Sensoteq
Smart Sensing Solutions

Sensoteq Kappa X™
Plant Maintenance System

Sensoteq Kappa X™ provides innovative machine health monitoring for industrial applications. Kappa X combines a proprietary means of transmitting data with professional software and robust wireless hardware for condition monitoring analysis.
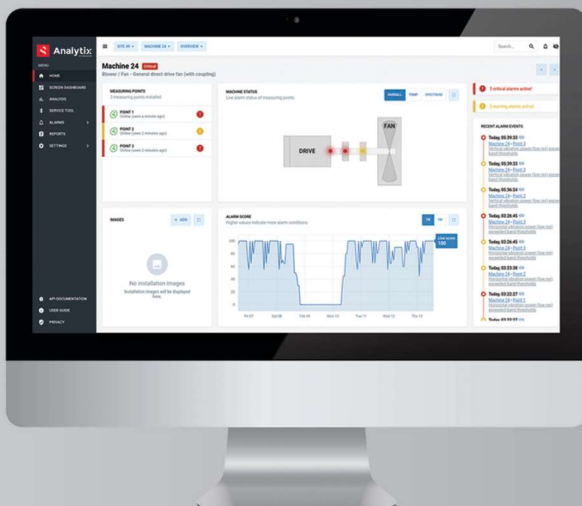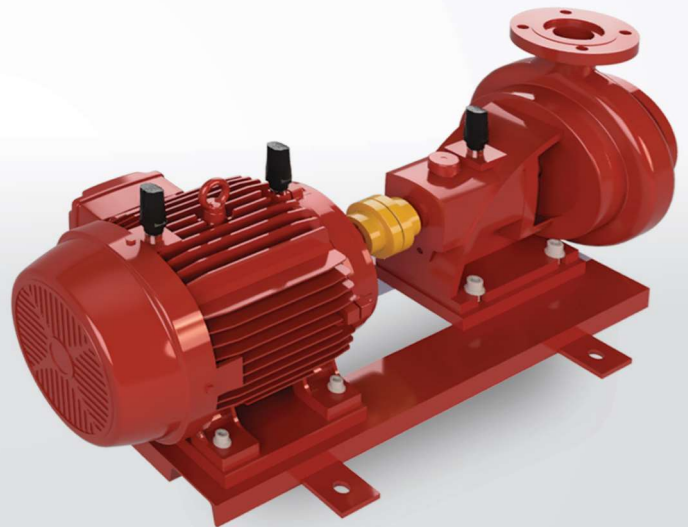
PUMPS   **MOTORS**   **FANS**

Sensoteq Kappa X™ wireless sensors measure and transmit data every minute to ensure an accurate diagnosis can be performed on your machinery for predictive maintenance purposes. Condition monitoring reduces downtime, costs, and increases efficiency, extending your machines' life.

Kappa X is an evolution of wireless continuous health monitoring for a wide range of machinery. Built in partnership with vibration experts, Kappa X introduces a market leading 10kHz FMax, enabling earlier warning and increased diagnostic capability. Designed to monitor almost any application, Kappa X features a small footprint, waterproof housing, and a user-replaceable battery.

Sensoteq Analytix®

Sensoteq Analytix® pioneers the user interface world when it comes to condition monitoring. Sleek design meets powerful analysis and reporting tools to give you one of the most advanced platforms available.

View high level data and an overall health rating. Delve deeper with full spectrum analysis, tracking harmonic peaks, bearing fault frequencies and side band amplitudes. Generate and share graphs at the click of a button.

With new features and updates added regularly, Analytix ensures you remain ahead of the game.

Kappa X Wireless Sensor

Kappa X's comprehensive feature set exceeds all expectations of a wireless sensor:

Smart Wake technology enables the sensor to enter ultra-low power mode, preserving battery life

Auto-Ranging allows the sensor to automatically scale up to +/-64G to cope with peak energy exerted by the machine

User configuration adapts the system to suit all applications

With upgradable firmware and a replaceable battery, Kappa X features one of the best wireless sensor lifespans on the market.

Kappa X Gateway

The Kappa X Gateway provides an uplink from the sensors in your plant to the Sensoteq Analytix® cloud platform via Wi-Fi, ethernet or cellular connection. It also monitors ambient temperature to account for daily and seasonal fluctuations.

