

Wireless Vehicle Presence Sensor

Technical Overview

General Description

The RF wireless vehicle presence sensor can be used in a host of applications where detecting vehicle presence or motion is needed. Three user selectable profiles are available. The selected profile tells the sensor what type of data to report to the software.

Features

- 3 unique sensor profiles available.

Principle of Operation

Profile 1 - Detects the presence or absence of a parked or stationary vehicle.

Profile 2 - Detects vehicles in motion passing by.

Profile 3 - Works along side of Profile 2 to report the speed of vehicles in motion as they pass by. If a Monnit WIT ID sensor is mounted on the vehicle, the system is capable of reporting the speed as well as the identity of the vehicle.


OEM Sensor Core Specifications

- Power: 3.0 V coin cell battery
- Communication: RF 900, 868 and 433 MHz
- Antenna: 4" wire antenna
- Operating Temperature: -40° to 85°C (-40° to 185°F)
- Device Range: 250 - 300 ft. non-line-of-sight*
- Only 1 inch by 1 inch

* Actual range may vary depending on environment.

Applications

- Parking Garages
- Parking Lots
- Road Construction
- Vehicle Speed Detection
- Automotive Services
- Fleet Management
- And many more...

Specifications		Technical Specifications	
Supply Voltage	2.0 - 3.6 VDC *	Field Range (Full scale (FS) - total applied field)	-8 to +8 gauss
Current Consumption	0.7 µA (sleep mode) 2 mA (radio idle/off mode) 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)	Mag Dynamic Range (3-bit gain control)	±1 to ±8
Operating Temperature Range	-40°C to +85°C (-40°F to +185°F) **	Resolution (VDD=3.0V, GN=2)	5 milli-gauss typ.
Performance	0.7% BFSL Accuracy	Linearity (±2.0 gauss input range)	0.1 ±% FS max
Operating Temperature	-40 to 221°F (-40 to 85°C)	Hysteresis (±2.0 gauss input range)	±25 ppm typ.
Certifications	900 MHz product; FCC ID: ZTL-RFSC1 and IC: 9794A-RFSC1. 868 and 433 MHz product tested and found to comply with: CISPR 22:2008-09 / EN 55022:2010 - Class B and ETSI EN 300 220-2 V2.4.1 (2012-05).	Cross-Axis Sensitivity (Cross field = 0.5 gauss)	±0.2% FS / gauss
		Output Rate (Continuous Measurement Mode)	0.75 to 75 Hz
		Output Rate (Single Measurement Mode)	160 Hz max
		Measurement Period	6 msec typ.
		Gain Tolerance	±5%
		Gain Tolerance (Ambient, unbiased)	-40 to +125°C
		Operating Temperature Range (Board Circuitry and Battery)	-20°C to +60°C (-4°F to +140°F) **
		Optimal Battery Temperature Range (Coin Cell)	+10°C to +50°C (+50°F to +122°F)

* Hardware can not withstand negative voltage. Please take care when connecting a power device.
 ** At temperatures above 100°C, it is possible to lose programmed memory.

For more product information, to get a quote, or to place an order, please contact our sales department at 801-561-5555. Visit us on the web at www.oemsensors.com.

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