

User Manual

100-000A

2.4GHz Vero Transponder

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Description

The Vero transponder acts as both the wireless power supply for an array of wireless sensors and the communications interface between the local, low-energy wireless network of receiver and sensor modules (RSM) and the existing, wide-area data network on the installation location. The transponder is able to manage RSM data sampling and transmission strategies, both preset fixed and dynamically varying during operation, in addition to making decisions based upon analysis of the sampled data transmitted back by the RSMs. The transponder provides means of sensing the proximity of any nearby personnel or metallic object for the purpose of decreasing or disabling the RF power output.



COMPLIANCE STATEMENTS

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Note: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

WARNING!

FCC and IC Radiation Exposure Statement: This equipment complies with FCC's and IC's RF radiation exposure limits set forth for an uncontrolled environment under the following conditions:

1. This equipment should be installed and operated such that a minimum separation distance of 25cm is maintained between the radiator (antenna) & user's/nearby person's body at all times.
2. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

TABLE 1. 100-000A ABSOLUTE MAXIMUM RATINGS

PARAMETER	MINIMUM	MAXIMUM	UNITS
Input Voltage		115	vac
RF Output		34	dBm EIRP
Operating temperature	0	+65	°C

TABLE 2. 100-000A ELECTRICAL SPECIFICATIONS

PARAMETER	DESCRIPTION
Conducted RF output power	22 dBm
Center Frequency	2.420 GHz
Modulation	DSSS-OQPSK
Bitrate	250 kbps
Beam pattern (vertical polarization)	HPBW: 26° elevation, 60° azimuth
Communication Protocols	802.11b/g/n, 2.4GHz BLE, Custom DTS protocol

TABLE 3. 100-000A MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION
Dimensions	16" x 7" x 3.75" (40.6cm x 17.8cm x 9.5cm)
Weight	3.4 lbs. (1.55 kg)
Enclosure	Ruggedized and corrosion resistant, vibration tested to UN DOT 38.3

INSTALLATION INSTRUCTIONS

1. Mount the 100-000A on or near the equipment being monitored such that the front of the unit is facing the receiver and sensor modules (RSMs). The 100-000A must be mounted in a location that always allows for a clearance of 25cm from the front of the unit to any individual.
2. Plug the DC connector of the power supply into the connector on the 100-000A. Then plug the power supply into a 120V outlet.
3. The LED on the front of the 100-000A will continuously flash red to indicate normal operation.

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