UL Compliancy guide

Simpy smart monitoring

Overview

The purpose of this document is to set forth how to use the InfraSensing parts so that your implementation is UL compliant.

InfraSensing (ServersCheck) Products UL registration:

Products UL file number: E504803
Product identity: ITE (Information Technology Equipment)

Detailed information can be found in the UL Database

SensorGateway (BASE-WIRED-XXX) Link

Dimensions: 70 mm (2.7") x 88 mm (3.4") x 22 mm (0.8")
0U and DIN mounting hole provision

Operating temperature range: 0°C to +75°C (+32°F to +167°F)
Operating humidity range: < 90% rH (non-condensating)

Power Source: PoE (IEEE 802.3af) or 12vDC @0.5A
Power Usage: 1500mW (without sensors attached)

Weight : 210 grams
Enclosure: steel

Thermal Image IR Sensor (ENV-THIMG-M) Link

Dimensions: 74 mm (2.9") x 66 mm (2.59") x 22 mm (0.8")
0U and DIN mounting hole provision
Operating temperature range: -10°C to +65°C (14°F to +149°F)
Operating humidity range: < 90% rH (non-condensating)

Power Source: SensorGatway (BASE-WIRED-XXX)
Power Usage: 492mW

Sensor connects via straight RJ45 cable to the SensorGateway.
Max distance to Base Unit: CAT6/CAT7 up to 100m / 300ft.

Weight : 150 grams
Enclosure: steel

Power requirements for the BASE-WIRED-XXX

Below are the instructions on how to power the SensorGateway (BASE-WIRED-XXX) in a UL compliant way.

The device can be powered either using an AC power adapter or through PoE (Power over Ethernet).

Do note that in the proccess of integrating our SensorGateway it is the infrastructure's responsibility to meet the NEC (National Electric Code) and CSA (Canadian Electrical Code) safety standards.

Reset   LAN/PoE   DC 12V
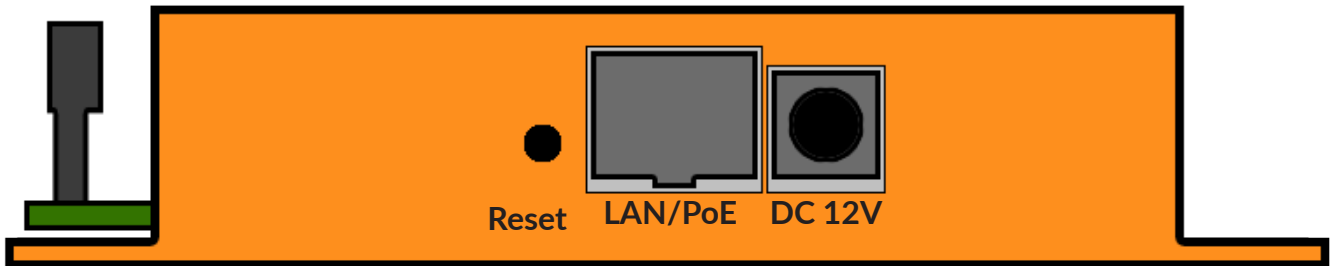
Powering using an AC power adapter:

When powering the base unit via an adapter it is required to use UL Listed or UL Certified AC adapters. Our optional AC power adapter (BASE-PWR) is UL Listed and is recommend with the base unit.

To connect the power adapter to the base unit, simply the 3.5mm connector of the AC power adapter into the base unit using the female DC jack connector labelled "DC 12v".

