

Vertex™

MERCURY FREE SENSORS

Melt Pressure Sensor Series



A new standard in Durability,
Environmental Safety,
and Reliability

Features

- No fill material or moving internal parts
- RoHS compliant for sustainability programs
- Robust Inconel diaphragm is coated with Dymax®
- Diaphragm is much thicker with unique sidewall support
- Available with J-type thermocouple temperature output
- 0-1,500 to 0-10,000 psi pressure range capability

Description

Vertex is a Dynisco melt pressure sensor innovation that 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 breakthrough technology lies at the tip of the sensor, where melt pressure is registered directly through a single, more robust diaphragm. Direct measurement eliminates errors that can arise in sensors with complicated internal structures, transmission fluids and moving push rods. The Vertex diaphragm is much thicker than those in other sensors and is made of tough Inconel 718 alloy, which provides a higher level of corrosion resistance than stainless steel. For added protection, the tip is coated with a diamond-hardened DyMax® coating. The sensor walls have been fortified to handle side stresses. With all these features, Vertex is the true definition of a robust sensor, proven to deliver long life and a low cost of ownership.

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. Dynisco can assist because Vertex is green, very green. There is no mercury, no NaK, no oil, no Gallium, no fill material what-so-ever. Vertex is also RoHS compliant.

Vertex sensors are available with 3.33mV/V or 4-20mA output signals and designed to work with universal pressure indicators. An optional J-type thermocouple is available to provide a melt temperature signal. Vertex is equipped with a 1/2-20 UNF for installation in standard transducer mounting holes.



Specifications

PERFORMANCE CHARACTERISTICS

Input, excitation:	mV/V: 6-12VDC; mA: 16-36VDC
Output, analog:	3.33mV/V or 4-20mA
Accuracy*:	±0.25% FS
Electronics Operating Temp, max:	185°F (85°C)
Zero Shift (Electronics temp):	0.05%/°F (0.09%/°C)
Span Shift (Electronics temp):	0.005%/°F (0.009%/°C)
Hex/Transition Temperature (max):	300°F (150°C)
Zero Shift (Hex temperature):	0.005%/°F (0.009%/°C)
Overload Pressure Rating:	1.5x FS
Pressure Ranges (psi):	1.5M, 3M, 5M, 7.5M or 10M
Pressure Units:	PSI, Bar, Kg/cm ² , MPa, KPa
Zero Balance Adjustment (±% FS):	mV/V: na; mA: ±20%
Zero Balance Setting (±% FS):	mV/V: 10%; mA: ±3%
Insulation Resistance:	mV/V: 100 MΩ @50VDC;
Internal Shunt Calibration (R-Cal):	80% FSO ±1% FS

