



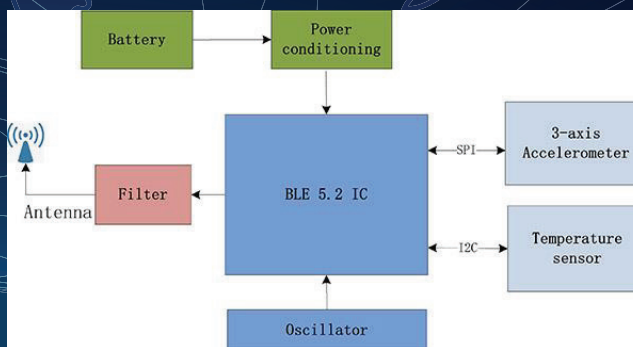
Ultra low power wireless vibration & temperature sensors SVT200 V, SVT30 V and SVT400 V provide true real time machine condition monitoring continuously 24/7 non stop. The sensors monitor triaxial acceleration continuously, and switches to 6.4kHz sampling rate automatically if the acceleration exceeds 0.1g in any direction. The sensor acquires a fixed number of samples, calculates velocity RMS and acceleration RMS value, and sends the result plus temperature to Broadsens's wireless gateway.



True real-time wireless vibration sensor SVT200-V

| Parameters                  | SVT200-V  | SVT300-V                 | SVT400-V                 |
|-----------------------------|---|--------------------------|--------------------------|
| Acceleration range          | 2g to 8g auto adjusting   | 2g to 16g auto adjusting | 8g to 64g auto adjusting |
| Sampling rate               | 6.4kHz in high-speed mode; 3.13Hz in low-speed mode   |                          |                          |
| Resolution                  | 16-bit with auto-range adjustment for maximum sensitivity   |                          |                          |
| Nonlinearity                | < 0.6%  |                          |                          |
| Noises                      | 130ug/ $\sqrt{Hz}$  | 130ug/ $\sqrt{Hz}$       | 330 ug/ $\sqrt{Hz}$      |
| Sampling method             | Fixed 320 sample points at x, y and z axis in high-speed mode   |                          |                          |
| Temperature sensor range    | -40 - 85 °C (-40 – 185 Fahrenheit)  |                          |                          |
| Temperature accuracy        | -25-85°C: ±0.3 °C; -40- -25°C: ±0.4 °C; no calibration needed   |                          |                          |
| Measurement & transmit mode | Continuous low-speed sampling, periodic high-speed sampling & transmission, and triggered high-speed sampling & transmission            |                          |                          |
| Power consumption           | 2.3 uA idle, 12uA average at low vibration environment, and up to 72uA (worst case) at continuously high vibration environment          |                          |                          |
| Power supply                | 14250 intrinsic safe battery, 1200mA capacity, replaceable  |                          |                          |
| Wireless protocol           | 2.4GHz ultra-low power proprietary  |                          |                          |
| FCC ID/IC ID                | X8WBC833M / 4100A-BC833M  |                          |                          |
| Transmission distance       | Up to 300m (900 ft) line of sight, open space   |                          |                          |
| Size                        | Single M6 case: 34mm (1.34 inch); height:31mm (1.22 inch)<br>Two-screw hole case: diameter 33mm (1.30 in); height 26mm (1.02 in)        |                          |                          |
| Weight                      | 53 g (1.9oz) for single M6 case; 37 g (1.3oz) for two-screw hole case   |                          |                          |
| Mounting method             | Magnet, pad, stud, epoxy or screw mount   |                          |                          |
| Environment                 | Working temperature: -40 - 85 °C; storage temperature: -55 - 85 °C; IP68 waterproof (IP69K optional); Explosive rating: Ex ia IIC T4 Ga |                          |                          |

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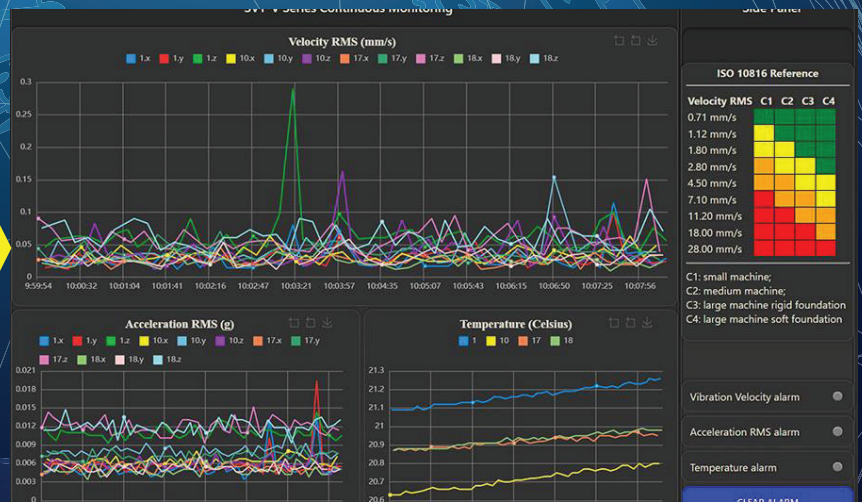
## SVT V Series Sensors' Advantages

SVT V series sensors are the only compact true real time wireless vibration sensors that monitor machine condition continuously with 4-5 year battery life typically. SVT V sensors have two auto sampling modes: continuous low speed sampling mode and high speed sampling mode. They acquire x, y and z axis data in 16 bit resolution continuously. When the sensor detects a vibration event, it switches to high speed 6.4kHz sampling rate, takes a fixed amount of data, calculates velocity RMS and acceleration RMS value, and sends the result plus temperature to the wireless gateway. When there is no vibration event, the sensor still switches to high speed 6.4kHz sampling rate every 10 seconds, calculates the velocity RMS and acceleration RMS value, and sends the result to the wireless gateway.

The smart algorithm inside SVT V series sensors adjusts the sampling modes and sensitivity dynamically and optimizes the energy usage. It can capture both high frequency and low frequency defects from the machine and structures. SVT V series sensors can be mounted with magnet, pad or stud (single M6 screw hole enclosure), epoxy, screws or wire (double screw hole enclosure).

### Monitoring Software

Software at wireless gateway is based on open-source software node-RED. No software installation is required. It can be accessed with all major web browsers.



### Software advantages

- . True real-time vibration monitoring
- . Intuitive data visualization
- . Alarm & threshold setup
- . Scheduled data acquisition
- . Time-series database
- . Vibration trend charts
- . FFT analysis
- . OTA firmware upgrade
- . Easy expansion
- . Secure data transmission

