and programs in large and small companies. Waste stream reduction and longer life cycles are good for the environment and the budget. There is no mercury, no NaK, no oil, no Gallium, no fill material what-so-ever. Vertex is also RoHS compliant.

Vertex sensors are designed to work with universal pressure indicators. HART digital communication is available for more extensive diagnostics and remote configuration. An optional Type J or K thermocouple is available to provide a melt temperature signal as well as a 4-20 mA temperature output. Vertex is equipped with a 1/2-20 UNF for installation in standard transducer mounting holes. An adaptor is also available to install 1/2-20 UNF units into a Button Seal application. A sealed welded shell and electrical connection are available if washdown capability is needed for food or medical applications (not available if thermocouple option TCx is selected).



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## **Specifications**

PERFORMANCE CHARACTERISTICS	5
Input, Excitation:	mV/V:
	16-36\
Diaphragm Operating Temp. Range <sup>1</sup> :	-40°F to
Electronics Operating Temp. (Max):	185°F
Zero Shift (Electronics Temp.):	0.012%
Span Shift (Electronics Temp.):	0.012%
Hex/Transition Temp. (Max):	300°F (
Zero Shift (Hex Temp.):	0.022%
Overload Pressure Rating:	1.5x FS
Pressure Ranges (PSI)	1.0M, 1
Pressure Units:	PSI, Ba
Zero Balance Adjustment (±% FSO):	mV/V:
	±20%
Zero Balance Setting (±% FSO):	mV/V:
Insulation Resistance:	mV/V:
Internal Shunt Calibration (R-Cal):	80% F
Zero Shift (Process Temp. Change):	1.0%/1

10-12VDC; mA; voltage VDC co +752°F (-40°C to +400°C) (85°C) %/°F (0.022%/°C) %/°F (0.022%/°C) (150°C) %/°F (0.039%/°C) SP 1.5M, 3M, 5M, 7.5M or 10M ar, Kg/cm2, MPa, KPa na; mA: -6 to +12% , Voltage 10%; mA:  $\pm$ 3%, Voltage  $\pm$ 3% 100 MΩ @50VDC; SO ±1% FSO 1.0%/100°F (2.0%/100°C)

## **MECHANICAL & PACKAGING**

**Diaphragm Wetted Parts:** Mounting Torque:

Temp. Sensor (Optional):

**Ingress Protection:** 

#### **APPROVALS & CERTIFICATIONS**

CF: ISO:

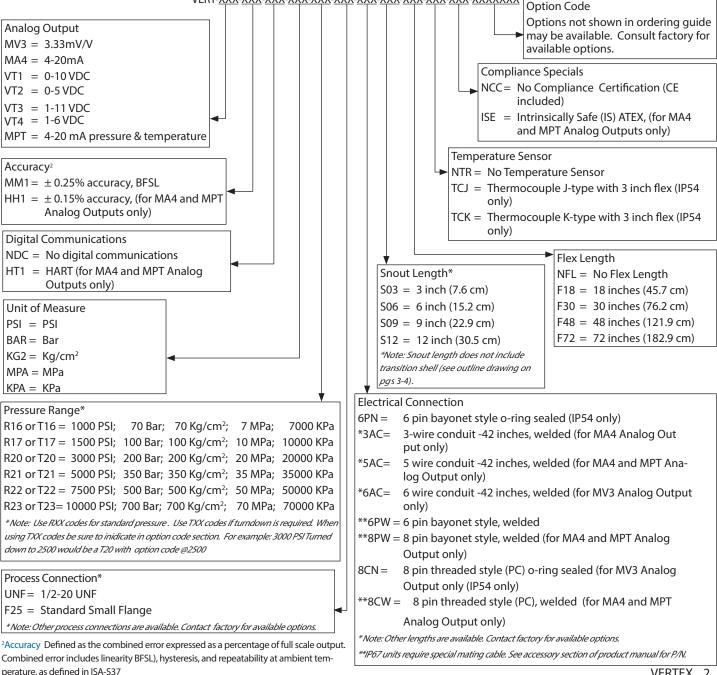
RoHS 1: RoHS 2: ATEX IS

Inconel 718, DyMax<sup>®</sup> coated 250 in-lbs recommended, 500 in-lbs max Type J or Type K thermocouple (available on flex units only) IP54 (IP67 if welded and temperature sensor code is NTR)

