

Averaging Temperature Sensors

Overview

Sense temperature of air streams in ducts and plenums. Sensors include a junction box with gasket to prevent leakage and vibration noise.

These sensors have a continuous element to sense true average temperature along their entire length. They provide accurate composite readings in locations where air may be stratified into hot and cold layers.

Rigid averaging sensors have a brass case. Bendable models have aluminum sheaths (copper on special order), formable to a radius of 4". Bendable sensors can criss-cross ducts to average temperatures in two dimensions.

See page 4-2 for optional 4 to 20 mA temperature transmitters.

Specifications

Temperature range:

Probe: -45.5 to 135°C (-50 to 275°F).

Gasket: 100°C (212°F) max.

Leadwires: AWG 22, PTFE insulated, 8" (200 mm) long.

Moisture resistance: Meet MIL-STD-202, Method 104, Test Condition B.

Special options:

- Lengths to 100 feet(30 m)
- Weatherproof connection box
- Sensor only, no box
- Thermistor averaging sensors

Model numbers

RTDs (Tolerance: ±0.25% at 70°F)	TCR Ω/Ω/°C	Rigid averaging sensors	Bendable averaging sensors
*Platinum 100 Ω at 0°C	0.00391	S423PB	S447PB
*Platinum 100 Ω at 0°C	0.00385	▼ S456PE	▼ S457PE
*Platinum 1000 Ω at 0°C	0.00385	▼ S493PF	▼ S475PF
*Platinum 1000 Ω at 0°C	0.00375	S492PW	▼ S488PW
Nickel-iron 1000 Ω at 70°F	0.00527	S421FB	S445FB
Nickel-iron 2000 Ω at 70°F	0.00527	S422FC	S446FC
*HW 3000 Ω at -30.2°C	0.00262	S20080PX	▼ S15215PX

*These averaging sensors use a proprietary sensing element that closely matches the platinum curve over the specified range.



STOCKED PARTS AVAILABLE

▼ = **STANDARD OPTIONS**

Specifications subject to change

Bendable

Averaging Sensor

Enclosure:

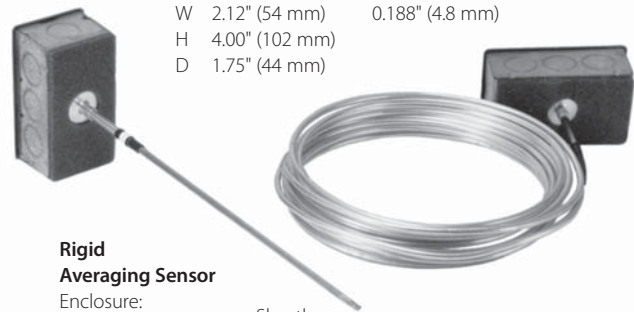
W 2.12" (54 mm)

H 4.00" (102 mm)

D 1.75" (44 mm)

Sheath Diameter:

0.188" (4.8 mm)



Rigid

Averaging Sensor

Enclosure:

W 2.12" (54 mm)

H 4.00" (102 mm)

D 1.75" (44 mm)

Sheath

Diameter:

0.188" (4.8 mm)

Specification and order options:

Rigid averaging sensors

S456PE	Model number from table
Y	Number of leads: ▼ Y = 2 leads Z = 3 leads
12	Insertion depth in inches: 1 inch = 25.4 mm ▼ : 12, 24, 48
S456PEY12 = Sample part number	

Bendable averaging sensors

S457PE	Model number from table
Z	Number of leads: ▼ Y = 2 leads ▼ Z = 3 leads
24	Insertion length in feet: 1 foot = 0.3 m ▼ : 12, 24, 50, 100
S457PEZ24 = Sample part number	

To order with transmitter, add

TT111	Transmitter Models TT111: Fixed Range (2 leads) TT211: Fixed Range (2 leads) TT321: Fixed Range (3 leads) <i>Contact for other transmitter options.</i>
A	Temperature Range Code: A = 20°F to 120°F (-6.7°C to 48.9°C) <i>Contact for complete list of available temp. codes.</i>
1	Calibration: 1 = Nominal Calibration 2 = Match Calibrated, 0.75% Total System Accuracy <i>Contact for other calibration options.</i>
TT111A1 = Sample part number addition	