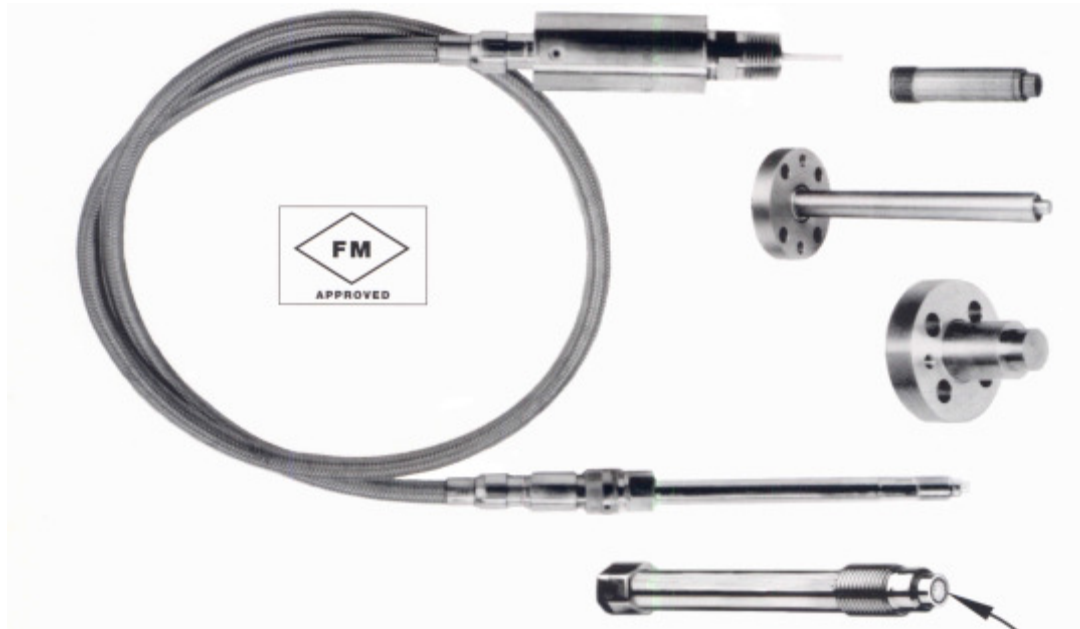




Sensonetics, Inc

SEN-421/422 PRESSURE/TEMPERATURE TRANSMITTERS



**Real-time in-process
temperature and pressure measurements**

FEATURES

- Abrasion-Proof Sapphire Diaphragm
- Fast response time < 100 microseconds
- Infinite cycle life @ rated FSPR
- No harmful mercury, NaK or Push Rods
- No signal decay
- No hysteresis
- Ideal for ISO-9000 and Six Sigma

APPLICATIONS

- Polymer plants
- Fiber spinning
- Chemical process industries
- Pharmaceuticals
- Refineries
- Food processing
- Oil and gas
- Autoclaves