Power Outlet

Power Adapter

SensorGateway
(BASE-WIRED-XXX)
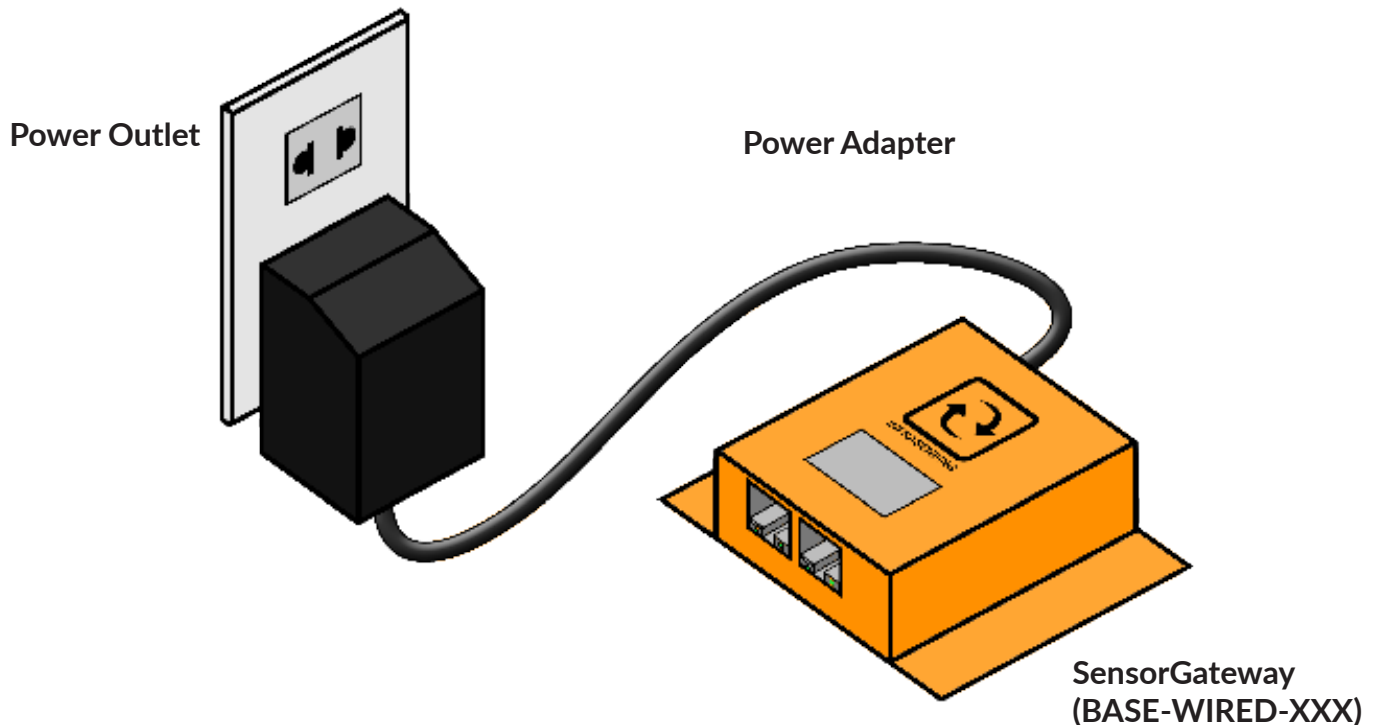
Powering via PoE

When powering the gateway via PoE the use of UL Listed or UL Certified network switches is required. The network cables between the PoE switch and the base unit should also be UL Listed or UL Certified ethernet cables is required.

