M172-i IR Durable Location Sensor

RFCODE Location Sensors

With its highly durable, sonically welded case, the M172-i Durable infrared (IR) Location Sensor is specially designed to provide room-level location accuracy in tough conditions.

Features & Benefits

- Encoded Radio Transmissions at 433 MHz
- IR-enabled for Room-Level Location Accuracy
- Dust Protected Sealed Enclosure
- Customizable Beacon Rates
- Low Power Consumption for Long Battery Life
- Superior Anti- Collision Technology for High Sensor Densities
- Compatible with A740 Rack Locator and A750 Room Locator Operating with Series 2 Protocol

The 433 MHz M172-i IR Durable Location Sensor is a battery-powered RF transmitter designed with a sealed, dust-resistant, crush-proof enclosure for general- purpose asset tracking. Every sensor broadcasts its unique ID and a status message at a periodic rate. 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.

M172-i IR Durable Location Sensors are equipped with on-board infrared (IR) and motion sensors. This family of sensors is designed to be deployed in concert with RF Code's IR Room Locators. IR-enabled sensors monitor their environment for incoming IR signals and periodically report both their own unique ID and IR location codes. Motion activation allows the sensors to operate at two beacon rates: slow when the sensor is stationary, and faster when the motion sensor is activated.

This provides a method for rapidly 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.

M172-i IR Durable Location sensors are impact-resistant, dust-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 dust and can be wiped with a damp cloth.

Powered by a coin cell battery, the M172-i sensor will perform reliably in 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.

M172-i IR Durable Location Sensors feature a wear-and-tear resistant, sealed enclosure to protect from dust; especially suitable for use in tough conditions.

RF Code M172-i IR Durable Location Sensor Specifications

OPERATION	
Operating Frequency	433.92 Mhz
Group Code & Sensor ID Codes	> 540,00 unique IDs per Group Code
Typical Transmission Range	Up to 300 ft.
Emitted Radiated Power	71.8 dBµV/m at 3 meters (maximum)
Modulation	ASK
Stability	SAW stabilized
Sensor Options	Infrared, Motion

ENCLOSURE	
Case Length	1.770 in (44.95 mm)
Case Width	1.330 in (33.78 mm)
Case Height	0.441 in (11.20 mm)
Case Weight (with sensor)	0.52 oz (14.7 g)
Construction	Polycarbonate
Durability	Tough, impact resistant and temperature stable
Mounting Options	Adhesive pad (included)

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

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 dust and moderate cleaning procedures

POWER	
Battery Type	Lithium CR2032 replaceable coin cell
Smart Sensor Feature	Low battery indication
Battery Life	> 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

RFCODE

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