

The Sensotek Kappa® sensor range is used to continuously monitor your rotating equipment and critical assets. Reporting key parameters to our cloud based Analytix® platform, these values can be trended over time and used to identify faults or inefficiencies with your equipment and processes.



The Kappa® X sensor KPX1001, has been specifically developed in identify faults for plant machinery in a wide variety of applications.

Key Applications

- Motor, Pumps, Fans
- Gearboxes, Conveyors
- Compressors, Chillers
- Grinders
- Wind Turbines
- Bearings on high & low speed assets.

Highlights	
10kHz Fmax	
Small diameter mount, magnetic or stud	
Long life replaceable battery	

Mechanical	
Physical	
Dimensions	See Sensor Dimensions
Weight (Magnet)	125g
Lid Material – Lid	POM-GF20
Base Material	Stainless Steel
Mounting Option (<i>m</i>)	0-Internal M6 Thread 1-Magnetic mount (std) 2-Stud mount with Axy-fix threaded attachment
Pull Force	Pull Force (26kg)
Base dimensions	Ø25mm
Environmental	
Operating Temperature	-40 to 85°C (-40 to 185°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Ingress Protection (IP)	IP69K
Shock	50g
Explosive Environments	ATEX Version Available

Power Source	
Battery	
Type	Replaceable 3.6V 1/2AA
Chemistry	Lithium Thionyl Chloride
Life	5 years (based on Default Data Transmissions)

Part Numbering
VE01-m01

Communication	
Data Transmission (Defaults)	
Short Interval Rate (Awake)	60 seconds
Short Interval Rate (Sleep)	10 minutes
Long Interval Rate (Awake)	45 seconds
Long Interval Rate (Sleep)	15 minutes
Effective Range	250 meters Line-of-Sight
Frequency	<1GHz ISM Band
Sensotek Channel	Channel 2
Sensor Configuration and Firmware Update	Via mobile device (iOS and Android)

Environmental Measurements	
Temperature	
Measurements	Sensor (Machine) Ambient (Gateway) Delta (Sensor-Ambient)
Ambient Capability	
Temperature Range	-40 to 85°C (-40 to 185°F)
Temperature Accuracy	±2°C
Surface Capability	
Temperature Range	-40 to 110°C (-40 to 230°F)
Temperature Accuracy	±2°C

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Time Waveform & Spectrum	
Types of Measurement	
Measurement Option* (Default Setting)	Primary Waveform (10kHz,6400LOR) Secondary Waveform (2.5kHz,3200LOR)
Transmit Rate	Once per 24-hour period
Common Settings (For all Measurements)	
Range - Acceleration	±64g
Range - Sensitivity	Autoscaling (min ±8g)
Axes	X, Y, Z (Synchronised)

*All waveforms are customisable via the Sensotek Config App and can be disabled, but by default, both are transmitted as per the table below.

Primary Waveform & Spectrum		
Purpose	Full Spectrum Overview	
	Customisable*	
Sample Time Window	640ms	
Sample Frequency	X	12.8kHz
	Y	12.8kHz
	Z	25.6kHz
Max Frequency (Fmax)	X	5.0kHz
	Y	5.0kHz
	Z	10.0kHz
Resolution (LOR)	X	3200 LOR
	Y	3200 LOR
	Z	6400 LOR
Resolution (Hz)	1.56Hz	