PoE Network Switch

Ethernet Cable

SensorGateway (BASE-WIRED-XXX)
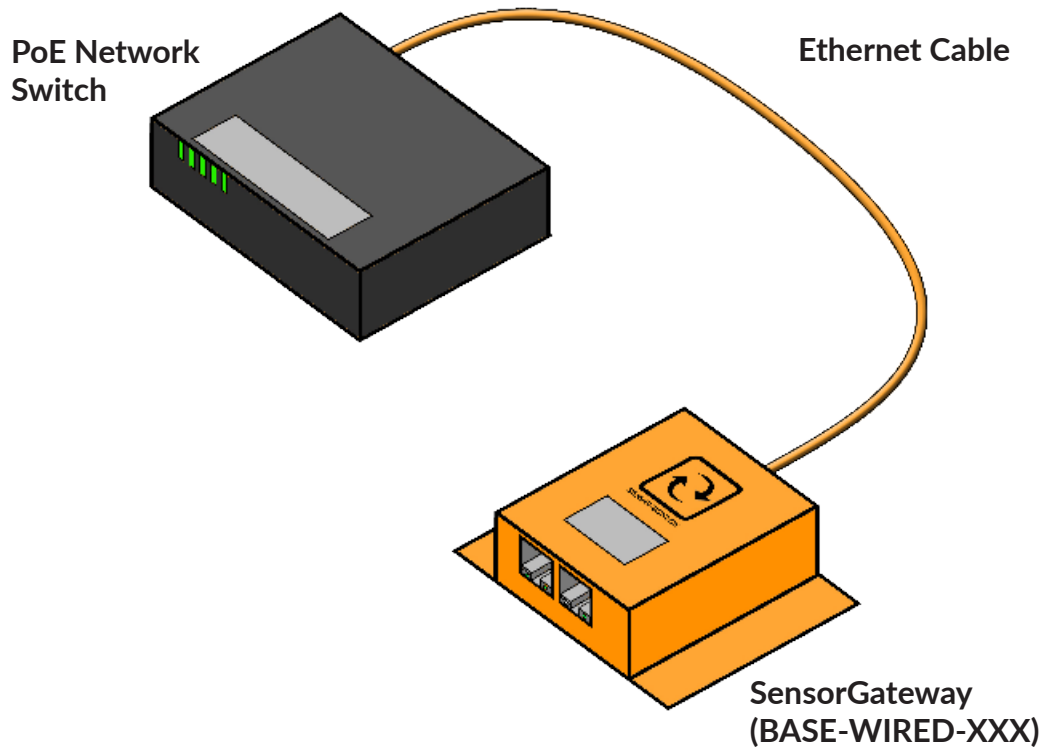
Powering sensors

Sensors are powered by the base unit (BASE-WIRED-XXX) using the network cable which connects to the sensor to the base unit.

In order to keep a UL compliant setup, it is required to use UL Listed / UL Certified network cables between the base unit and sensor(s).

PoE Network Device

Ethernet Cable

Thermal Image IR Sensor (ENV-THIMG-M)

