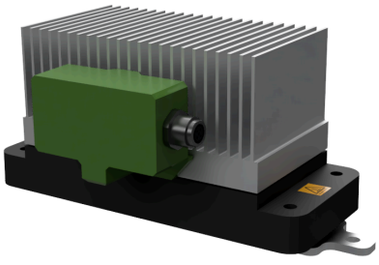
AEInnova
Alternative
Energy Innovations

InduEye®

Solution InduEye® LoRa Vibro 3.0

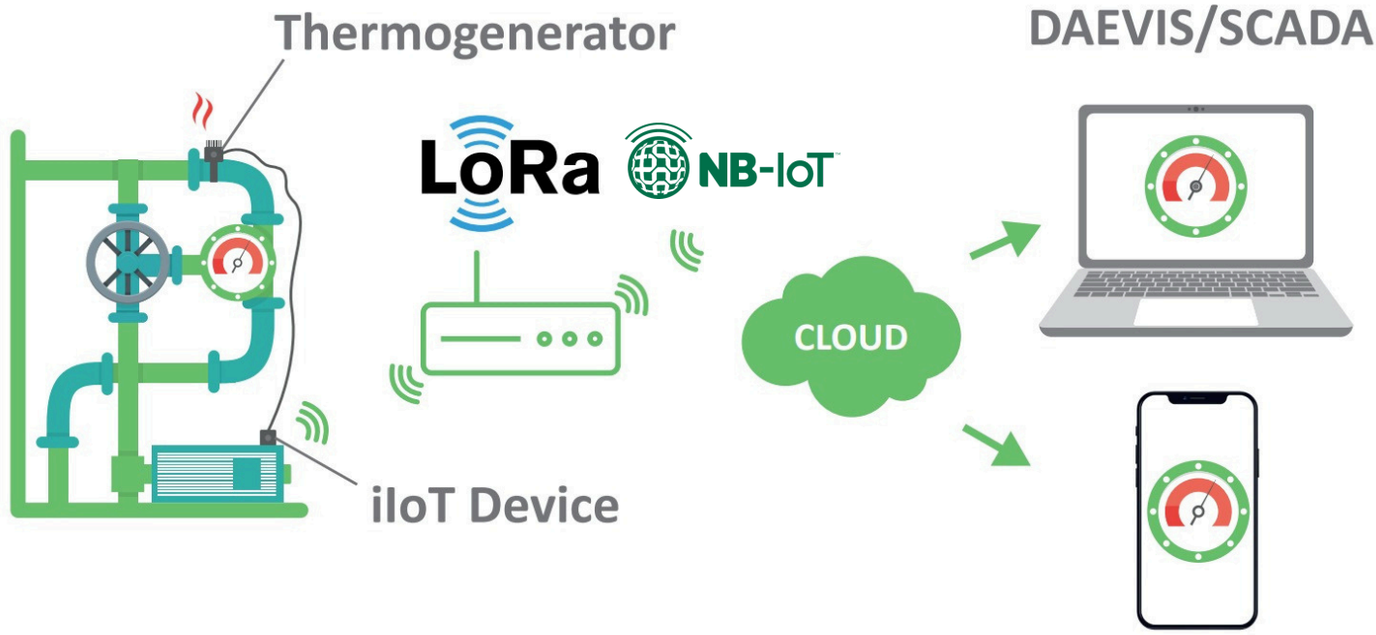
InduEye ® is a waste heat powered IoT sensing device connected to a complete real-time monitoring system. Plug & Play installation with no wires and no batteries

