GREYSTONE
ENERGY SYSTEMS INC

Precision temperature control/sensing

FEATURES:

- Precision Thermistor or RTD
- Various configurations
- Compact ABS Enclosure

Peace of mind through reliable temperature monitoring

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM

SPECIFICATIONS:

Sensor..Several thermistors, platinum or nickel RTD's available.
See product ordering information

Sensor Accuracy.....................................**Thermistors:** ±0.2˚C (±0.36˚F), 0 to 70˚C (32 to 158˚F)
Platinum RTD's: ±0.3˚C (±0.54˚F) @ 0˚C (32˚F)
Nickel RTD's: ±0.4˚C (±0.72˚F) @ 0˚C (32˚F)

Probe Sensing Range.............................**AP, GL, RP, SO:** -20 to 105°C (-4 to 221°F)
DC, DF, DR, FL, OS: -20 to 60°C (-4 to 140°F)

Ambient Operating Range..................-40 to 50°C (-40 to 122°F)

Wire Material..**AP, DR, RP, SO, GL:** PVC insulated, parallel bonded, 22 AWG
DC, DF, FL : FT-6 rated plenum cable, 22 AWG

Probe Material ....**AP, DR, FL, RP:** 6.00 mm (0.236") O.D., 304 series stainless steel
DC: 7.94 mm (0.3125") O.D. soft copper
DF: FT-6 rated plenum cable
SO: 2" x 2" aluminum plate
GL: 0.5" x 0.5" x 2" aluminum wafer

Enclosures...**A:** Hinged cover - ABS - UL94-V0 - IP65 (NEMA 4X)
C: Hinged cover - ABS, with terminal block
E: Hinged cover - ABS, with thread adaptor (1/2" NPT to M16) and cable gland fitting
Conduit connection - 1/2" NPT threaded connection

Wiring Connections...............................**A:** Pigtail, 2 or 3 wire
C & E: Terminal block, 2 or 3 wire

Country of Origin...................................Canada

TS - PROBE TEMPERATURE SENSOR CONFIGURATIONS

FEATURES:

The TS temperature sensors offer a choice of precision platinum or nickel RTD's, or NTC Thermistors which can be interfaced with a computerized monitoring or control system. A wide variety of configurations are available such as:

AP) Duct/Immersion Sensor – The AP is for single point monitoring. Both are available with various probe lengths.

AP)

DC, DF & DR) Duct Averaging Sensor – All models incorporate numerous sensors along the assembly and act as a single sensor averaging the temperature across the sensors. They are available in various lengths. The DF probe is constructed of FT-6 rated plenum cable which allows for easy installation. The DC probe is constructed of bendable soft copper and the DR is a constructed of rigid stainless steel.

DC)　　　　　　　　　　　　　　DF)　　　　　　　　　　　　　　DR)

RP) & SO) Strap-on Sensor – The RP comes with stainless steel probe and is available in several lengths and 1.5 m (5') of cable for remote mounting. The SO has an aluminum plate with an expandable 10" clamp assembly to strap directly to a pipe. Various enclosures are available.

RP)　　　　　　　　　　　　　　　　　　　SO)

OS (Outside Sensor) – Comes in a weather-proof enclosure which incorporates a sun/windshield to protect the sensor.

OS)

GL) – The sensor is encapsulated in a 1/2" square x 2" aluminum wafer that can be affixed to any surface. It comes with 5' of zip cable.

FL) Flying Lead – The sensor is encapsulated in a 2" S/S probe with 6' of FT-6 rated cable and can be used in almost any application where temperature monitoring is required.

GL)　　　　　　　　　　　　　　　　　　　　　　　　FL)

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RoHS COMPLIANT

CE

PRODUCT ORDERING INFORMATION:

MODEL	Product Description
TS	Temperature Sensor Series

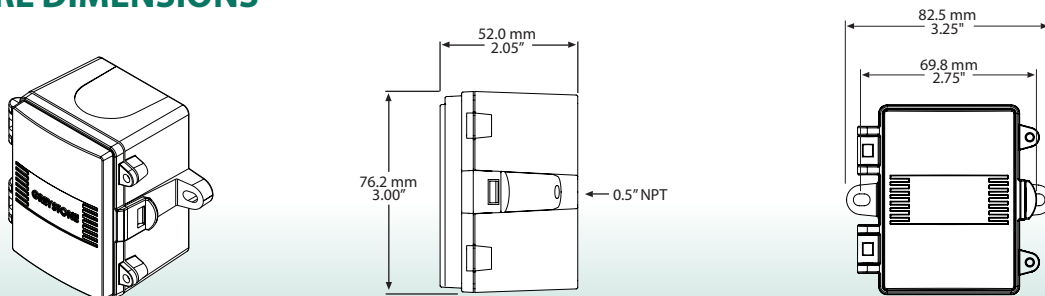| CODE	Mounting Style
AP	All Purpose Duct/Immersion
DC	Duct Average, copper probe
DF	Duct Average, flexible cable
DR	Duct Average, rigid stainless steel probe
RP	Remote Probe - strap-on
SO	Strap-On – assembly clamps around pipe with aluminum plate with 254 mm (10") stainless clamp
OS	Outside Air
FL	Flying Lead
GL	Glass

