



## ColdGuard Voltage Sensor

The ColdGuard Wireless Voltage Sensor is an analog measuring device that reports the measured voltage on user specified intervals. The sensor has three operating modes, in which you can obtain the voltage measurement in VACrms (root mean squared), the peak voltage, or the DC voltage. The modes can be set by the user; the default mode measures VACrms.

By connecting the leads on the ColdGuard Wireless Voltage Sensor to the positive and ground terminals of another device, battery or sensor, it can measure the voltage and send data to the ColdGuard Online Sensor Monitoring and Notification System. The data is stored in the online system and can be reviewed and exported as a data sheet or graph. Notifications can be set up through the online system to alert the user when certain thresholds have been met or exceeded.

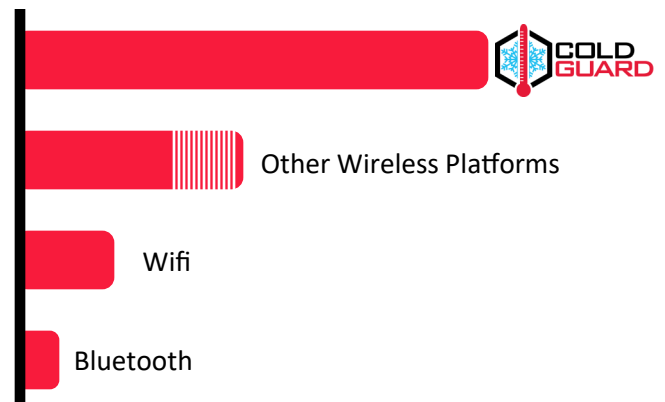
ColdGuard sensors are enclosed in reliable, weather-proof NEMA rated enclosures. Our NEMA rated enclosures are constructed for both indoor or outdoor use and protect the sensor circuitry against the ingress of solid foreign objects like dust as well as the damaging effects of water (rain, sleet, snow, splashing water, and hose directed water).



- Wireless range of 1,000+ feet through 12-14 walls \*
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange+ AES-128 CBC for sensor data messages)
- 16,000 sensor message memory
- Over the air updates (future proof)
- Plug & Sense, no hassle set-up
- No PC required for operation
- Local status LEDs with transmission and online status indicators
- On-line heart-beat control
- Power outage notification

\*Actual range may vary depending on environment.

### Wireless Range Comparison





## ColdGuard Voltage Sensor Specifications

Supply Voltage	2.0 - 3.6 VDC *
Current Consumption	0.7 $\mu$ A (sleep mode) 2 mA (radio idle/off mode) 2 mA (measurement mode) 25 mA (radio RX mode) 35 mA (radio TX mode)
Operating Temperature Range (Board Circuitry and Battery)	-40°C to +85°C ( -40°F to +185°F ) **
Included Battery	Max Temperature Range: -40° to +85°C ( -40° to +185°F ) Capacity: 1800 mAh
Sensor Resolution	11 bit (single ended)
Conversion Time	228 $\mu$ s
Supported Operation Modes ****	VACrms (root mean squared), Peak Voltage, DC Voltage
Full Scale Voltage	0—500 VAC/VDC*****
Maximum Input Voltage	600 VAC/VDC *****
Accuracy	+/- 3% FS (User calibrated: +/- 1% FS)
Integrated Memory	Up to 512 sensor messages
Wireless Range	1,000+ ft. non-line-of-sight ***
Security	Encrypt-RF tm (256-bit key exchange and AES-128 CTR)
Weight	4.7 Ounces
Enclosure Rating	NEMA 1, 2, 4, 4x, 12 and 13 rated, sealed and weather proof
UL Rating	UL Listed to UL508-4x specifications (File E194432)
Certifications	900 MHz Product: FCC ID: ZTL-G2SC1 and IC: 9794A-G2SC1
	*Hardware cannot withstand negative voltage. Please take care when connecting a power device.
	**At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.
	***Actual range may vary depending on environment.
	****Operation mode must be specified at the time of purchase.
	*****If application exceeds 500 VAC/VDC the sensor will return a maximum reading of 500V.

