RFCODE

M173-i Sealed IR Location Sensor

With its small footprint and sealed enclosure, the M173-i Sealed infrared (IR) location tag is designed to provide room-level location accuracy in temperature-controlled environments.

Features & Benefits

- Encoded radio transmissions at 433 MHz
- Water-resistant sonic-welded enclosure
- Small, light-weight active RFID sensor
- Low power consumption for long battery life
- Superior anti-collision technology for high sensor densities
- Compatible with the A740 IR rack locator and the A750 IR room locator

The 433MHz M173-iSealed IR Location Sensor is a battery-powered RF transmitter designed with a sealed, water-resistant, crush-proof. Enclosure for general-purpose asset tracking. Every sensor broadcasts its unique ID and a status message at a periodic rate (that is programmed at the factory). These sensors provide an economical solution for a variety of asset tracking environments. RF Code's patented communication protocols support high sensor densities that allow large populations of sensors to be deployed in confined spaces.

M173-i Sealed IR Location Sensors are equipped with an on-board infrared (IR) sensor. This family of sensors is designed to be deployed in concert with RF Code's IR Rack and Room Locators. IR-enabled sensors monitor their environment for incoming IR signals and periodically report both their own unique ID and IR location codes. This provides a method for locating mobile assets with room-level accuracy. Since location is determined via the IR room code, there is no need for deploying multiple overlapping readers or performing complicated signal strength calculations or triangulation algorithms to determine sensor location.

M173-i Sealed IR Location Sensors are impact-resistant, splash-resistant and temperature stable. Labels are sealed on the inside of the clear polycarbonate enclosure via sonic welding at the point of manufacture. This protects both the label and the electronics from moisture and fluids. The durable enclosure provides a degree of protection in harsh environments; it can with stand saltwater splashes, cleaning solutions, germicides, disinfectants, etc. This enclosure design has been evaluated for compliance with Ingress Protection Rating 54 (IP54).

Powered by a coin cell battery, theM173-i sensor will perform reliably in extreme temperature environments (from-20 to +70 degrees Celsius).
In addition, the sensor performs well after exposure to humidity and hot/cold cycles. The sensor operates with a very low duty cycle that translates to long battery life (typically up to 4 years).

RF Code M173-i Sealed IR Location Sensor Specifications

OPERATION	
Operating Frequency	433.92 Mhz
Group Code & Sensor ID Codes	> 4,000,000 unique IDs per Group Code
Typical Transmission Range	Up to 300 ft.
Emitted Radiated Power	61.5 dBmV/m at 10 meters (maximum)
Modulation	ASK
Stability	SAW stabilized

ENCLOSURE	
Case Length	1.51 in (38.35 mm)
Case Width	1.23 in (31.24 mm)
Case Height	0.38 in (9.65 mm)
Case Weight (with sensor)	0.42 oz (11.8 g)
Construction	Polycarbonate
Durability	Tough, impact resistant and temperature stable
Mounting Options	Adhesive Pad (included)

ENVIRONMENTAL	
Operating Temperature	-20° C to +70° C
Storage Temperature	-40° C to +80°C
Operating Humidity	< 95% RH non-condensing; not recommended for outdoor applications
Sealing	Sonically welded: resistant to moisture, fluids, and rigorous cleaning procedures

IR COMPATIBILITY	
Rack Locators	RF Code A740 with Series 2 Protocol
Room Locators	RF Code A750 with Series 2 Protocol

POWER	
Battery Type	Lithium CR2032 coin cell
Smart Sensor Feature	Low battery indication
Battery Life	3.1 – 4 years (nominal)*

REGULATORY	
FCC Compliance	FCC Title 47 CFR Part 15; FCC ID: P6FX
CE Compliance	RED 2014/53/EU Article 3.1(a): Health and Safety RED 2014/53/EU Article 3.1(b): Electromagnetic Compatibility RED 2014/53/EU Article 3.2: Radio Spectrum CE Marked
WEEE Compliant	

9229 Waterford Centre Blvd. Suite 500
Austin, TX 78758
(512) 439-2200
sales@rfcode.com
rfcode.com