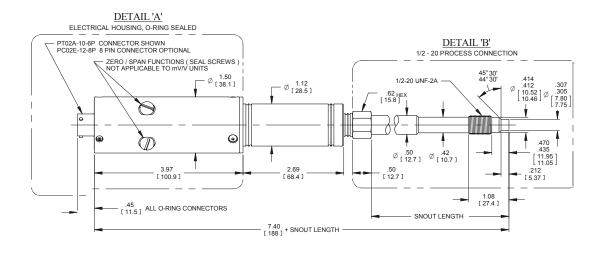
Directive 2004/108/EC ISO9001:2008 production environment Directive 2011/95/EC Directive 2011/65/EU Intrinsically Safe

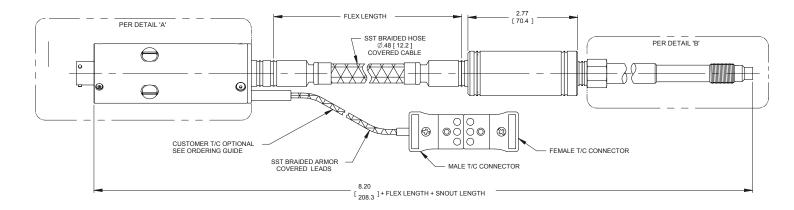
<sup>1</sup>Diaphragm Operating Temp. Range refers to the functional limits of the snout tip. Refer to the manual for greater detail on the operating and compensated temperature ranges of the diaphragm tip, flex and electronics.

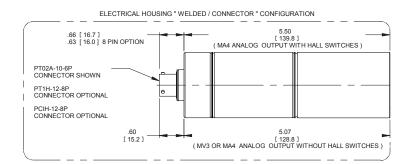
## Ordering Guide



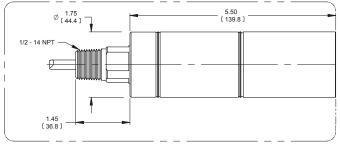
## MECHANICAL DIMENSIONS







ELECTRICAL HOUSING " WELDED / CONDUIT " CONFIGURATION



NOTES:

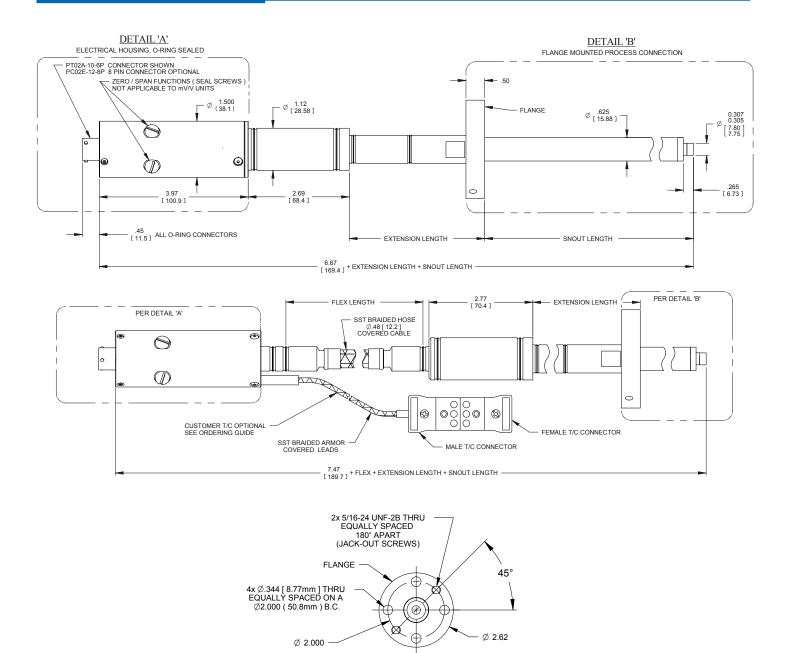
1. DIMENSIONS ARE IN INCHES [ MILLIMETERS ].