**SensorGateway (BASE-WIRED-XXX)**
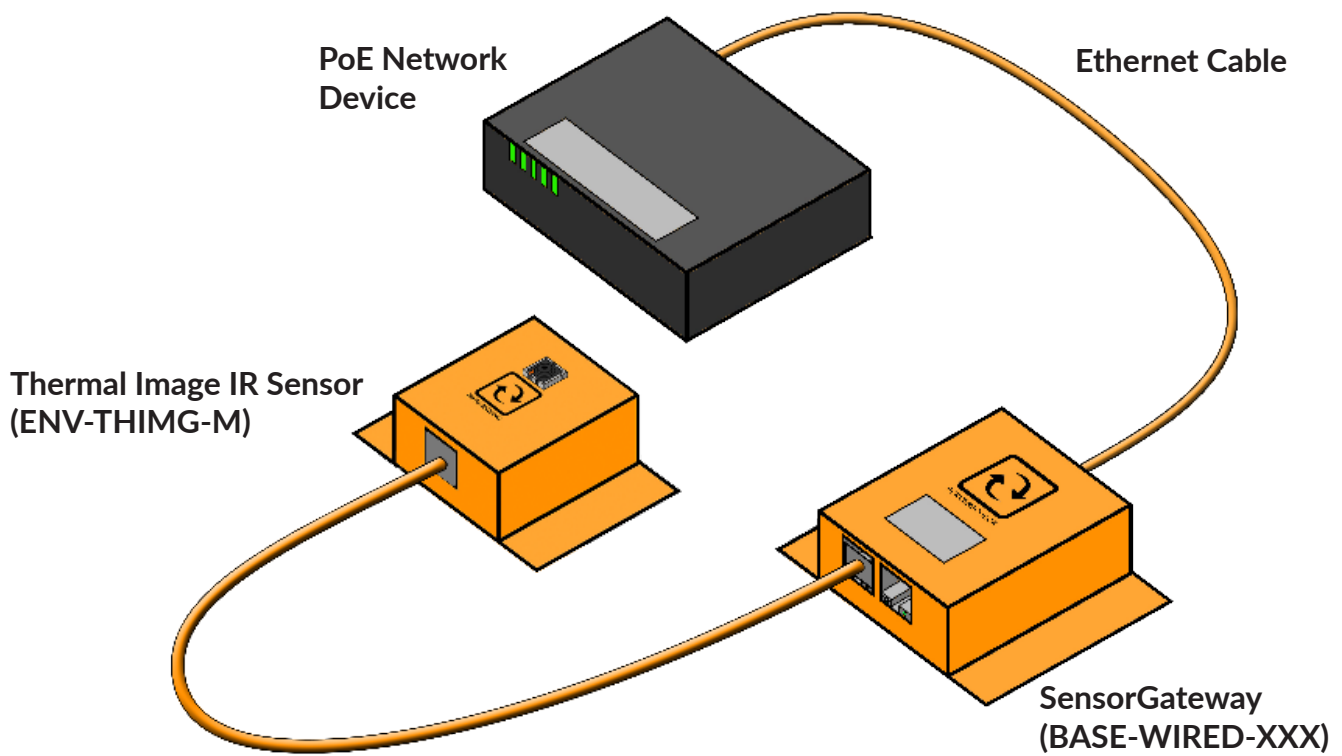
Mounting Guide Overview

The following is a UL compliant mounting guide for sensors and base units.

Rack Mounting Requirements

- 0U mounting hole provision
- Screw head diameter should be at least 0.65cm / 0.26 inch