CODE	Enclosure
A	ABS with hinged and gasketed cover
C	Same as A, with terminal block
E	Same as C, with thread adapter and cable gland
X	Not Applicable (mounting styles FL & GL)

CODE	Sensor
02	100 Ω platinum, IEC 751, 385 alpha, thin film, 3 wire
05	1801 Ω, NTC thermistor, ±0.2 C
06	3000 Ω, NTC thermistor, ±0.2 C
07	10,000 Ω, type 3, NTC thermistor, ±0.2 C
08	2.252K Ω, NTC thermistor, ±0.2 C
12	1000 Ω platinum, IEC 751, 385 alpha, thin film
13	1000 Ω nickel, class B, DIN 43760
14	10,000 Ω, type 3, NTC thermistor, ±0.2 C c/w 11K shunt resistor
20	20,000 Ω, NTC thermistor, ±0.2 C
24	10,000 Ω, type 2, NTC thermistor, ±0.2 C
59	10,000 Ω @ 25°C ±1%, B=3435 ±1%

CODE	Probe Length	Lengths are applicable to these mounting styles
X	Not applicable	SO, OS, FL, & GL
A	50 mm (2")	AP & RP
B	100 mm (4")	AP & RP
C	150 mm (6")	AP & RP
D	200 mm (8")	AP & RP
E	300 mm (12")	AP
F	450 mm (18")	AP & DR
G	600 mm (24")	DR
H	900 mm (36")	DR
I	1800 mm (6')	DC & DF
J	3600 mm (12')	DC & DF
K	6100 mm (20')	DC & DF
L	7300 mm (24')	DC & DF

TS	AP	A	12	E

ENCLOSURE DIMENSIONS

52.0 mm
2.05"

76.2 mm
3.00"

← 0.5" NPT

82.5 mm
3.25"

69.8 mm
2.75"

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Warranty

MADE IN CANADA

Certified System
ISO9001

CE

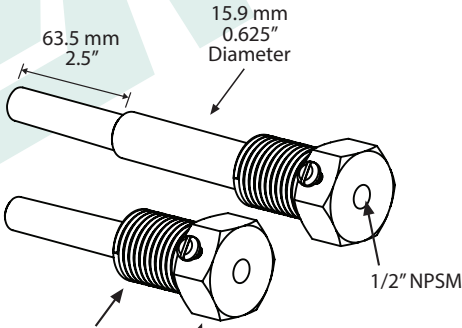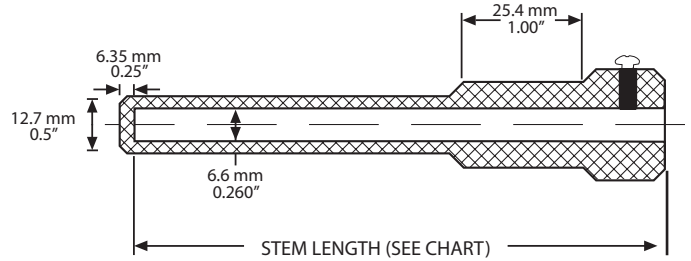# THERMOWELLS:

NOTE:

6" and up machined thermowells have a two step stem as shown. welded construction have a 9.5 mm (0.375") diameter

6.35 mm
0.25"

12.7 mm
0.5"

6.6 mm
0.260"

25.4 mm
1.00"

STEM LENGTH (SEE CHART)

63.5 mm
2.5"

15.9 mm
0.625"
Diameter

1/2" NPSM

Process Thread: 1/2" NPT or BSP

HEX Stock: 1" HEX for 1/2" NPT

THERMOWELL PART NUMBERING SYSTEM

SERIES NUMBER	NPT THREAD SIZE		MATERIAL	STEM LENGTH
T2	1/2"	N=NPT B=BSP	P - 304 SS R - 316 SS	2" 4" 6" 8" 12" 18"

EXAMPLE: T2 1/2 N P 4
4" 304 STAINLESS THERMOWELL
WITH 1/2" NPT PROCESS THREAD

ACCESSORIES:

Thread adapter and cable gland fitting are included with the E style enclosure option.

Thread Adapter

Cable Gland Adapter
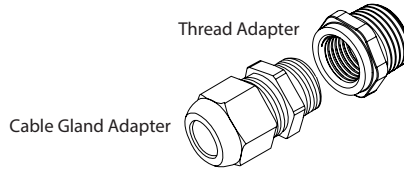
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