

**Horus**  
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[www.horus.ie](http://www.horus.ie)



# Sentinel L

## LoRa

**Giving Motors A Voice**

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# Horus Sentinel™ System



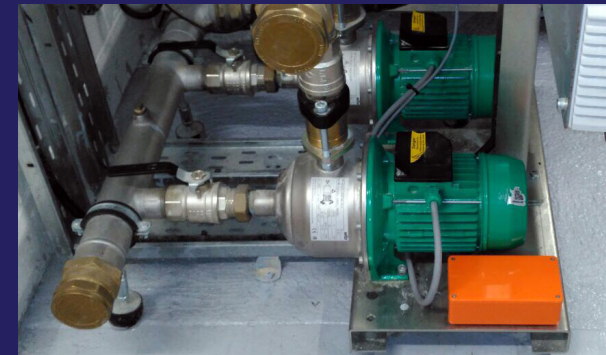
Horus Sentinel™ is an Autonomous Monitoring Unit (AMU) designed for early detection and warning of machine faults on low cost assets for which the economics of such monitoring have been traditionally prohibitive.

Horus Sentinel™ combines thermal, vibration, and acoustic measurement sensors with advanced algorithms that learn the characteristics of the machine being monitored. Deviations from this learned behaviour are assessed by Horus Sentinel™ and a decision made as to whether to flag an alert.

Horus Sentinel™ utilises low-bandwidth SIGFOX connections to wirelessly transmit its assessment results, which can be readily integrated with existing Building Management Systems and a variety of dashboards.

The Horus Sentinel™ is a highly flexible low cost solution ideally suited to the monitoring of a variety of machines, including:

- Water Pumps
- Water Chillers
- Water Softeners
- Vacuum Pumps
- Refrigeration Systems
- Air Conditioning Systems
- Boilers and Heating Systems



## Easy Installation

- Magnetic base fixes to most machine surfaces
- Self-calibrating and self-testing
- No wiring, no plugs, no cabling
- No training required

## Specifications

### Vibration

14-bit 3-axis-accelerometer  
0.244 mg/LSB sensitivity  
50 Hz acquisition rate

### Thermal

Proprietary dual thermal sensor system with ambient environment - machine surface differential measurement.

### Power

6V supplied by internal battery  
>12 months lifetime

### Acoustic

100 Hz - 2.5 KHz monitored band  
Proprietary ambient acoustic elimination and auto-gaining technology

### Communications

LoRa

### Dimensions

150 x 80 x 50 mm

“We are very excited about the Horus Sentinel™ and the multiple applications in our business”

### Patricia Sibley

Project Lead in Robotics & Innovations  
BAM Facilities Management

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