

Personal Badge Instruction Manual and Specs sheet

FCC Compliance

The FCC Wants You to Know

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- a) Reorient or relocate the receiving antenna.
- b) Increase the separation between the equipment and receiver.
- c) Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- d) Consult the dealer or an experienced radio/TV technician.

FCC Warning

Modifications not expressly approved by manufacturer could void the user authority to operate the equipment under FCC rules.

15.9 (a) Labeling Requirements

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IR and RF Personal Badge

P/N: PBU00916 (916.5 MHz)



IR/RF Personal Badge

Description

A small, portable, personal clip-on badge. The badge sends Infra Red signals, in addition to RF signals in the frequency of 916.5 MHz. The tag is used for locating people in enclosed environments and providing various location dependent functions (open doors, alert indication, etc.).

General

Electrical power source	One 3-Volt lithium battery
Data rate	19,200 bits per second
Message protocol	4 bytes proprietary format
Message duration	2.08 ms
Button on badge	Location dependent function. Button press transmitted with IR and RF message. Four identical button messages are transmitted 0.4sec apart on every button press. Button press decoded by RF and IR RDRs or Central PC.
Battery type	CR-2430 Renata
Battery life	18 months, assuming movement 8 hr / day
Battery status indication	Battery status transmitted with every message
LED indicator on badge	Activated with every RF and IR message.
Badge ID	Unique factory programmed (ID code, transmit rate, motion sensor activation and deactivation, etc.)
Dimensions	79 x 39 x 7 mm
Weight (including battery)	24 gram

Temperature: Operating	-10 to 70°C
Temperature: Storage	-20 to 60°C
Humidity : Operating	Operating – 5 to 95% RH @ 70°C
Humidity : Storage	Non Operating (12 Hours) – 5 to 95% RH @ 85°C
Safety Compliance	UL 1950, CE EN 60950

IR Transmission

Peak optical transmitted power	500mW
Peak transmission wavelength	880nm
Peak radiant intensity	120 mW/Sr
Frequency of transmission	Carrier at 455 KHz
Transmission rate	During human movement – every 3 to 5 sec message. During rest (no movement) – every 60 sec
Transmission angle	360° badge plane. ±60° to badge perpendicular axis

RF Transmission

	916.5 MHz RF
Modulation	ASK (Amplitude Shift Keying of 916.5 MHz carrier) transmitted 200ms after IR transmission
Average effective radiated power	In motion: less than –35 dbm. Motionless: less than –45 dbm
Stability	+/- 20ppm
Min ERP	-25 dbm (min)
Peak ERP	-15 dbm (max)
Transmission pattern	Omnidirectional

Standards Compliance

	916.5 MHz RF
FCC compliance	FCC Part 15.249
CE compliance	300 220-1 EN 55022

Using the Personal Badge

The following is a set of procedures to ensure proper use of the Personal Badge.

To use the Personal Badge:

1. Keep the IR transmission area clear.
2. Use the pad of your finger to press the button on the back of the badge.
3. The RDRs within the facility pick up the signals.
4. A brief press of the button is all it takes.
5. Maintain the position of the badge for about one second.

Battery Replacement

The battery is located inside the Personal Badge. In order to replace the battery, you need to remove the two screws of the plastic backing of the Personal Badge and then remove the old battery and replace it with a new one. Replace the plastic casing and secure it with the two screws.