Rack Mounting Procedure

Base units and sensors have 0U mounting provisions that can be securely and easily mounted inside racks by using standard rack mount screws. In order to be only compliant, such screws should have a head of at least 0.65 cm / 0.26 inches. Although one screw is sufficient to hold the whole equipment in place, a second one improves stability. Before mounting make sure the rack follows the UL standard for proper grounding to avoid electrical faults.
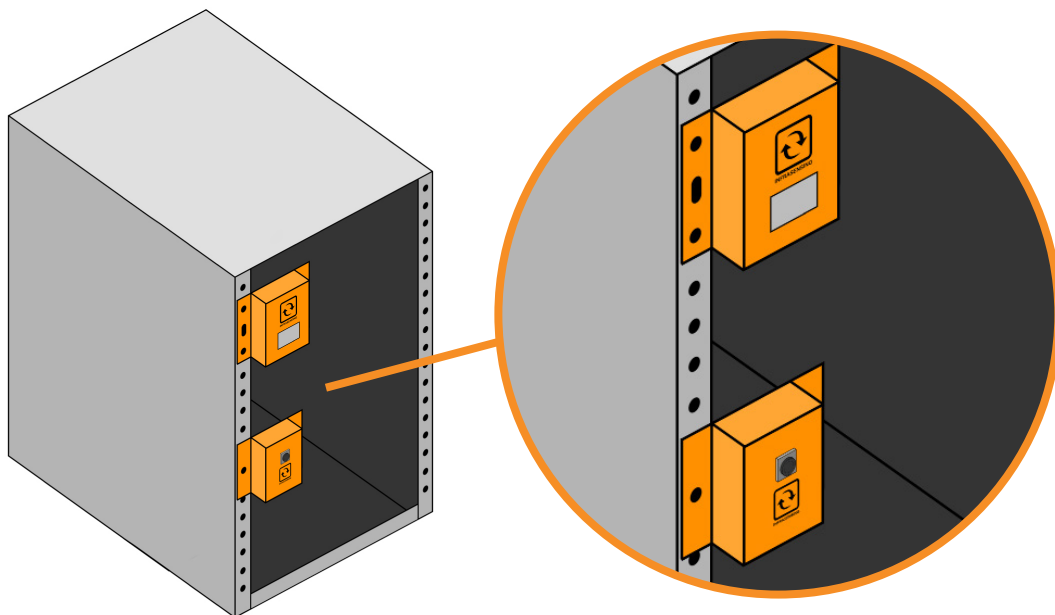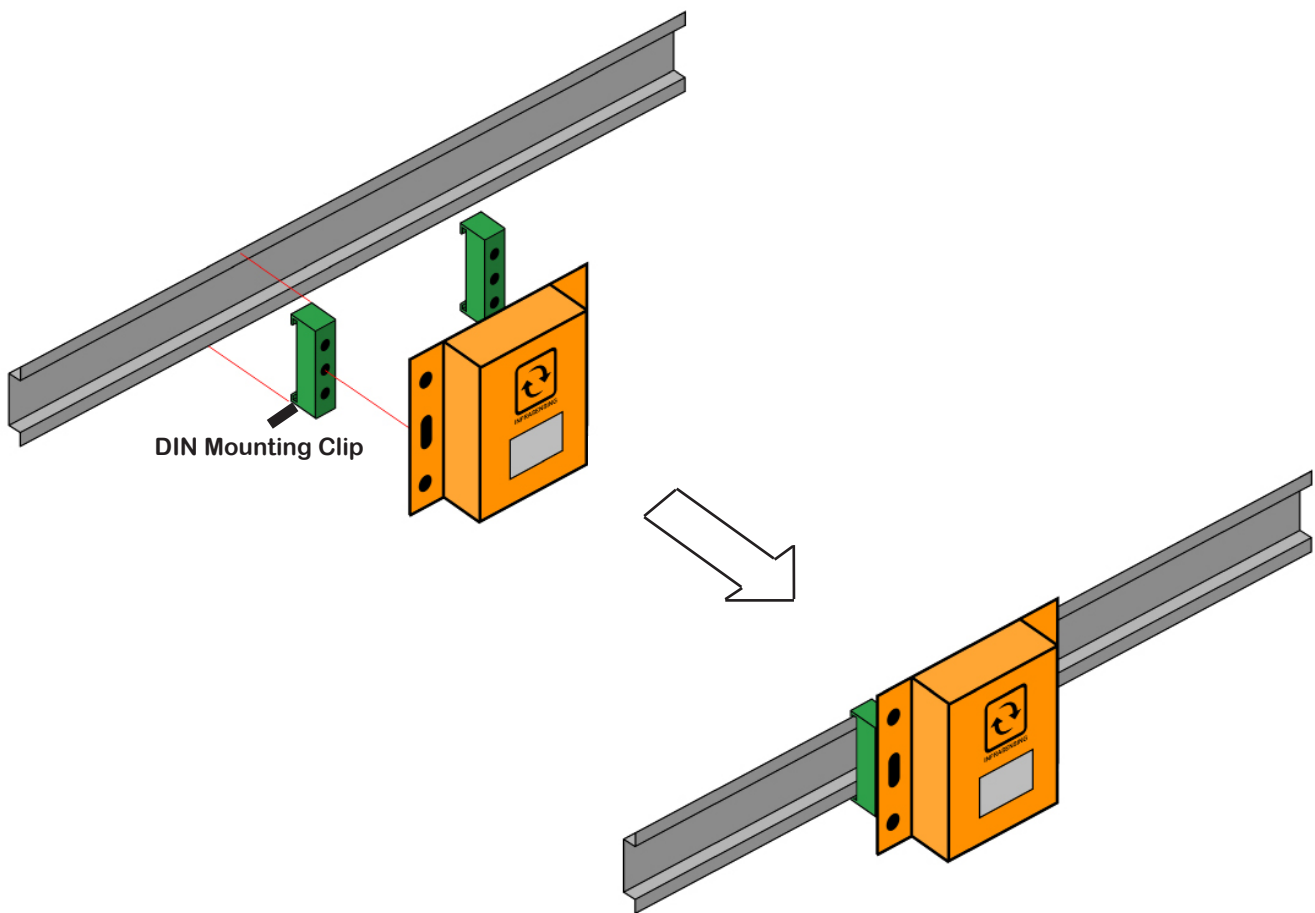
DIN Rail Mounting Requirements
- DIN rail mounting hole provision
- The screw head diameter should be at least 0.6cm / 0.24 inch
- Use standard DIN rail mounting clips
- Recommended to use screws partnered with the mounting clips

