X-Tag *High Rate Programming*

PHYSICAL SPECIFICATIONS

Dimensions: Max. Diameter 1.3 in (3.30 cm) x Length 4.8 in (12.19 cm)

Weight (in air): ~46 grams

Antenna: 7.3 in (18.54 cm)

FEATURES

- Predefined deployment duration (up to 30 days)
- Transmitted time-series depth, temperature, and light-level data
- Emergency Depth Release (greater than ~1250 m*)
- Constant Pressure Release after 2 days*
- 15,000 Argos message transmission capacity (about 16 transmission days)
- SiV™ technology
- Temperature-compensated real-time clock
- Embedded CRC checksum with bit error detection
- Rated to 3500 psi
- Complete archived (1−6 minute intervals, high-resolution) depth, temperature, and light-level records upon recovery and data extraction

CONSTRUCTION

Composite carbon-fiber, low-drag housing constructed with a strong tether attachment point. A polycarbonate BigEye™ nose cone encapsulates the multi-directional light sensor array, while the shape-memory alloy (NiTi) antenna provides additional durability. The PTT is then coated in a layer of anti-foulant paint to inhibit biological growth.

* Can be optimized per your requirements at time of manufacture.

GENERAL ELECTRICAL SPECIFICATIONS

Operating frequency: 401.650 MHz ±36 kHz
RF output power: 200 mW**
Output impedance: 50 ohms
Modulation tri-phase PSK: ±1.1 Rad ±0.1 Rad
Quiescent current: <3 µA
Spurious emissions: -45 dB
Transmission interval: 60 seconds*
Supply voltage: 3.6−4 volts
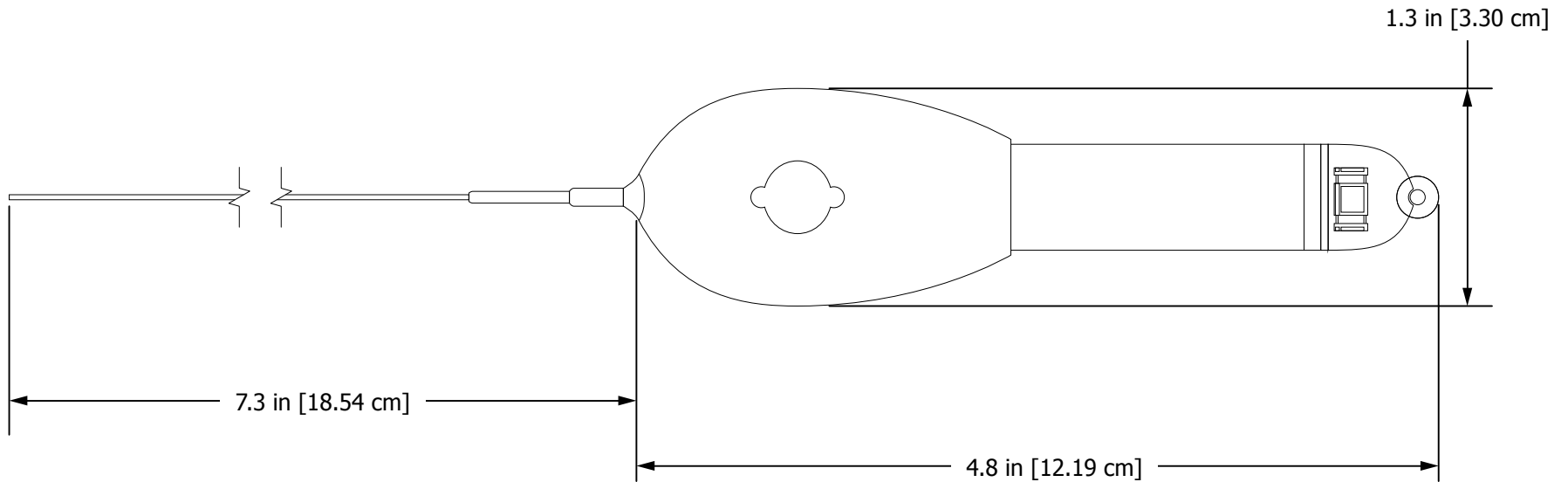Operating temperature range: -15−45°C

SENSORS

The X-Tag includes sensors to measure temperature, battery voltage, and pressure (depth). It is also equipped with multi-directional light sensors to account for tag orientation and dynamic light conditions.

Temperature range: -4−40°C (Resolution: 0.16−0.23°C)
Depth range: 0−1250 m (Resolution: 1.34 m [0.34 m archived])
Max light sensitivity: <4 x 10^{-5} Lux @ 555 nm

** Adjustable between 100−500 mW.

1.3 in [3.30 cm]

7.3 in [18.54 cm]

4.8 in [12.19 cm]

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X-Tag

NOTE: Dimensions may vary slightly due to the individually crafted nature of these devices.

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Scale 1:1