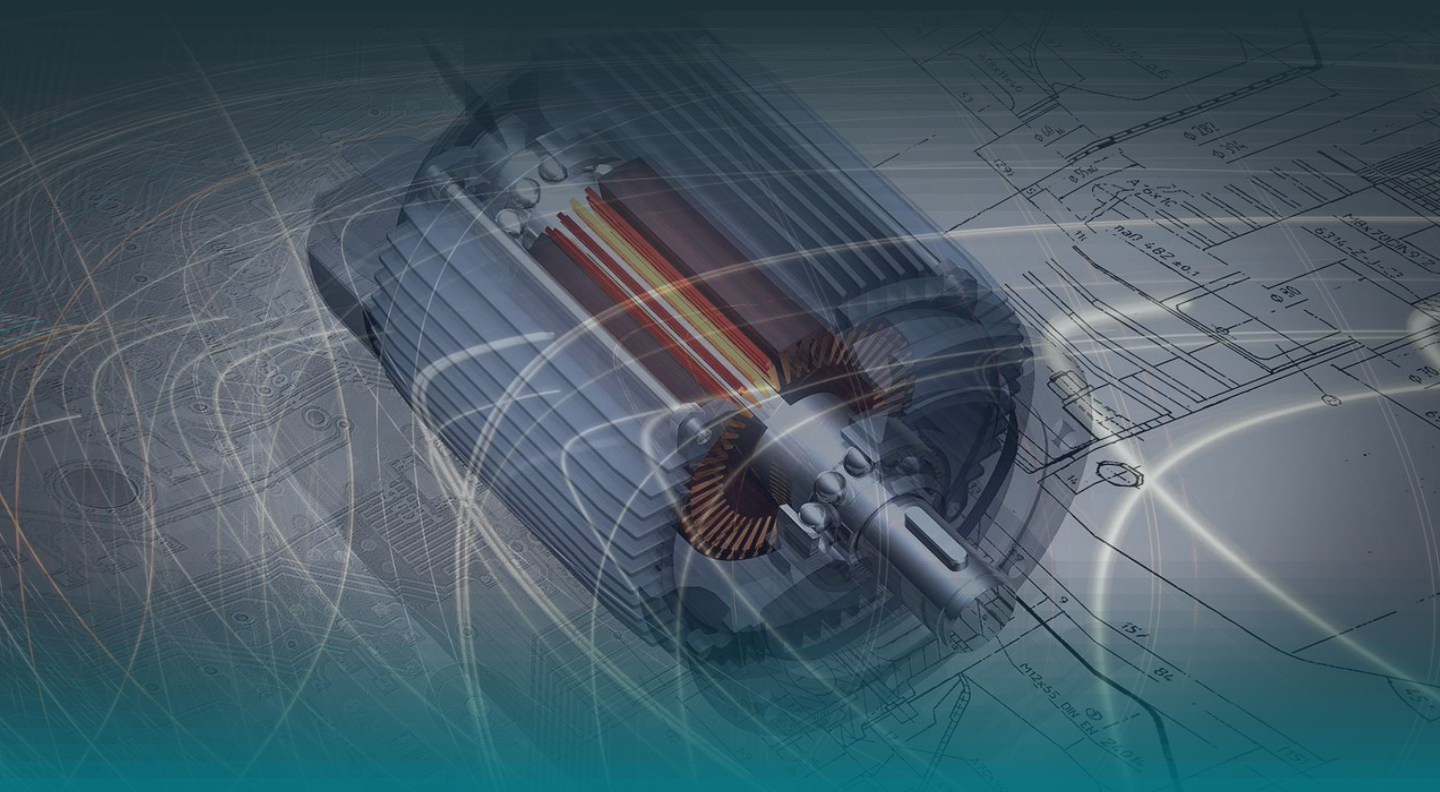# Aistin
Motion

Aistin Motion —
monitor motion and vibration

Monitor true usage times

iprotoxi
energy-efficient industrial IoT

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Aistin Motion

Aistin Motion accurately measures motion and vibration, allowing for the monitoring of e.g. engine usage times. Aistin Motion blends smoothly to the environment around it. The design is modern, elegant, functional - **energy-efficient, completely wireless and ready with software**. We believe devices should be pleasant and easy to use.