DIN Rail Mounting Procedure

Base units and sensors have DIN rail mounting provisions. This enables to easily attach the devices onto DIN rails using DIN mounting clips. The use of such clips requires for UL compliancy standard screws with a head of at least 0.6cm / 0.24 inches. The clips are then mounted on DIN rails as shown on the image below.
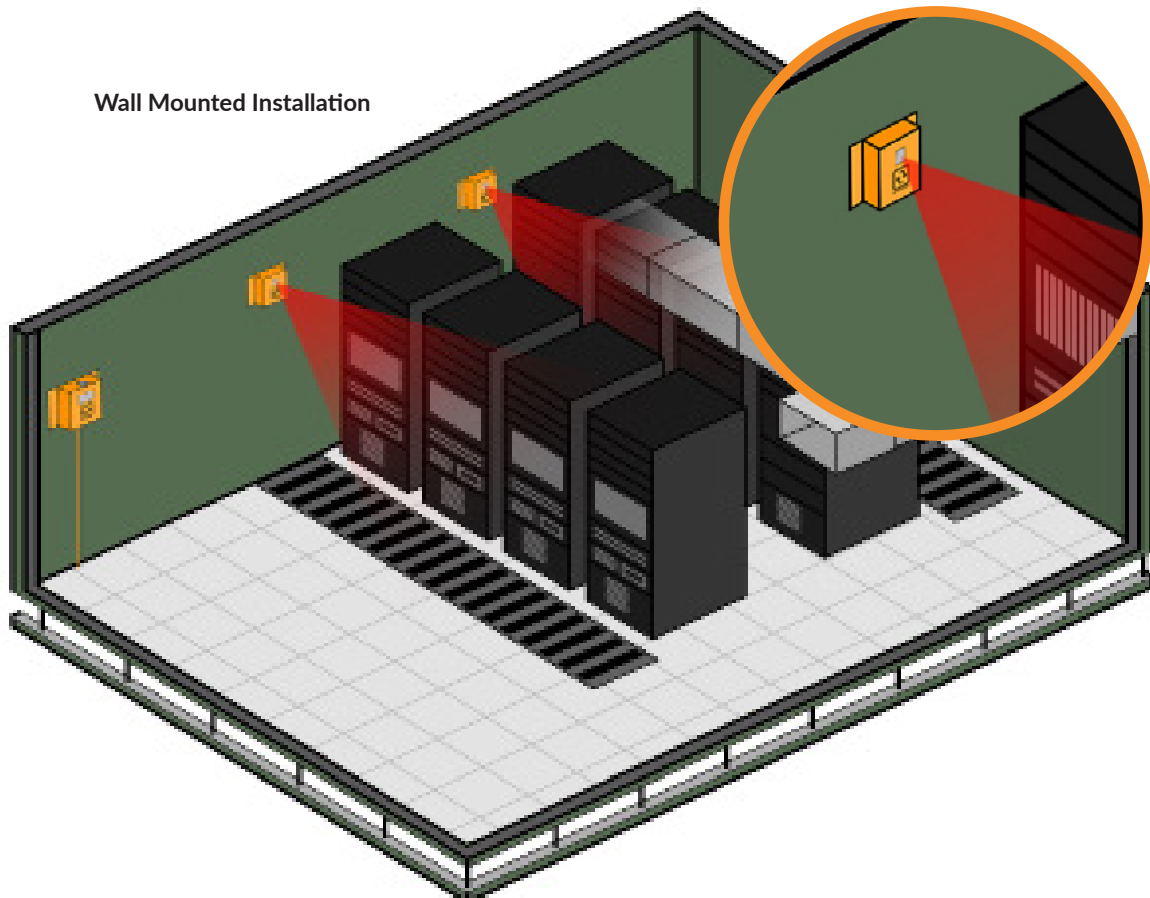
DIN Mounting Clip

Wall / Ceiling Mounting Requirements (2 meters / 78 inches above floor level)

- 0U mounting hole provision
- Screw head diameter should be at least 0.65cm / 0.26 inches
- The length of the wall plug should at least be 1 inch and due to the light weight of the sensors and base units, you may opt between plastic or metal screws
- Use screws partnered with the wall plug
- Use the correct type of wall plug depending on the material of the wall (Concrete / Dry Wall / Metal)

Wall / Ceiling Mounting procedure

The 0U rack mounting holes can also be used to mount the base units and sensors onto walls. Make sure that the area where the devices will be mounted is not in the proximity of electricity tubes and other electrical wiring. Also use the appropriate screw and wall plug for the type of wall it is mounted on.

Wall Mounted Installation

Ceiling Mounted Installation