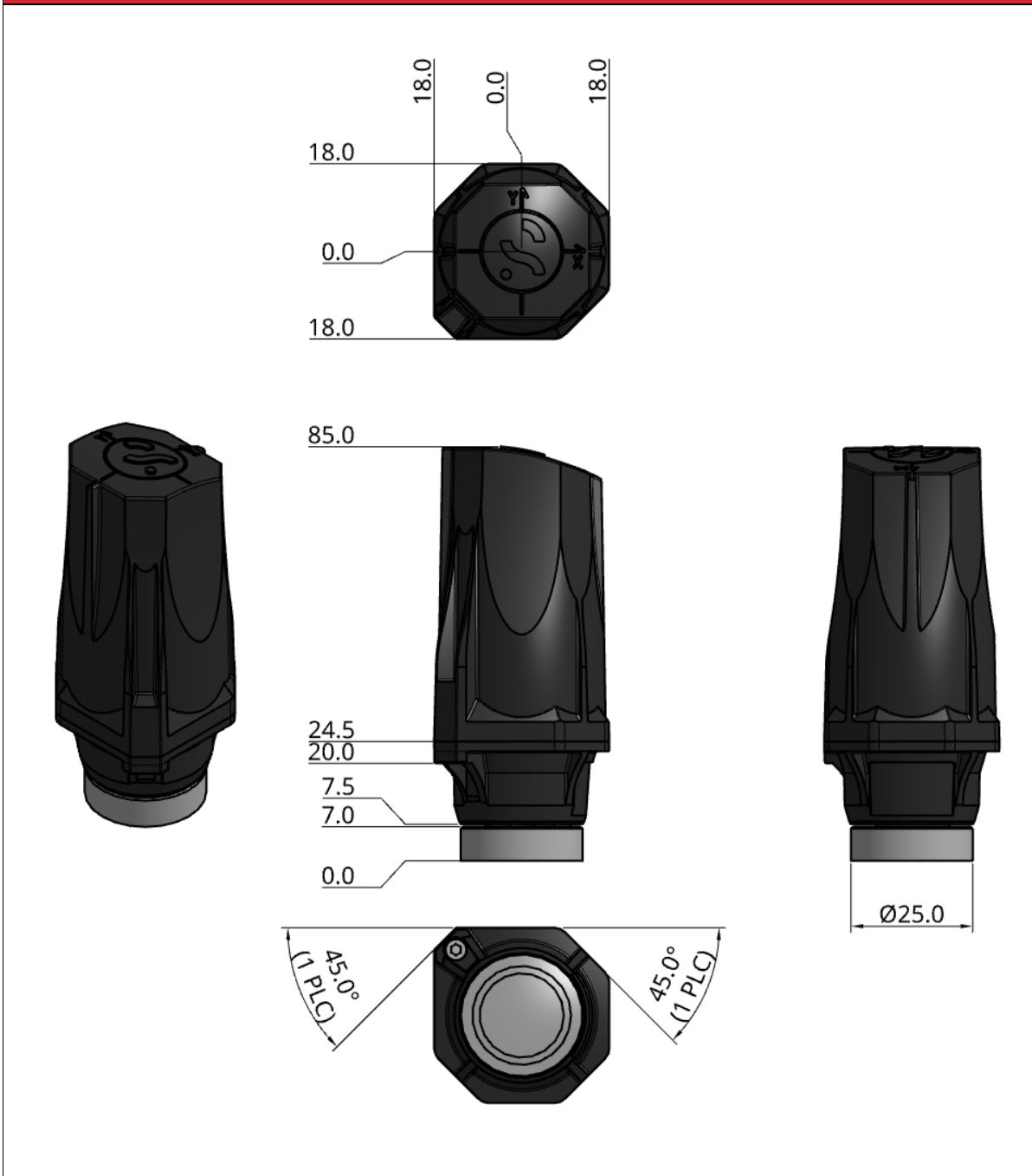
Secondary Waveform & Spectrum		
Purpose	Speed-specific monitoring	
	Customisable*	
Sample Time Window	2560ms	
Sample Frequency	X	3.2kHz
	Y	3.2kHz
	Z	3.2kHz
Max Frequency (Fmax)	X	1.25kHz
	Y	1.25kHz
	Z	1.25kHz
Resolution (LOR)	X	3200 LOR
	Y	3200 LOR
	Z	3200 LOR
Resolution (Hz)	0.390625Hz	

Overall Trend (OA)	
Parameter	Unit
Sample Rate (Temperature)	1 minute
Sample Rate (Vibration)	3 minutes
Measurements	Temperature Acceleration RMS Acceleration Pk-Pk Velocity RMS
Overall Trend (OA) Measurement Specifics	
Max Frequency (Fmax)	2.5kHz
Sample Frequency	6.4kHz
Samples	1280 (Acceleration RMS and Pk-to-Pk) 1024 (Velocity RMS)
Range - Acceleration	±64g
Range - Sensitivity	Autoscaling (min ±8g)
Axes	X, Y, Z (Synchronised)

Analytix Platform – Vibration Analysis	
Parameter	Unit
Calculated Values Spectrum	Spectral Bands
Calculated Values Waveform	Acceleration RMS Velocity RMS Crest Factor
Windowing	Hann (Default) or None
Tools	Bearing Fault Frequencies Enveloping (Demodulation) Circular Plots Harmonic Cursors Sideband Cursors Difference Cursors Waveform Audio Playback
Units	Metric or Imperial User Selectable

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Sensor Dimensions : Magentic Mount (std)



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Sensor Dimensions: Stud mount with Axy-Fix attachment