The Device

Monitor true usage times

Elegant & Functional: Our Aistin Design casing seals in all the sensors – vibration detection, ambient temperature, and orientation, making the device robust and waterproof.

Energy-efficient: Smart power control enables longer than usual operating times, by default over 5 years with single set of batteries.

Modern and completely wireless: Members of the Aistin family never require a separate gateway. The device is connected to the internet via LoRaWAN network.

Why Aistin

Modern, elegant, functional

- ❑ Independent and Maintenance Free
- ❑ Completely Wireless — Over-the-air updates and Device Management
- ❑ Plug-and-Play – Functional, ready with software, ready to use
- ❑ *Shock- and Waterproof, Robust*

Use Case Examples

Monitor true usage times

- ❑ How long the true total usage time of an engine is (total or between maintenance)
- ❑ Optimize maintenance
- ❑ Alerts, when predicted movement and/or vibration thresholds are about to exceed
- ❑ Alerts, when engine or aggregate stops, when it should not
- ❑ Alerts, when pump starts pumping, when it should not

iProtoxi Custom

All of our products and services can be tailored to connect to other cloud services and API interfaces or include additional features. For any tailoring related questions, please consult our sales at sales@iprotoxi.fi

Aistin Motion

TECHNICAL SPECIFICATION

Device Settings

Aistin Motion is configurable **remotely over-the-air.** With **IoThund Cloud** web, all of the devices can be updated, configured, and managed at bulk or one at a time.

Inside the Casing

- ❑ **Connectivity:** LoRaWAN 868MHz and 915MHz
    - ▪ NFC 13.56 MHz
    - ▪ Optional Bluetooth 5.2
- ❑ **Dimensions**: 90 x 90 x 28,5 mm
    - ▪ IP67 casing
- ❑ **Operating temperature**
    - ▪ -25 to +60 °C
    - ▪ -40 to 85 °C with reduced accuracy
- ❑ **Powering:** 1 x 3,6 V C Primary battery
- ❑ **Battery lifetime:**

    Over 5 years: 12 measurements / day

    Battery lifetime is dependent on used measurement interval and settings

- ❑ **6D-Accelerometer/Gyroscope**
    - ▪ Acceleration range of ±2/±4/±8/±16 g
    - ▪ Angular rate range of ±125/±250/±500/±1000/±2000 dps
- ❑ **NTC Temperature (Device Temperature)**

    By default, the NTC is installed inside the casing, but may be fit into the casing seam to react quicker to changes in outer temperature.
    - ▪ Range from -40 to +125 °C
    - ▪ Accuracy ± 1 °C
- ❑ **Device Orientation:** 180°
- ❑ **Activity counter mode**
    - ▪ Engine stop and start counter
    - ▪ Engine hours
- ❑ **Vibration measurement mode (optional)**
    - ▪ Vibration frequency(s) Hz
    - ▪ Amplitude(s)

Positioning

- ❑ LoraWAN network positioning

Device Management

- ❑ **General Measurement and Alarming Functions**
- ❑ **Complete Device Management and Firmware Updates:** Over-the-air via IoThund Cloud or Bluetooth (optional)
- ❑ **Measurement mode selection**
    - ▪ Activity counter
    - ▪ Vibration measurement (optional)
- ❑ **Adjustable parameters**
    - ▪ Enable/Disable functionality
    - ▪ Trigger level setup
    - ▪ Measurement Interval
    - ▪ Alarm settings
- ❑ **Optional Adjustable parameters (vibration)**
    - ▪ Enable/Disable functionality
    - ▪ Detailed frequency and amplitude setup
    - ▪ Frequency band and resolution setup

Product Code

- ❑ **Order Number**
    - ▪ 20043