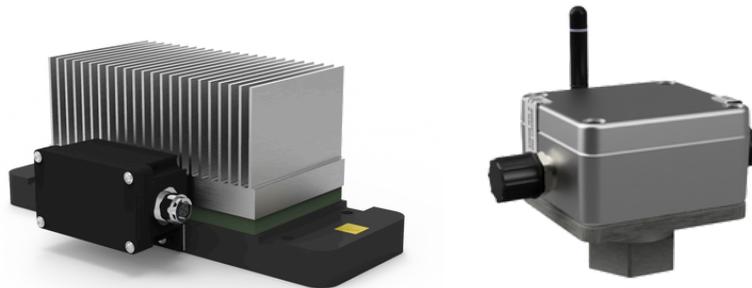


BATTERYLESS IOT VIBRATION&TEMPERATURE MONITORING SOLUTION

InduEye® 3.0

InduEye® is a waste heat powered IoT sensing device connected to a complete real-time monitoring system. Plug & Play installation with no wires and no batteries

High-performance sensing system InduEye LoRa Vibro 3.0 **powered by Heat**. Complete monitoring solution composed by three elements in two devices:



Main features:

Battery-less: Self powered by heat.

Maintenance free: Autonomous work, no battery dependency.

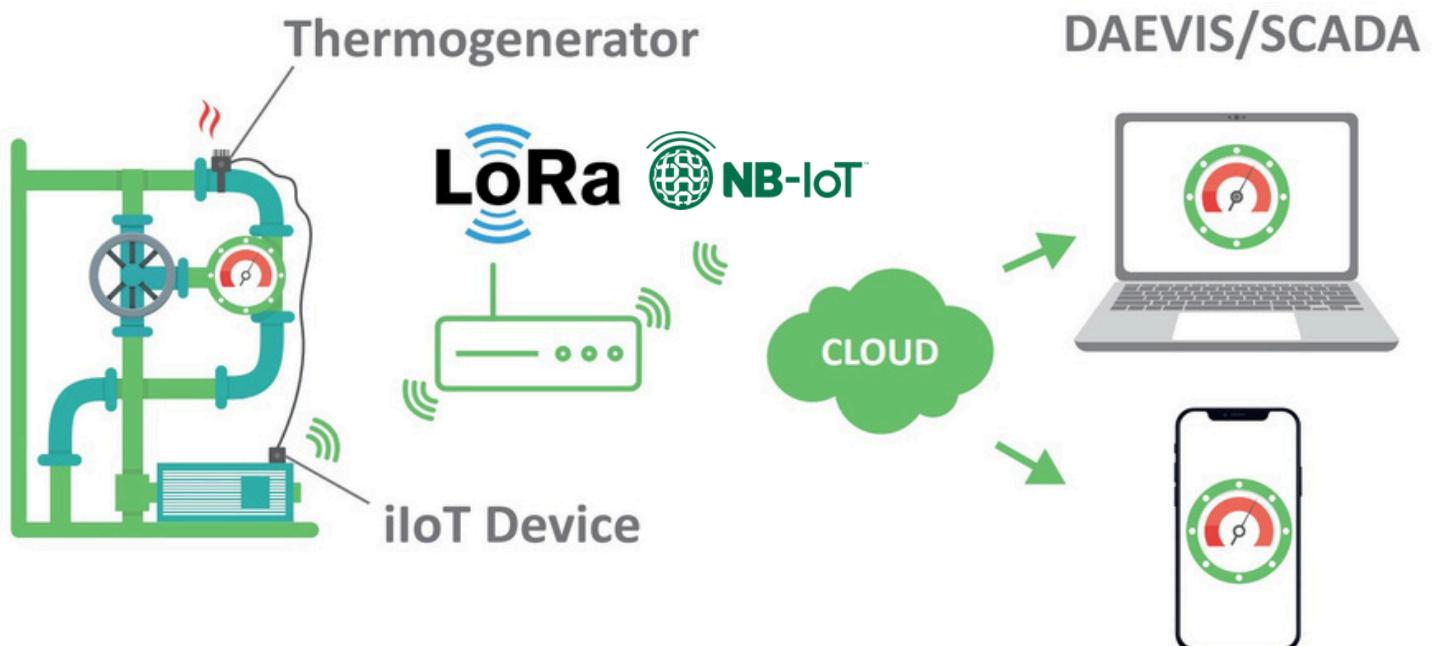
Wireless: Use of LoRaWAN Protocol, data is generated and processed into the device (edge-computing) and sent to LoRaWAN gateway.

