



# ICT International Pty Ltd

Instrumentation for Soil, Plant and Environmental Monitoring

## SEA-THERM

### Ocean Surface Temperature Thermometer



#### TEMPERATURE MEASUREMENT

SCALE RANGE:	-70°C TO 100°C
RESOLUTION:	0.1°C
ACCURACY:	±0.5°C
REPEATABILITY:	±0.1°C
TEMPERATURE:	ALL FUNCTIONS IN °C
NOISE EFFECTIVE TEMPERATURE:	±0.2°C

#### OPTICAL CONSIDERATIONS

OPTICAL CONFIGURATION:	ROBUST, AEROSPACE-QUALITY, DOUBLE-COATED ZINC SELENIDE OPTICS PER MILITARY SPECIFICATION MIL-C-13508
SPECTRAL PASS BAND:	8 < WAVELENGTHS < 14 MICRONS
SIGHTING:	LINE OF SIGHT
FIELD OF VIEW:	10°

#### OPERATING CONDITIONS

OPERATING ENVIRONMENT:	-40°C TO 100°C, UP TO 99% RELATIVE HUMIDITY, NON-CONDENSING
STORAGE TEMPERATURE:	SAME AS OPERATING ENVIRONMENT TEMPERATURE

#### ELECTRICAL INTERFACE

POWER REQUIREMENTS:	5V TO 26V DC
OUTPUT SIGNAL:	0.5 VOLT - SLOPE = 10 MV/°C AND OFFSET = 700 MV AT 0°C

#### GENERAL

RESPONSE TIME:	<1 SECOND
EMISSIVITY COMPENSATION:	PRESENT TO 0.97 (DEFAULT) OR TO CUSTOMER'S SPECIFICATION
SKY DETECTION:	<b>SKY-SPY™ SYSTEM</b> FOR COMPENSATION OF UNWANTED SKY RADIATION
OPERATING DISTANCE:	2 CM TO 300 METERS
DIMENSIONS:	2" DIAMETER BY 3" LENGTH PLUS BAFFLE
MOUNTING HARDWARE:	ADJUSTABLE CLAMP-ON COLLARS
CABLE:	6' STAINLESS STEEL ARMORED CABLE WITH 4" PIGTAIL WIRES
BAFFLE:	3' LONG, 2" PVC BAFFLE TO PROTECT THE LENS FROM THE WEATHER
WARRANTY:	ONE-YEAR LIMITED WARRANTY ON PARTS & LABOR

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## **MOUNTING OF SEA-THERM**

1. Mount the sensor vertically  $\pm 20^\circ$ .
2. The infrared temperature sensor has a  $4^\circ$  included solid angle field-of-view. This conical field-of-view must be clear to the water surface with no structures or foreign objects intruding into the field-of-view. With this rule respected, the instrument can be mounted at any distance to the water up to 1000 feet.
3. Any bracket materials are allowable.
4. Any radiant heat from nearby sources is allowable as long as it does not heat the instrument above  $90^\circ\text{C}$ . Transient ambient temperature changes above  $5^\circ\text{C}$  per minute should be avoided to maintain accuracy.