

Overview

Equipped with the best IoT technology from Dynamox, the **Dynamox Lens** is the thermographic sensor that goes beyond the naked eye to detect **thermal radiation from industrial assets**. This technology offers a wide range of applications, bringing ease of assembly and advantages in **preventing asset failures**.

Dynamox Lens is used in industrial maintenance for **monitoring electrical panels, data centers, electronic circuits, substation assets, and small to medium-sized rotating machines**. Additionally, our sensor elevates the concept of monitoring through thermal images to a new level, allowing temperature readings on surfaces at distances from 0.3 to 3.5 meters.

Integrated with the Dynamox Platform, the sensor enables **continuous temperature monitoring** of assets through telemetry from different points **minute by minute** and **detailed infrared images**, identifying specific hot spots and **trend analysis for decision-making** to ensure maximum efficiency and reliability.



Thermographic Monitoring

- Compact and robust wireless sensor
- Wide-angle lens
- Continuous monitoring with high-quality photos
- Selection of multiple areas for minute-by-minute telemetry
- Wide measurement range -20 °C to 550 °C (-4 °F to 1022 °F)
- Rechargeable batteries
- Wireless Bluetooth® 5 communication

Monitored Assets

- Racks and electrical panels
- Servers and data centers
- Transformers and electrical reactors
- Industrial contactors
- Rotating machines in general
- Transmission towers
- Brakes and drums
- Boilers, heaters, and heat exchangers
- Valves in general

PHYSICAL CHARACTERISTICS	
Dimensions	99,1 mm x 87,2 mm x 23 mm (3.90 in x 3.43 in x 0.91 in)
Weight	315 g
Material (case)	Anodized Aluminum/Polyacetal
Mounting	Screwed or Magnetic Base ¹
Operating Temperature	-20 °C ≤ T ≤ 60 °C (-4 °F ≤ T ≤ 140 °F)

POWER SUPPLY	
Power Source ²	Rechargeable batteries ³ or 5V power cable
Capacity	4 hours
Input Voltage	5 Vdc
Connector	USB-C

COMMUNICATION INTERFACES	
Wireless Communication	Bluetooth® 5 / 2.400 – 2.483.5 MHz
Wi-Fi 2,4 GHz	Protocols: 802.11 b/g/n (802.11 n up to 150 Mbps)
	Frequency Range: 2.412 - 2.484 MHz
	Transmission Power: 20.5 dBm
	Antenna gain: 3dBi

OTHER INTERFACES	
External Button	Reset and Configuration
LED	RGB

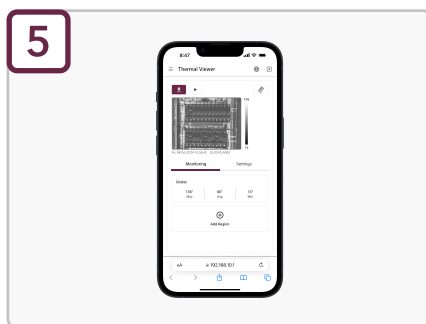
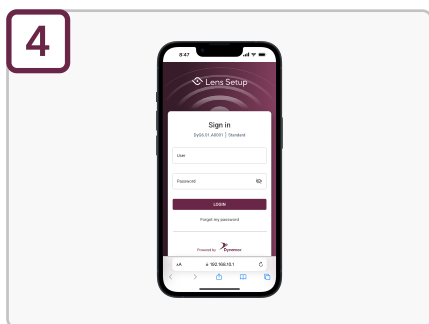
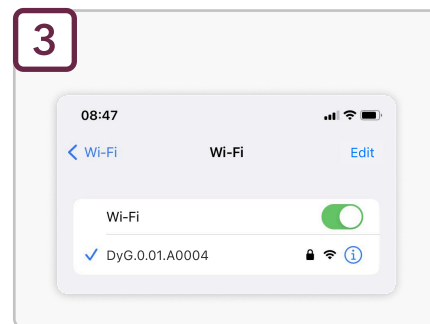
INFRARED CAMERA	
Resolution	256 x 192 px
Pixel Size	12 μm
Spectral	8 a 14 μm
NETD ³	≤ 50 mK @ F1.0, 300 K
Quantization	14 bits
Optical (focus and aperture)	2.1 mm / F1.0 - FF
Field of View	90° x 73,7°
Object Distance Limits	0.3 to 3.5 m
Accuracy	±5 °C (41 °F) or ±5%
Vibration Resistance	Random vibration of 5.35 g (RMS)
Impact Resistance	40 g at 11 ms in any direction