The Gateway receives data from the sensors, collates it into internet protocol and communicates this information for viewing and analysis.

Kappa X's proprietary sub 1GHz ISM band protocol relays data over long-range, high noise environments to accomodate large-scale industrial installations.

Sensor Specifications

Detects

- Bearing Failure
- Imbalance
- Shaft and Bearing Wear
- Mechanical Looseness
- Misalignment
- Electrical Noise and Resonance

Key Measurements

RMS Velocity/Acceleration, Peak to Peak (Every minute/Configuarable)
Acceleration Time Waveform (Configurable time period)
Spectrum (Acceleration, Velocity, Displacement)

10 kHz Fmax (X, Y, Z)	**64G** Vibration Limt (+/-)
IP69K (ATEX Zone 0 Available) Environmental Protection	**5 Years*** Replaceable Battery

*With standard configuration and normal operating conditions

Gateway Specifications

Key Benefits

Proprietary RF Link Ensures Robust Data Connection
Easy Install
Small Form Factor

Compatibility

Sensoteq Kappa, Kappa X and Tau Sensors
Sensoteq Analytix Platform
Sensoteq Install App

250m Wireless Range (Line of Sight)	**Wi-Fi, Ethernet** Connection to LAN
IP64 (ATEX Zone 2 Available) Environmental Protection	**Cellular** Optional Connection

The Sensoteq® sensor range is used to continuously monitor your rotating equipment in different environments. Reporting key parameters to our cloud based Sensoteq Analytix® platform.

The Sensoteq® Gateway has been specifically developed to connect with all our entire sensor range. The gateway provides connectivity for Kappa and Tau to the Analytix Cloud Platform.

Key Features

- Connects Sensoteq Kappa and Tau
- Waterproof (IP65)
- Robust metal enclosure
- Easy setup and installation
- High gain antennas
- Range of communication options

Part Numbering (Options must be specified)	
AN-G03-_m_01-_c_0-ZC2	
Mounting Options (_m_)	0 = Bolted (Standard) 1 = DIN Rail Adaptor 2 = Pole mount
Communication (_c_)	1 = WiFi 2 = Cellular

Mechanical	
Physical	
Dimensions	Shown on next page
Weight	640g (±20g)
Material	Aluminium (6000 series)
Mounting Options (_m_)	0 = Bolted (Standard) 1 = DIN Rail Adaptor 2 = Pole mount
Environmental	
Operating Temperature	-20 to 85°C (-4 to 185°F)
Storage Temperature	-20 to 85°C (-4 to 185°F)
Sealing	IP65
Shock	50g

Communication	
Sensor Data Reception	
Effective Range	250 meters Line-of-Sight
Frequency	<1GHz ISM Band
Sensoteq Channel	Channel 1 or 2
Cloud Communications	
Comms Option (_c_)	1 = WiFi 2 = Cellular
WiFi	
Frequency	2.4GHz IEEE 802 11b/g/n
Protocol	CoAP over TCP
Encryption	AES
Authentication	RSA public/private keys

Power Source	
Wired	
Input Voltage	12vdc Nominal 7vdc minimum 24vdc maximum
Current	1.0 amp peak (wifi) 2.0 amp peak (cellular)
Connection	2-pin IP65
Power Supply	Standard 1.5m cable with plug and multi-region adapter supplied

Measurements	
Ambient Temperature	
Temperature Range	-20 to 85°C (-4 to 185°F)
Temperature Accuracy	±0.1°C

Sensoteq®

Gateway Datasheet

The Sensoteq® sensor range is used to continuously monitor your rotating equipment in different environments. Reporting key parameters to our cloud based Sensoteq Analytix® platform.

Dimensions

Standard – DIN Rail Bracket can be removed – See DOC-00499 for Installation Guidelines

DIN RAIL BRACKET (REMOVABLE)

10.7
0
19.5
38
40

185.5

94
87
84

R3.25 SLOT THRU
R5.25 x 4.5 SLOT DEEP
(4 PLCS)

10
0
10.1

0
7.5
14.5

160.5
167.5
175.5

22
8
0
7

12V 1A DC

22
21

0

0

61

126.4

RESET BUTTON (USE STANDARD PAPERCLIP TO ACCESS)