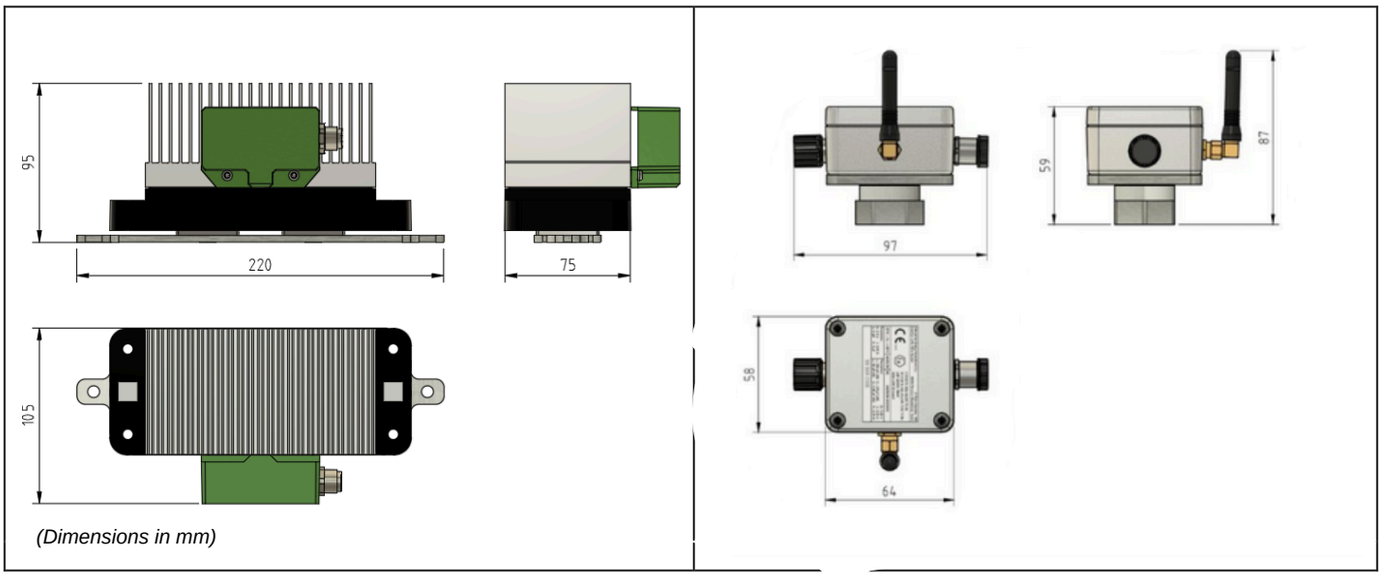
High-performance sensing system **InduEye LoRa Vibro 3.0 powered by Heat**. Complete monitoring solution composed by three elements in two devices:



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: Reduction of 90% cloud computing costs due to edge-computing in the iIoT device.
High-performance vibration: Monitoring with a 3 axis accelerometer (+ optional external temperature sensor).





(Dimensions in mm)

Technical Specifications

NODE-SENSOR				
WIRELESS SPECIFICATIONS	Communication protocol			LoRaWAN clase A
	Data rate			5.5kbits/s
	Coverage range			Up to 2km
	Frequency			EU868
	Radio security			128-bit AES encryption
	RF Transmitter Power			Max 12dBm
	Antenna			External omnidirectional antenna
ELECTRIC SPECIFICATIONS	Supply voltage			5 V
	Maximum input current			0.5 A
PERFORMANCE SPECIFICATIONS	Measurements	Vibration	Measurement	Velocity (RMS), Acceleration (g)
			Axis	X, Y, Z axis
			Range	Acceleration: 0 to 157 m/s^2 (0 to 16g) Velocity: 0 to 180 mm/s^2
			Frequency range	10 Hz to 1,000 Hz (± 3 dB) RMS velocity. 10 Hz to 2,000 Hz (± 3 dB) 3 peaks of highest value per axis, with their frequencies
		Temperature	Measurement	Temperature
			Range	-20°C 400°C (-4 to 752.0°F)
			Resolution	0.1 °C
			Measuring part	External PT100 probe
	Frequency rate			6 transfer per hour

INSTALLATION ENVIRONMENT	Ambient temperature limits	Operating: -20 ºC to 50 ºC (-4ºF to 122 ºF)
REGULATORY COMPLIANCE	IP Rating	IP67
	Certifications	CE / ATEx Ic (Zone 2 y Zone 22)
PHYSICAL SPECIFICATIONS	Housing material	AlSi 12
	Weight	0.3kg
	Mounting	Adhesive
THERMOELECTRIC GENERATOR		
THERMOELECTRIC GENERATOR MODULE SPECIFICATIONS	Minimum surface temperature	50 ºC
	Maximum surface temperature	150 ºC
	Minimum temperature gradient	30 ºC
	Minimum temperature gradient ATEX	30 ºC
INSTALLATION ENVIRONMENT	Ambient temperature limits	Operating: -20 ºC to 50 ºC (-4ºF to 122 ºF)
REGULATORY COMPLIANCE	IP Rating	IP67
	Certifications	CE / ATEx Ic (Zone 2 y Zone 22)
PHYSICAL SPECIFICATIONS	Housing material	PP+20%GF
	Weight	1.5Kg
	Mounting	Welding, bolting, flanged