

# R142-i3RF IR-Enabled Proximity Badge

Designed for use with A760 Proximity Locators, A740 Rack Locators, and A750 Room Locators, R142-i3RF Proximity Badges provide real-time location information that enables you to track personnel movement, including entrance and exits from controlled areas.

## Features & Benefits

- ◆ Encoded radio transmissions at 433 MHz
- ◆ Designed for personnel tracking applications
- ◆ Clip to clothing or hang on a lanyard
- ◆ Flat surface for adhesive-mount of HID-type card on the badge face
- ◆ Infrared sensor for reporting room-level location addresses
- ◆ Proximity detection for monitoring localized events (typically 6 foot radius)
- ◆ Three (3) buttons for alerting and status messaging
- ◆ Audible buzzer provides user feedback

The Infrared-Enabled Proximity Badge (tag) is a battery-powered RF transmitter that can be clipped onto an article of clothing or worn around the neck with a lanyard. Every tag broadcasts its unique ID and a status message at a periodic rate. When used with strategically-deployed RF Code Proximity Locators and IR Room Locators, tag transmissions can be mapped in real-time to track personnel movement, including entrance and exits from controlled areas.

This tag transmits RF status messages several times per minute, has an on-board proximity transceiver, IR receiver and 3 buttons. There is an adhesive liner on the face of the tag. Removing the adhesive liner allows a personnel badge (HID or similar) to be secured to the Proximity Badge.

This tag also includes an on-board motion sensor. When the tag is in motion, it is actively searching for proximity event messages from Proximity Locators and incoming IR signals from Room Locators. During periods of normal operation, the tag will transmit its unique ID and status payload messages (typically its Room Location address). If the tag encounters a new IR Location, the tag will immediately send the new IR Location payload three times and then revert to the normal operation.

If the tag detects a Proximity Event message from an RF Code Proximity Locator, the tag will immediately send the proximity ID three times. The proximity

ID payload also includes an indication of whether or not the tag was considered the closest tag to the proximity event. The tag will beep at the conclusion of the proximity event communication if instructed to do so by the Proximity Locator.

If the user presses one or more of the buttons, the tag will beep and immediately send messages indicating which button(s) were pressed. Button messages are sent six times in a row; holding down the button will not cause messages to be sent. If the tag reaches a low battery condition, the low battery bit flag will be set and the flag beacons will be included in the beacon sequence. The beacon rate is not affected by the low battery bit flag.

The tag enclosure is IR transparent, impact resistant, splash resistant and temperature stable, with a read range up to 300 feet.



*The R142-i3RF IR-Enabled Proximity Badge shown with an RF Code A760 Proximity Locator.*

# RF Code R142-i3RF IR-Enabled Proximity Badge Specifications

## OPERATION

Operating Frequency	433.92 MHz
Group Code & Tag ID Codes	> 540,000 unique IDs per Group Code
Typical Transmission Range	Up to 300 ft

## ENCLOSURE

Case Length	2.232 in (56.67 mm)
Case Width	3.949 in (100.30 mm)
Case Height	0.280 in (7.11 mm)
Case Weight (with tag)	1.40 oz (39.68 g)
Construction	Injection-molded polycarbonate enclosure
Durability	Tough, impact resistant and temperature stable

## 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 coin cells (3)
Smart Tag Feature	Low battery indication
Battery Life	>4,000 hours of active use *

## IR COMPATIBILITY

Rack Locators	RF Code A740 with Series 2 Protocol
Room Locators	RF Code A750 with Series 2 Protocol
Proximity Locators	RF Code A760 Proximity Locator

\*The tag operates with a very low duty cycle that translates to long battery life. Based on the ratings and specifications from the battery manufacturers, RF Code develops usage models to calculate the life of the active RFID Tags. Like all models, there are assumptions and approximations involved. The values are to be taken as engineering estimates - not guaranteed performance. Exposure to extreme temperatures will shorten the battery life. RF Code warrants all tags to be free from defects in materials and workmanship for a period of 1 year.

Each R142-i3RF badge contains an internal counter that logs the cumulative number of active hours. When the badge is in motion, it is considered to be "active." Warranty coverage is provided for a period of one (1) year or 4,000 hours of active use (whichever comes first).



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