Equipment Tag with Input Instruction Manual and Specsheet

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.

IR and RF Equipment Tag with Input

P/N: WSE00433 (433.92 MHz)

Description

A small, attachable portable device, capable of transmitting Infra Red signals in addition to RF signals in the frequency of 433.92 MHz. It is used for the purposes of locating, monitoring and protecting mobile equipment in enclosed environments and for providing various location dependent functions.
The inclusion of the input provides an indication of the “short” and “open” states of the input.

General

Input	Short – accepts dry contacts of less than 10kΩ Open – accepts dry contacts more than 1MΩ **Note:** No voltage should be applied between the two input wires.
Transmissions	The transfer from open to short or from short to open triggers the following transmissions: Open to short – 4 badge transmissions at 0.4 sec apart with B2 high Short to open - 4 badge transmissions at 0.4 sec apart with B2 low In Steady State, B2 indicates the following input states: Low – open High – short
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
Battery type	CR 2032 Renata
Battery life	Five years, assuming movement 1 hr / day

Battery status indication	Battery status transmitted with every RF and IR message
Badge ID	Unique factory programmed (ID code, transmit rate, motion sensor activation and deactivation, etc.)
Dimensions	39 x 39 x 16 mm
Weight (including battery)	25 gram
Temperature: Operating	-10 to 70°C
Temperature: Storage	-20 to 60°C
Humidity: Operating	5 to 95% RH @ 70° C
Humidity: Storage	5 to 95% RH @ 85° C
Water resistance	Waterproof

IR Transmission

Modulation	ASK (Amplitude Shift Keying of IR carrier)
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 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

	433.92 MHz
Modulation	ASK (Amplitude Shift Keying of 433.92 MHz carrier)
Average effective radiated power	In motion: less than –35 dbm. Motionless: less than –45 dbm
Stability	+/- 20ppm
Peak ERP	-15 dbm (max)
Transmission pattern	Omnidirectional
FCC compliance	FCC Part 15.231 Level C

Using the Equipment Tag with Input

The following is a set of procedures to ensure proper use of the Equipment Tag.

To use the Equipment Tag with Input:

1. Use some glue to attach the Equipment Tag to a piece of equipment.
2. A press button is available, if required.
3. Connect the two wires together to activate the input sensor.

Battery Replacement

The Equipment Tag contains a standard Lithium battery of type CR2032.
The battery is located inside the Equipment Tag. In order to replace the battery, you need to open the back side of the equipment tag with a Phillips screwdriver (preferably an electric one) with point size "0". For example, the APEX #4910. A new battery can then be inserted, after which the screws must be replaced.