

SENSAPHONE 10K IMMERSION TEMPERATURE SENSOR FGD-0105

Field wiring resistance causes the sensor to read lower than actual temperatures. Chart at right shows max length allowable for a 1/10th deg. Error. Multiply lengths if greater error is allowable.	Wire size	40	60	80	100	120	150	175	200	230	Max temp F°
	22 gauge	1770	1025	621	373	233	124	75	45	31	Max length wire run (feet) for given wire size and max expected temperature
	20 gauge	2791	1618	980	588	368	196	118	74	49	
	18 gauge	4467	2586	1567	940	588	313	188	118	78	
	16 gauge	7107	4115	2494	1496	935	499	299	187	125	
	14 gauge	11265	6521	3953	2372	1482	790	474	296	198	

GENERAL INFORMATION

The active element is precision thermistor material accurate to within .36°F. Refer to controller literature for overall system accuracy.

WIRE

The sensor does not require shielded cable or even twisted pairs. However, most micro-based controllers operate more reliably when shielded cable is used. Sensor leads are rated for 105°C.

WARNING

Connection to the sensor to any voltage source other than the controller specifically designed for it can cause irreversible damage. The sensor resistance can be checked with a VOM without harm.

CONNECTIONS

Solder connections are by far the most reliable and trouble free over extended periods, and thus are preferred. Crimp type butt splices are the second choice and usually prove satisfactory. Simple wire nut connections are an invitation to long term trouble. This is an electronic hook up, not a power hook up. Equally important is that the field connection be made as far as possible from the sensed media. Use the full lead length provided to avoid condensation at the field connection.

APPLICATION RESTRICTIONS

Care should be taken in sensing temperatures in areas subject to rapid change in ambient wet bulb temperatures. Sensing media where it is possible for the sensed temperature to fall below the ambient dew point can cause condensation on the sensor itself and on the field connection.

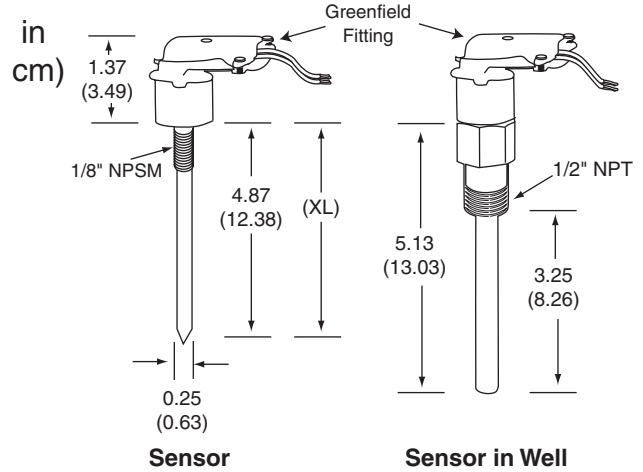
MOUNTING

Install well into customer-supplied 1/2" FNPTsaddle (or Thredolet®). Screw sensor into the well via the 1/8" NPSM brass fitting.

WIRING

Terminate with butt splice or soldering. Wire nuts are not recommended. Use full 8' (2.44m) lead length provided to avoid moisture migration up the wire.

DIMENSIONS



For technical support, call 877-373-2700.

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