2. DIMENSIONS ARE NOMINAL AND FOR REFERENCE ONLY.

3. NOT ALL CONFIGURATIONS & OPTIONS ARE SHOWN, CONSULT FACTORY.

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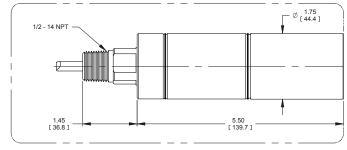
### **MECHANICAL DIMENSIONS**



STD. FLANGE " F25 " SHOWN

ELECTRICAL HOUSING " WELDED / CONNECTOR " CONFIGURATION

ELECTRICAL HOUSING " WELDED / CONDUIT " CONFIGURATION



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## **ELECTRICAL CONNECTIONS**

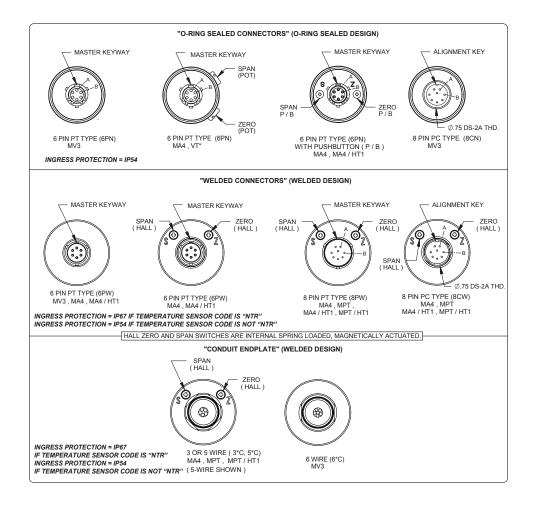
CONNECTOR OPTIONS			
	BENDIX PT02-10-6P		
6 PIN	OR EQUIVALENT		
PT	MATING CONNECTOR		
	PT06-10-6S		
	BENDIX PC02-12-8P		
8 PIN	OR EQUIVALENT		
PC	MATING CONNECTOR		
	PC02-12-8S		
	BENDIX PT02-12-8P		
8 PIN	OR EQUIVALENT		
PT	MATING CONNECTOR		
	PT06A-12-8S		

ANALOG OUTPUT MA4, MPT		CONNECTION TYPE		
SIGNAL	TERMINAL DESCRIPTION	<sup>1</sup> CONDUIT-LEAD OR DYNISCO CABLE WIRE COLOR	6- PIN	8-PIN
PRIMARY 4-20mA	PWR+/SIG+	RED	A	Α
	PWR-/SIG-	BLACK	В	В
	CASE	GREEN	-	-
OPTIONAL RCAL	RCAL+	ORANGE	F	E
	RCAL-	BLUE	E	D
OPTIONAL SECONDARY 4-20mA	PWR+/SIG+	ORANGE	N/A	G
	PWR-/SIG-	BLUE	N/A	н

<sup>1</sup>UNITS THAT HAVE CONDUIT LEADS ARE AVAILABLE WITH OPTIONAL RCAL OR TEMPERATURE 4-20mA SIGNAL, NOT BOTH.

ANALOG OUTPUT MV3		CONNECTION TYPE		
SIGNAL	TERMINAL DESCRIPTION	CONDUIT-LEAD OR DYNISCO CABLE WIRE COLOR	6-PIN	8-PIN
PRIMARY OUTPUT	SIG+	RED	Α	В
	SIG-	BLACK	В	D
SUPPLY	PWR+	WHITE	С	A
	PWR-	GREEN	D	С
RCAL	RCAL+	ORANGE	F	F
	RCAL-	BLUE	E	E
N/A	-	-	-	G
	-	-	-	Н

ANALOG OUTPUT VT*		CONNECTION TYPE	
SIGNAL	TERMINAL DESCRIPTION	DYNISCO CABLE WIRE COLOR	6-PIN
PRIMARY OUTPUT	SIG+	RED	A
	SIG-	BLACK	В
SUPPLY	PWR+	WHITE	С
	PWR-	GREEN	D
RCAL	RCAL+	ORANGE	F
	RCAL-	BLUE	E



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