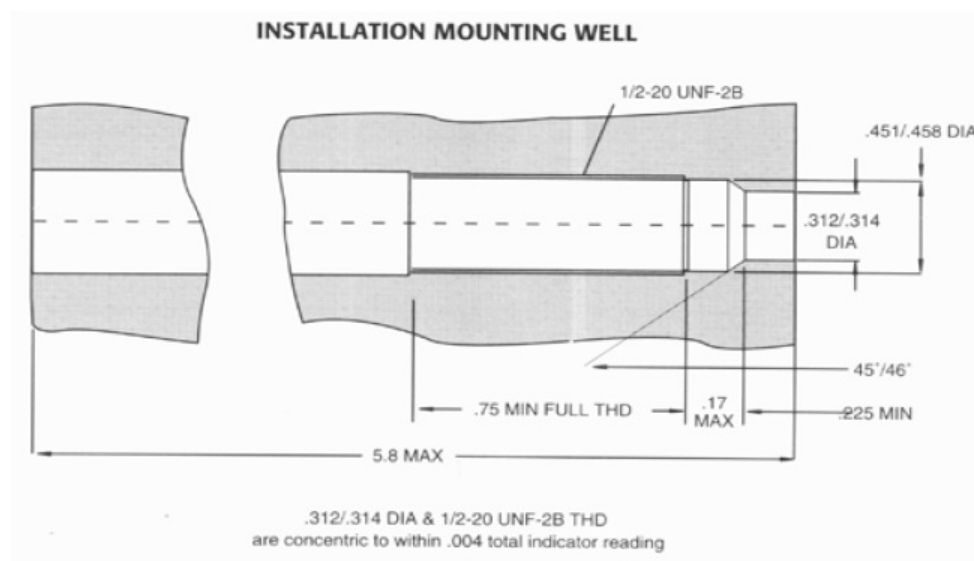
SEN 421/422 MELT PRESSURE AND TEMPERATURE TRANSMITTER

Sonsonetic's SEN-421 and SEN-422 Pressure/Temperature Transmitters Utilize the same state-of-the-art, Silicon-on-Sapphire (S-O-S) technology as used in the revolutionary SEN-401 and SEN-402 which have rapidly established a proven track record for accuracy, reliability and durability in the thermoplastics and food extrusion industries.

S-O-S technology does not require high-temperature isolation of the sensing diaphragm, thereby eliminating the need for mercury, NaK Fill or push rods. The sapphire diaphragm is fifty times harder than stainless steel, making it virtually impervious to wear due to abrasion. In addition, the SEN-421 and SEN-422 are the worlds only Factory Mutual approved non-mercury filled melt pressure and pressure/temperature transmitters.

The SEN-421 Pressure Transmitter features an advanced 2-Wire, 4-20mA amplifier which accommodates a wide range of supply voltages. For ease of calibration, there is minimal interaction between the amplifiers zero and span adjustments. The system also features lead reversal and short circuit protection.

The SEN-422 Pressure/Temperature Transmitter incorporates a silicon RTD on the sapphire force-collection diaphragm located at the tip of the transducer. This RTD/Sapphire diaphragm is thermally isolated from the mounting wells. The result is a reliable transmitter that measures surface media temperature and pressure, while maintaining its accuracy over long periods of time. Moreover, it does not protrude into the melt stream and disrupt laminar flow. Sonsonetic's combined pressure/temperature transmitters provide reliable measurement and control of a process's most important parameters, thus enabling users to protect equipment and personnel, increase production rates and to perform diagnostic tests.



SEN 421/422 PRESSURE AND TEMPERATURE TRANSMITTER

Pressure Transmitter

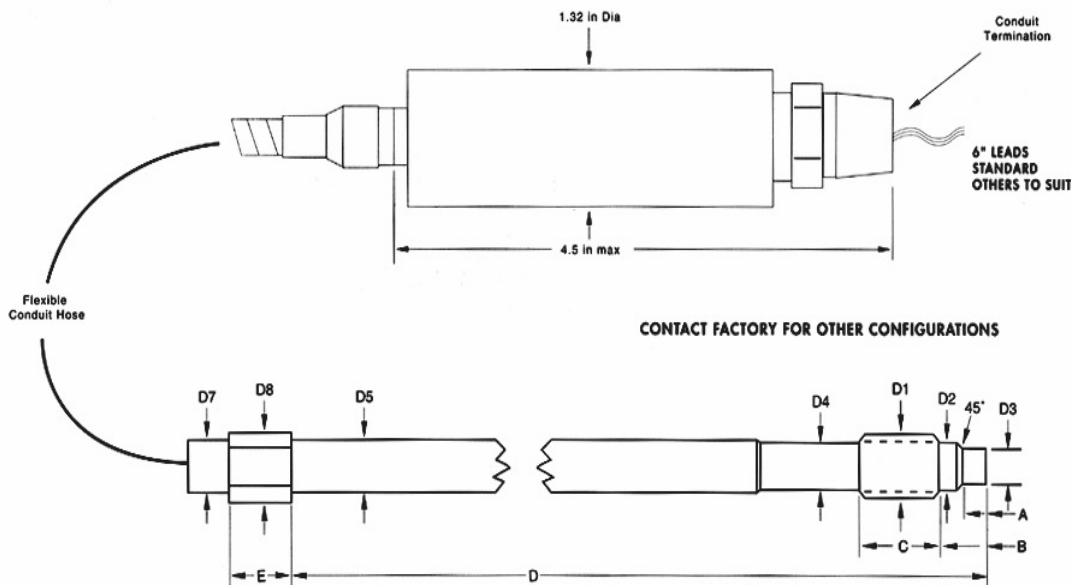
Ranges: 0-500, 0-750, 0-1000, 0-1500,
0-3000, 0-5000, 0-7500, 0-10,000.
Combined error: Better than +/-0.5% FSO
Repeatability: Better than +/-0.1% FSO
Resolution: Infinite
Maximum pressure: 2x full scale; 20,000 psi
maximum
Wetted material: Single Crystal Sapphire
Case material: 17-4 pH and 300 series stainless
steel
Mounting torque: 40 in-lbs nominal, 50 in-lbs
maximum
Maximum diaphragm temperature: 750°F
(400°C)
Thermal Zero shift: Better than: +/-0.01%
FSO/°F
Thermal span shift: Better than +/-0.005%
FSO/°F