MECHANICAL & PACKAGING

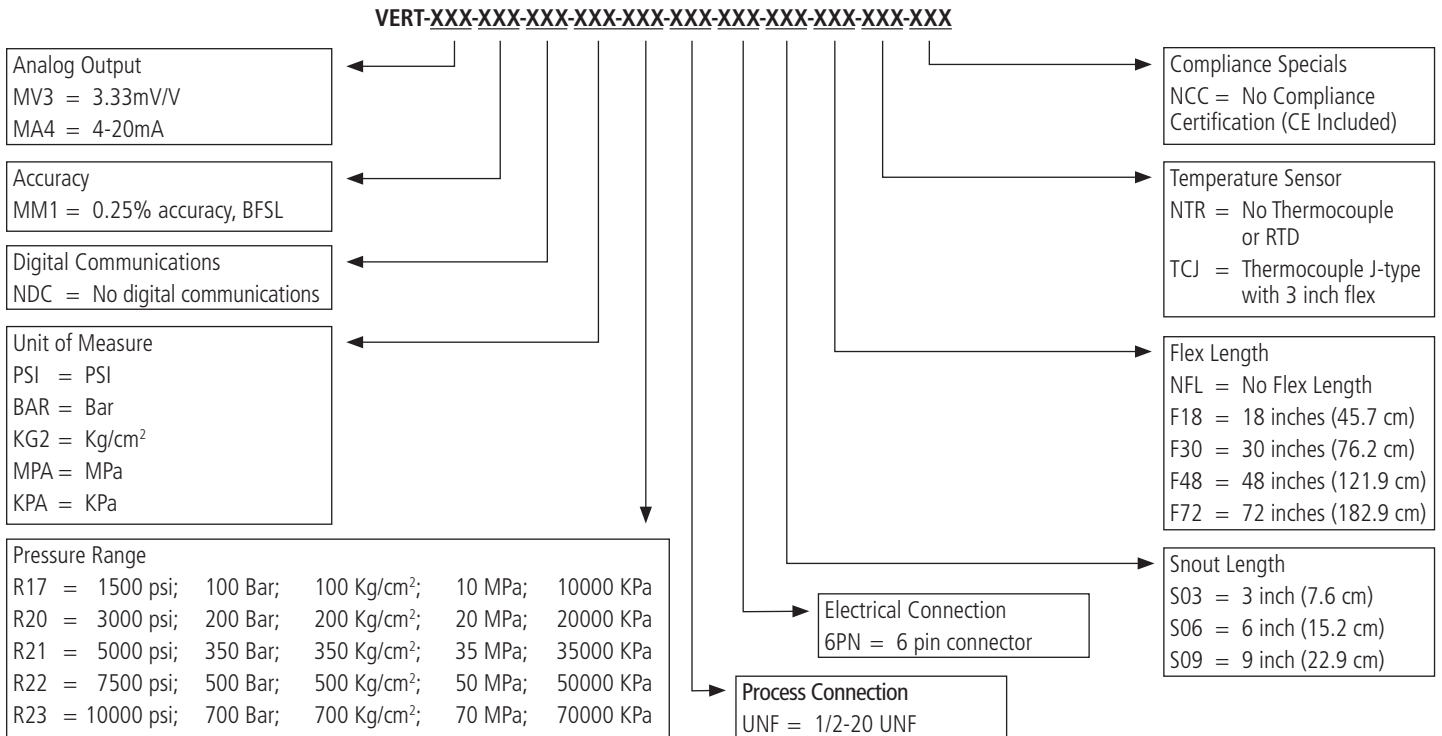
Sensor Technology:	Direct sensing
Diaphragm Temperature:	660°F (350°C), max
Zero Shift (process temp change):	0.5%/100°F 0.9%/100°C
Diaphragm Wetted Parts:	Inconel 718, DyMax [®] coated
Process Connection:	1/2-20 UNF (with 45° conical seat)
Electrical Connection:	Bendix PT02A-10-6P
Mounting Torque:	250 in-lbs recommended, 500 in-lbs max
Temperature Sensor (optional):	J-type thermocouple

