RFCODE
Location Sensors

M100 Location Sensor

With their modular design and low price, M100 location sensors provide an economical solution to a wide variety of tracking scenarios.

Features & Benefits

- Encoded Radio Transmissions at 433 MHz
- Small Size and Low Cost
- Customizable Beacon Rates
- Low Power Consumption for Long Battery Life
- Multiple Mounting and Enclosure Options
- Adaptive Form Factor for Customized Solutions
- Smart Sensor Options: Motion Detection
- Superior Anti-Collision Technology for High Sensor Densities

The 433 MHz M100 sensor is a battery-powered RF transmitter that attaches to items that need to be tracked, located and identified. Every sensor broadcasts its unique ID and a status message at a periodic rate (that is programmed at the factory). With a modular design and low price, sensors provide an economical solution to a wide variety of problems. RF Code's patented communication protocols allow for very high sensor densities. Large populations of sensors can be deployed in highly-scalable asset tracking environments.

Typical beacon rates for these general-purpose sensors range from 2-seconds to 10-seconds. The M100-series sensors can be customized to support a broad range of integrated sensors to monitor sensor status. Motion activated sensors can be programmed to operate at 2 beacon rates: slow when the sensor is stationary, faster when the motion sensor is activated (to provide immediate notification when objects are moving). The standard low- profile, snap-together enclosure allows for battery replacement.

M100 location sensors feature impact resistant, splash resistant, temperature stable cases and read ranges up to 1,000 feet (with optional antenna configurations). The standard sensor operates with a very low duty cycle that translates to long battery life (typically 5-7 years at a 10-second beacon rate).

RF Code M100 Location Sensor Specifications

OPERATION	
Operating Frequency	433.92 MHz
Group Code & Sensor Codes	> 540,000 unique IDs per Group Code
Typical Transmission Range	Up to 300 ft
Radiated Emissions	71.8 dBuV/m at 3 meters (maximum)
Modulation	ASK
Stability	Saw stabilized
Sensor Options	Motion, Tamper

SENSOR DIMENSIONS (WITHOUT ENCLOSURE)	
Sensor Width	1.64 in (41.65 mm)
Sensor Depth	1.125 in (28.57 mm)
Sensor Height	0.30 in (7.62 mm)

ENCLOSURE	
Case Length	1.84 in (46.74 mm)
Case Width	1.35 in (34.28 mm)
Case Height	0.46 in (11.68 mm)
Case Weight (with sensor)	.50 oz (14.1 g)
Construction	Polycarbonate
Durability	Tough, impact resistant and temperature stable
Mounting Options	Tape, lanyard, asset strap, cable tie, magnet, screw

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	Splash resistant

POWER	
Battery Type	Lithium CR2032 replaceable coin cell
Smart Sensor Feature	Low battery indication
Battery Life	5-7 years *

* Battery life measured at 2-second motion beacon interval / 12.5-second static beacon interval with 10% motion over the life of the sensor.

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