Temperature Transmitter

Range: 750°F (400°C) maximum
Resolution: Infinite
Sensor: On-diaphragm silicon RTD Calibration:
4mA @ 80°F, 20mA @ 500°F or 750°F

Electrical Characteristics

Current output: 4-20 mA. SEN-422 has separate
loops for pressure and temperature
Input voltage: 14-30 VDC
Maximum Load resistance: 800 Ω @ 30 VDC;
500 Ω @ 24 VDC
Zero: 4mA, field adjustable +/-10%
Span: 20mA, field adjustable +/-10%
Lead reversal protection: Up to 5A
Response time: Better than 100 micro-sec
Factory mutual approved intrinsically safe:
SEN-421 Entity approved CLASS 1, DIV 1, GPS A,
B, C, D
SEN-422 System approved CLASS 1, DIV 1, GPS
C, D



Outline Drawing	D1	D2	D3	D4	D5	D6	D7	D8	A	B	C	D	E
No.10 (inches)	½- 20	.40	.298- .305	.42	.50 -.75	.500	.62	¾ Hex	.209	.44	1.5	6 - 12.5	1.00

SEN 421 MELT PRESSURE TRANSMITTER

SEN 422 MELT PRESSURE AND TEMPERATURE TRANSMITTER

ORDERING INFORMATION

SEN-42X-XXX-XX-XXX-XXX-XXX

MODEL: _____

421 = PRESSURE TRANSMITTER, 4-20 mA

422 = PRESSURE AND TEMPERATURE, 4-20 mA

PRESSURE RANGE: _____

5C = 500 PSI

5M = 5,000 PSI

7.5C = 750 PSI

7.5M = 7,500 PSI

1M = 1000 PSI

10M = 10,000 PSI

3M = 3000 PSI

OUTLINE: _____

10 = No. 10 (1/2-20 UNF)

12 = METRIC THD (M18 X 1.5 THD)

STEM LENGTH: _____

4 = 4 INCH

12 = 12.5 INCH

6 = 6 INCH (STD)

15 = 15 INCH

9 = 9 INCH

18 = 18 INCH

W = WELDED

D = DISCONNECT

FLEX LENGTH: _____

18 = 18 INCH

72 = 72 INCH

36 = 36 INCH

84 = 84 INCH

48 = 48 INCH

120 = 120 INCH

60 = 60 INCH

TERMINATION: _____

C6 = 6 PIN CONNECTOR FOR 421 PRESSURE ONLY--PTIH-10-6P

C8 = 8 PIN CONNECTOR FOR 422 PRESSURE AND TEMPERATURE--PCIH-12-8P

CD = CONDUIT FITTING (STANDARD SEN 421/422 MELT PRESSURE AND TEMPERATURE TRANSMITTER)