1 - Does not include a power supply. 2 - Main power supply via 5 V source, with the battery providing 4 hours of autonomy, considering a 5-minute telemetry interval and 1 photo per day. 3 - Equivalent noise of the temperature difference (also known as Noise Equivalent Temperature Difference).

CONTINUOUS MONITORING (TELEMETRY)	
Collection Interval (Telemetry)	1 min to 24 hours
Monitored Metrics	Maximum temperature
	Selection of 3 regions
	Maximum temperature per region
Temperature Range (selectable)	20 °C to 150 °C (68 °F to 302 °F)
	-20 °C to 550 °C (-4 °F to 1022 °F)
Memory	Up to 86,400 telemetry measurements

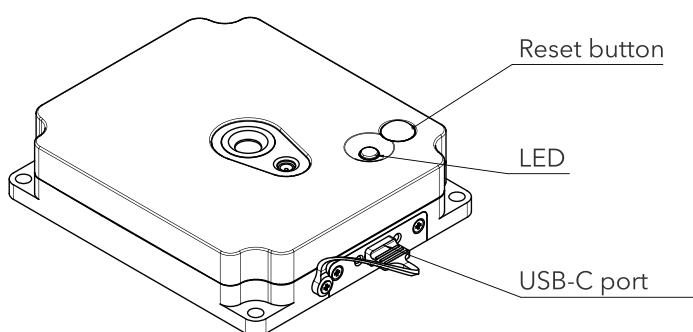
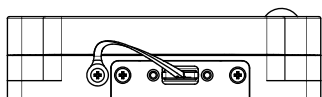
Quick Installation Guide

1. Position the device with the cameras pointing towards the region of interest;
2. Temporarily fix it and press the button on the front of the device until the LED flashes yellow (approximately 5 seconds);
3. Connect to the network generated with the device name;
4. Once connected, access the device configuration mode by typing **192.168.10.1** in the browser;
5. In configuration mode, you will have real-time images from the camera to assist you in positioning;
6. Once the position is decided, permanently fix the device.

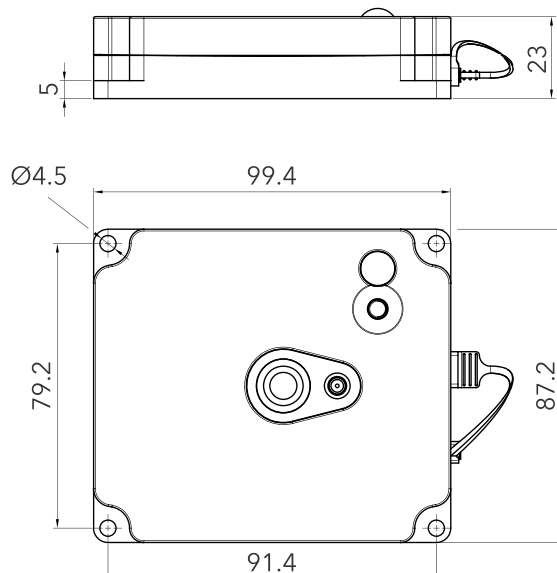


Note: Reflective or low-emissivity surfaces may produce inaccurate readings. It is recommended that reflective and low-emissivity objects monitored by the infrared camera have their surfaces treated or painted with high-emissivity paints.

Technical Drawing



Dimensions in millimeters



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