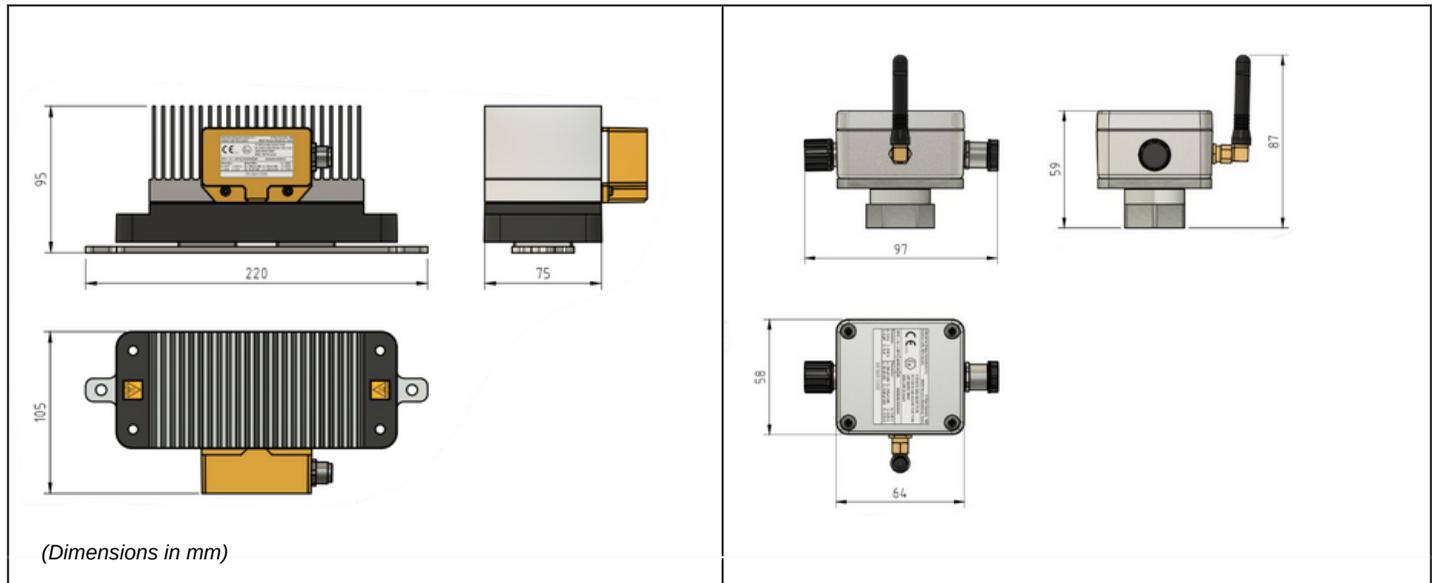
Low infrastructure needs: Up to 1.000 IoT devices in a 2 km radius (LoRaWAN gateway).

Visualization of data through: DAEVIS dashboard or a third-part SCADA platform.

Reduction of 90% cloud computing costs: Thanks to edge-computing in the iloT device.

High-performance vibration: Monitoring with a 3 axis accelerometer (+ optional external temperature sensor).





Technical Specifications

WIRELESS SPECIFICATIONS	Communication protocol		LoRaWAN class A EU868, AS923	
	Data rate		5.5kbits/s	
	Coverage range		Up to 2km	
	Frequency		Available frequency bands vary by country See General Specifications for details in LoRa-alliance.org	
	Radio security		128-bit AES encryption	
	RF Transmitter Power		Max. 12.75dBm (18.8408mW)	
ELECTRIC SPECIFICATIONS	Supply voltage		5 V	
	Maximum input current		0.5 A	
THERMOELECTRIC GENERATOR MODULE SPECIFICATIONS	Minimum surface temperature		50 °C	
	Maximum surface temperature		150 °C	
	Minimum temperature gradient		30 °C	
	Minimum temperature gradient ATEX		50 °C	
PERFORMANCE SPECIFICATIONS	Measurements	Temperature	Measurement	Temperature
			Range	-20 °C to 400 °C (-4 °F to 752.0 °F)
			Resolution	0.1 °C
		Measuring part	External PT100 probe	
	Vibration	Measurement	Velocity (RMS), Acceleration (3 peaks max). Full FFT in process	
		Axis	X, Y, Z axis	
		Range	Acceleration: 0 to 157 m/s ² (0 to 16g) Velocity: 0 to 180 m/s	
	Frequency range	10 Hz to 1,000 Hz (± 3 dB) RMS vel. 1,000 Hz to 2,000 Hz (± 3 dB) 3 peaks of highest value per axis, with their frequencies		
Frequency rate		From 1 transfer/h up to 1 transfer/min depending on power generation		
INSTALLATION ENVIROMENT	Ambient temperature limits		Operating: -20 °C to 60 °C (-4°F to 140 °F)	
REGULATORY COMPLIANCE	IP Rating		IP67	
	Explosion proof		ATEX zone 2 and zone 22 (in process)	
	Certifications		CE, MIC GITEKI certification	
PHYSICAL SPECIFICATIONS	Housing material		IET3 PP+20%GF IETLV3T AISi 12	
	Weight		IET3 1.5Kg IETLV3T 0.3Kg	
	Mounting		IET3 bolted flanged welding IETLV3T adhesive	