



DAVISOL DVS-WT790 Ex Smart Wireless Temperature & Vibration Monitor

Eliminate complex cabling and costly downtime. The **DAVISOL DVS-WT790 Ex** delivers continuous, tri-axis vibration, speed, and temperature monitoring in one zero-configuration device. Powered by embedded diagnostic algorithms, it detects machinery faults before failures happen, giving you total asset visibility in even the most extreme Zone 0 hazardous environments.



CONTACT US

<https://www.davisol.ch/>

sales@davisol.ch

+41 77 445 18 34

support@davisol.ch

Rue de la Prulay 47, Meyrin
Geneva, Switzerland

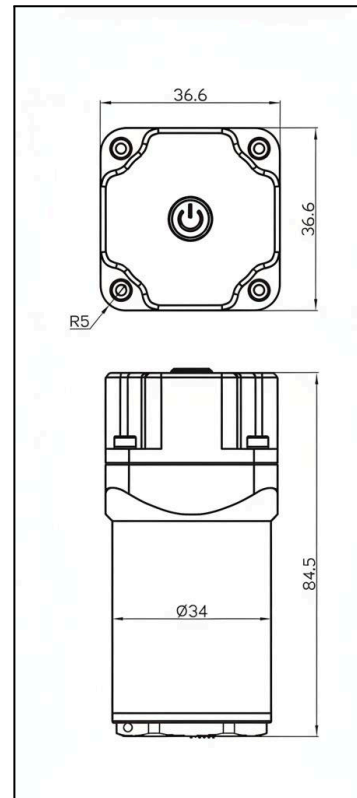


Some Product Applications

- Water & wastewater treatment
- Power generation & wind turbines
- Manufacturing & CNC machinery Petrochemical refineries (Zone 0)
- Air Compressors & Small Reciprocating Compressors
- Mixers & Centrifuges
- Ball Mills & Blowers
- Pumps and Cooling Towers
- Generators & Steam Turbine

Principle and Characteristics

This smart sensor integrates 3-axis vibration, rotational frequency, and temperature monitoring for real-time fault diagnosis. Powered by a 32-bit ADC with up to 51.2kHz sampling and embedded algorithms, it delivers instant threshold alerts and visual LED status indicators. Its compact, plug-and-play body features a patented magnetic base for accurate thermal readings. With dual Bluetooth 5.0 and Zigbee connectivity for mobile data access, its ultra-low-power design provides 3 to 5 years of battery life.



Technical Specifications

Category	Parameter	Specification
Acceleration	Number of Axes	3 Axes
	Sensing Unit	Piezoelectric or MEMS
	Amplitude Range	±50 g Peak (Z-axis) and ±16 g Peak (X and Y axes)
	Linearity	1%
	Measurement Accuracy	±5% (160 Hz) for Z-axis; ±5% (160 Hz) for X and Y axes
	Cross-Axis Sensitivity	3% (100 Hz)
Data Acquisition	Frequency Range	Z-axis: 0.1 Hz to 20 kHz (±3dB) X/Y axes: 0.5 Hz to 1.6 kHz (±3dB)
	ADC Precision	32-bit ADC
	Sampling Rate	1 KHz – 51.2 KHz
	Sampling Length	2 Kbytes – 2 Mbytes
	Measurement Interval	5-minute Indicators and 2-hour Time-domain Waveforms
	Output Format	Total Value, RMS Value, Frequency Spectrum, and Time-domain Waveforms
Temperature	Measurement Range	-40°C to 125°C (Device Surface Temperature)
	Accuracy	1°C
Speed Frequency	Monitoring Range	0 – 100 Hz
	Measurement Accuracy	±0.5 Hz (Applicable to motor equipment)
Wireless Communication	Network Topology / RF	Star / IEEE 802.15.4 (2.4 GHz ISM band)
	Encryption /	128-bit AES encrypted transmission

Category	Parameter	Specification
	Security	
	RF Output Power (Peak)	5 dBm (Max)
	Communication Range	Up to 450m line-of-sight unobstructed distance
	Firmware Upgrade	Gateway wireless OTA (Over-The-Air) upgrade
	Battery	Replaceable Size C 3.6V disposable lithium thionyl chloride (EVE ER26500 or Xeno Energy XL-145F)
Environmental & Hazardous Area	Hazardous Area Approval	Zone 0, Group IIC gas environments (Ex ia IIC T4)
	Operating Environment	-40°C to 80°C (Prolonged operation beyond these extremes will affect battery life).
	Mechanical Durability	Withstands a 1.5m drop onto concrete. Constructed with a highly corrosion-resistant stainless steel body and a solvent-resistant nylon enclosure.

A full suite of operational accessories, including gateways, antennas, batteries, and mounting hardware, is available through DAVISOL.

R&D and Customization

At **DAVISOL**, we understand that standard off-the-shelf solutions don't always meet the rigorous demands of specialized industrial applications. Our dedicated R&D engineering team stands ready to deliver bespoke configurations of the DVS-WT790 Ex tailored precisely to your operational needs.

From modified enclosures for extreme environments to custom firmware and direct SCADA/IoT integration, we adapt our technology to fit your exact operational requirements.

DAVISOL — Engineering that delivers.