FLIR SV88™ and SV89™

Vibration Monitoring Solution Kit

Key Features:

- Precise measurements of GRMS, VRMS, peak, crest factor, kurtosis, skewness, standard deviation, and FFT analysis provides users with detailed insights into the vibrational characteristics of their equipment to prevent costly downtime.
- Wireless capability enhances flexibility in installation, allowing for easy deployment in various industrial environments.
- Rugged, IP66 rating ensures reliable performance in demanding conditions subject to moisture, dust, or debris.
- Multi-communication protocols (Modbus, MQTT, OPC UA) for integration with advanced analysis tools.

Main Applications:

- Condition monitoring of critical equipment: By continuously analyzing vibrations from rotating equipment, it enables the necessary insights to utilize predictive maintenance strategies.
- Fault detection of vibration patterns indicative of potential faults such as: misalignment, bearing defects, or gear damage.
- Data-driven decision making for reliability-centered maintenance to help identify patterns, trends, potential failure modes and the severity of detected issues.

VIBRATION SENSOR SPECIFICATIONS

	SV88	SV89
Measurement & Analysis		
Sensitivity range	±16 g	±50 g
Frequency range	10 Hz to 5 kHz	10 Hz to 10 kHz
Capture rate	Configurable: 1 min (min) ~ 1 day (max)	
Temperature range	Display measurement trend of contact temperature -20°C to 80°C (-4°F to 176°F)	
Output data	SV88 (5 KHz, X/Y/Z): 19,200 raw data	SV89 (10 KHz, Z): 12,800 raw data
Vibration analysis d ata	Grms, Vrms (ISO10816), Peak, Crest Factor, Kurtosis, Skewness, Standard deviation, FFT	
Memory	1 MB Flash	
Connections & Communications		
Wi-Fi type	IEEE 802.11n	
Range (during a session)	Up to 50 m (160 ft), line of sight	
Communication protocol	TCP Socket	
Mounting	Bolt/screw (1/4" × 28 UNF) or TA88 Magnetic mount (optional)	
General Information		
Warranty	3 years	
Certifications	ETL/FCC/IC/CE/UKCA/RCM	

	SV88	SV89
Environmental Data		
Operating temperature range	-20°C to 80°C (-4°F to 149°F)	
Storage temperature range	-20°C to 80°C (-4°F to 149°F)	
Relative humidity	10% to 95% relative humidity, non-condensing	
Operating altitude	2000 m (6,562 ft) drop test	
Drop test	1 m (3 ft)	
IP rating	IP66	
Power		
Battery type	LS17500 3.6 V 3600 mAh Li battery (replaceable)	
Battery life	Min 2 years subject to sampling rate and installationenvironments	
LED indicators	Low battery LED	
Physical Data		
Size (L × W × H)	Sensor: 29 × 25 × 14 mm (1.14 × .98 × .55 in)	
Weight	Sensor : 187 g (6.6 oz)	

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GATEWAY SPECIFICATIONS

GW66	
System	
Processor	ARM Cortex-A7
Memory	DDR3L 512 MB
Storage	32 MB NOR Flash
Realtime clock	On chip RTC
LED indicators	WAN, LAN, 2.4 GHz, 5 GHz dual band dual concurrent
Connections & Communications	
Wi-Fi type	IEEE 802.11 b/g/n:
Communication protocol	MQTT, Modbus, OPC UA
Operating systems	Built-in webserver (Linux)
Output data	Vibration analysis data: Grms, Vrms, (ISO10816), Peak, Crest Factor, Kurtosis, Skewness, Standard Deviation, FFT
Ethernet	LAN, WAN
Environmental Data	
Operating temperature range	25°C to 65°C (-13°F to 149°F)
Storage temperature range	25°C to 65°C (-13°F to 149°F)
Relative humidity	10% to 95% relative humidity, non-condensing
Input/Output	
Ethernet	1 x 10/100/1000 Base-TX MDI/MDIX for LAN 1 x 10/100/1000 Base-TX MDI/MDIX for WAN
Power Supply	
PoE input	802.3 at standard PoE (PD) @ WAN port
Power input	12 VDC
AC input	TA87 universal power adaptor: 100 V to 240 V AC, 50/60 Hz (optional)

Environmental and Mechanical	
IP rating	IP40
Mounting	Wall-mount or DIN-rail mount
Operation temperature	-40°C to 75°C (-40°F to 167°F)
Storage temperature	-40°C to 85°C (-40°F to 185°F)
Physical Data	
Packaging size (L × W × H)	285 × 147 × 100 mm
Packaging weight	3.3 lbs
Size (L × W × H)	Gateway: 57.3 × 39.3 × 46.1 mm (2.25 × 1.55 × 1.81 in)
Weight	Gateway: 645 g (22.75 oz)

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