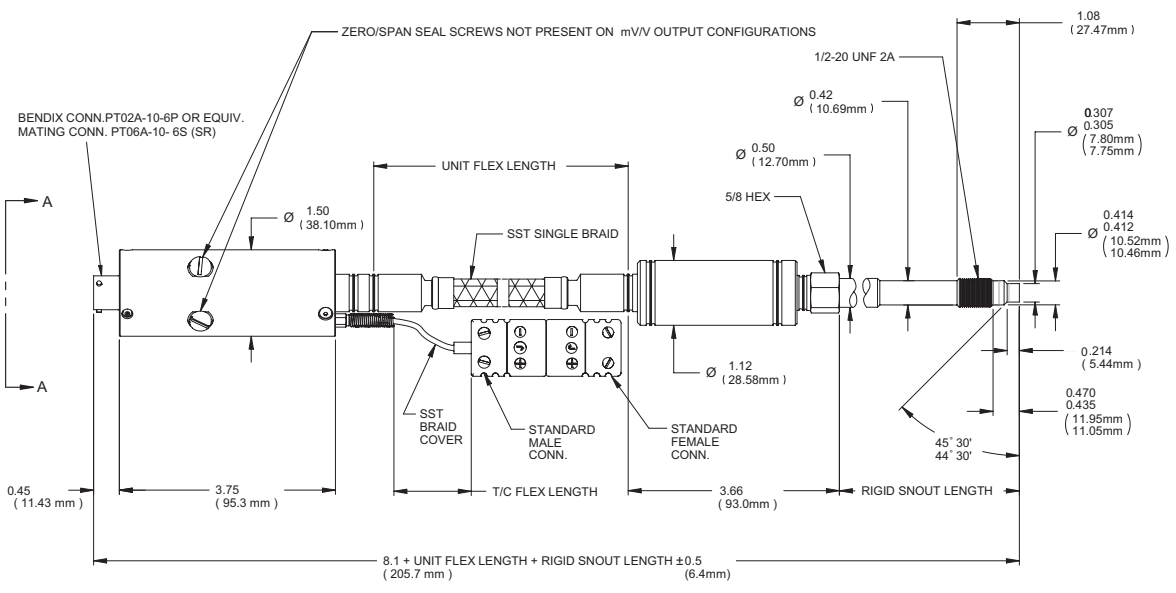
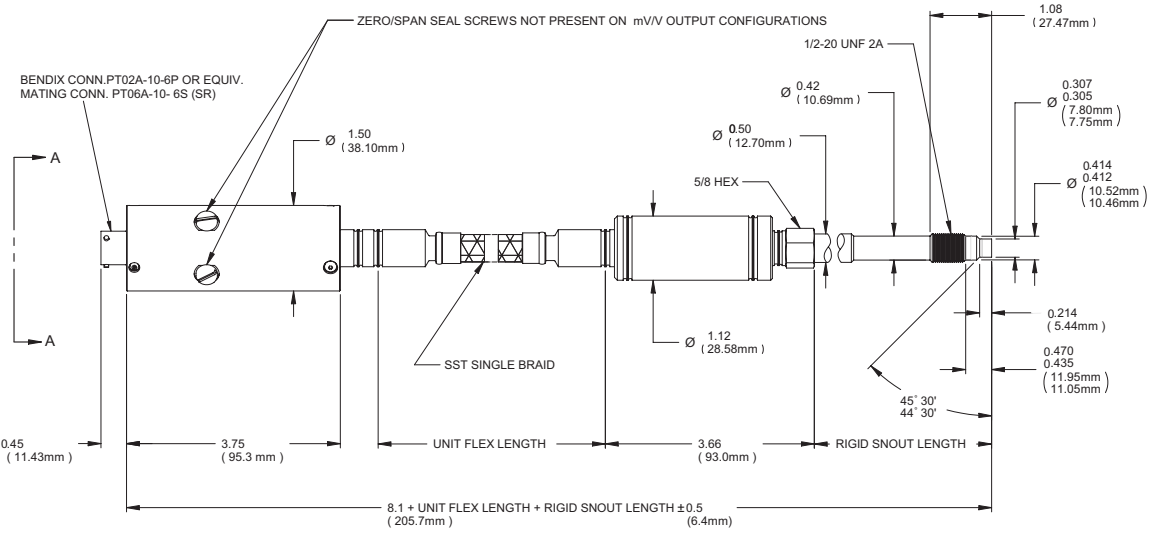
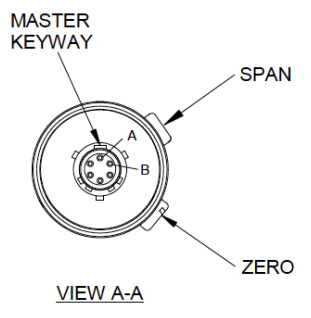
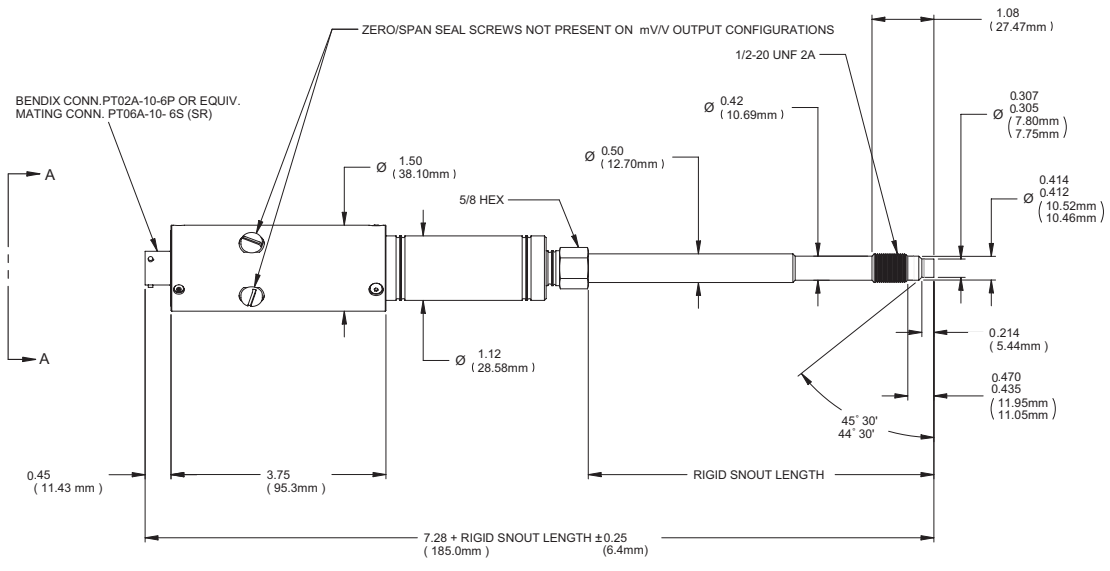
APPROVALS & CERTIFICATIONS

Marks, Certifications, Registrations:	
CE:	Directive 2004/108/EC
ISO:	ISO9001:2008 production environment

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

Ordering Guide





All dimensions are inches (mm) unless otherwise specified.
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