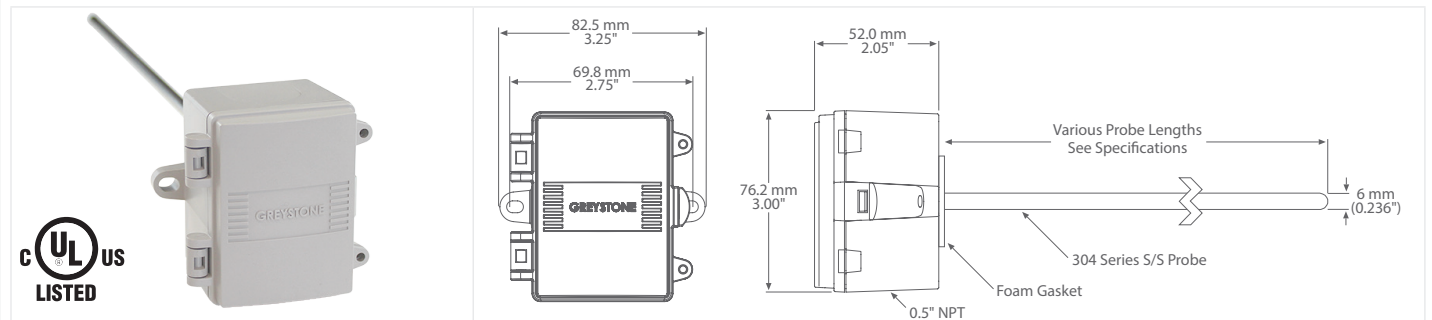




ALL PURPOSE DUCT/IMMERSION TEMPERATURE SENSOR



TSAP SERIES

PRODUCT DESCRIPTION

The all purpose single point temperature sensor utilizes a precision sensor encapsulated in a 6 mm (0.236"), 304 series stainless steel probe and is available in various lengths. All probes provide excellent heat transfer, fast response and resistance to moisture penetration.

TYPICAL INSTALLATION

For complete installation and wiring details, please refer to the product installation instructions.

In duct applications the probes are installed in the side of the duct to monitor a single point temperature within the duct. Select a probe length that allows the probe to span the duct width. Install the probe in a straight section of duct at a suitable distance downstream from any heating, cooling, or humidification devices.

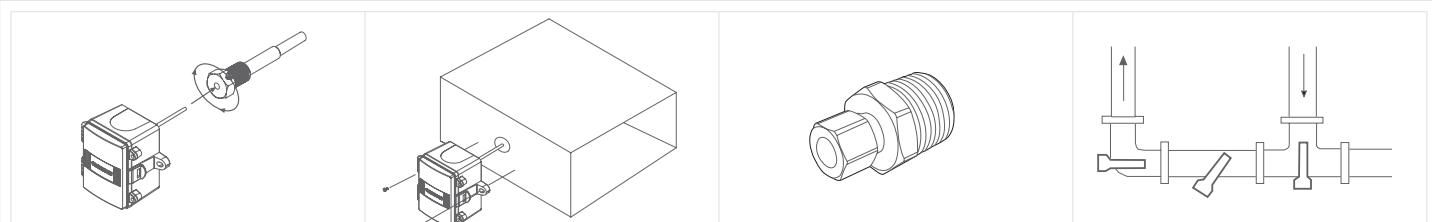
For immersion applications ensure the probe is installed in the appropriate length thermowell for the pipe size. Thermal conductive compound should be added inside the thermowell to provide optimum thermal transfer.

For immersion applications, a T2 Series thermowell is required. When using a T1 series thermowell an adapter will be required (T1AP-ADAPTER).

SPECIFICATIONS

SENSOR TYPE	Thermistor or RTD (see ordering chart)
SENSOR ACCURACY	Thermistors: $\pm 0.2^{\circ}\text{C}$ ($\pm 0.36^{\circ}\text{F}$) @ 25°C (77°F) Platinum RTD's: $\pm 0.3^{\circ}\text{C}$ ($\pm 0.54^{\circ}\text{F}$) @ 0°C (32°F) Nickel RTD's: $\pm 0.4^{\circ}\text{C}$ ($\pm 0.72^{\circ}\text{F}$) @ 0°C (32°F)
PROBE SENSING RANGE	-40 to 100°C (-40 to 212°F)
AMBIENT OPERATING RANGE	-40 to 60°C (-40 to 140°F), 5 to 95 %RH non-condensing
WIRE MATERIAL	PVC insulated, parallel bonded, 22 AWG
PROBE MATERIAL	304 series stainless steel
PROBE DIAMETER	6 mm (0.236")
STANDARD LENGTHS	50, 100, 150, 200, 300, and 450 mm (2', 4', 6", 8", 12", and 18")
ENCLOSURE	ABS, UL94-V0, IP65 (NEMA 4X) C: includes terminal block E: same as C, with thread adapter (1/2" NPT to M16), and cable gland fitting
TERMINATION	A: pigtail, 2 or 3 wire C & E: terminal block, 2 or 3 wire
PROTECTION CLASS	III
POWER SOURCE UL	SELV, Limited Energy (<15W)
EU CONFORMITY	CE
CERTIFICATION	UL 60730 & CSA E60730
UL 2043 / CSA / ULC S142 COMPLIANT	Suitable for Use in Air Handling Spaces in Accordance with Section 300.22, (C) of the National Electrical Code
PURPOSE OF CONTROL	Temperature Sensor
TYPE OF ACTION	Type 1
IMPULSE VOLTAGE	330V
POLLUTION DEGREE	2
COUNTRY OF ORIGIN	Canada

MOUNTING STYLES



THERMOWELL MOUNTING

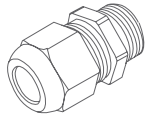
DUCT MOUNTING

T1AP ADAPTER

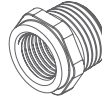
THERMOWELL PLACEMENT



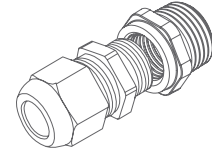
ACCESSORIES - INCLUDED WITH E ENCLOSURE OPTION



CABLE GLAND FITTING



THREAD ADAPTER 1/2" NPT TO M16



ORDERING

PRODUCT	TSAP	All Purpose Duct/Immersion Temperature Sensor
ENCLOSURE	A C E	ABS, with hinged and gasketed cover Same as A, with terminal block Same as C, with thread adapter and cable gland fitting
SENSOR	02 05 06 07 08 12 13 14 20 24 59	100 Ω Platinum, IEC 751, 385 Alpha, thin film 1801 Ω NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ 3000 Ω NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ 10,000 Ω Type 3, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ 2.252K Ω NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ 1000 Ω Platinum, IEC 751, 385 Alpha, thin film 1000 Ω Nickel, Class B, DIN 43760 10,000 Ω Type 3, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ c/w 11K shunt resistor 20,000 Ω NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ 10,000 Ω Type 2, NTC Thermistor, $\pm 0.2^{\circ}\text{C}$ 10,000 Ω , 25 $^{\circ}\text{C}$, $\pm 1\%$, B = 3435 $\pm 1\%$ (25/85)
PROBE LENGTH	A B C D E F	50mm (2") 100mm (4") 150mm (6") 200mm (8") 300mm (12") 450mm (18")

PART NUMBER

TSAP

NOTE: Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.