



UVC SMART-Vu™ Installation Instructions

NOTE: Read this entire instruction sheet before starting the installation

The qualified installer (licensed electrician / trained contractor) must use factory kits or accessories when installing this product. Refer to the individual instructions packaged with kits or accessories when installing them (if applicable). Follow all safety codes and any warnings or cautions attached to any accessed area. Consult local building codes and the National Electrical Code (NEC) for special requirements.

 DANGER	DANGER	Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.
 WARNING	WARNING	Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.
 CAUTION	CAUTION	Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.

Improper installation, adjustment, alteration, service, maintenance, or use can cause fire, electrical shock, or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your supplier for information or assistance. Use manufacturer-authorized spare parts to avoid safety hazards.

Consult all applicable codes before installing. Check fixture label(s) for the correct power requirements and supply the correct voltage from a suitable, protected (fused), and grounded power source.

NOTE: The WARNINGS & IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining, or operating Steril-Aire products.

SAFETY (WARNING & CAUTION) DECALS

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.



Never touch Emitters with bare hands. Damage to Emitter may result. Oil from fingerprints will permanently etch glass of Emitter and may cause premature failure. If necessary, clean Emitter using a Steril-Aire cleaning kit.

Do not touch

Before installing or performing maintenance or service, turn off main power switch to unit. Electrical shock can cause injury or death. There may be more than one disconnects switch.



Installations must comply with minimum specifications and requirements stated in the applicable Installation Manual, any applicable municipal building codes, electrical wiring regulations and any other relevant statutory regulations.

Due to varied requirements and applicable local codes, this product must be installed, adjusted, and serviced by qualified maintenance personnel familiar with applicable local codes and the construction and operation. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury, property damage, and/or equipment damage, and will void the warranty.

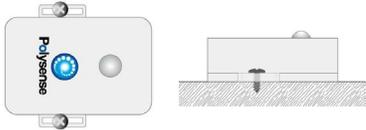


Turn all supply power off to Emitter(s) before installation of Smart-Vu. Never expose eyes to UVC light from any source, as personal injury WILL result. Wear gloves, face shield/glasses (per ANSI Z87.1) and cover all exposed skin (as much as possible).



Emitter contains a small quantity of mercury. If an Emitter breaks, clean and dispose of with care as it would be done for a standard fluorescent lamp.

PRODUCT INFORMATION

UV-C SENSOR		6 FT CORD TO RELAY
RELAY		BATTERY POWERED
GATEWAY	 CELLULAR	NA915 / EU868 / AUS923 / JP920 CH779 CELLULAR 3G/4G Requires electricity: 120V
FRAMING ARM		STERIL-AIRE FRAMING ARM - 2 ft
FRAMING ARM MOUNTING KIT		H-BRACKET (Horizontal mounting) MAGNET (Vertical mounting)
SENSOR MOUNTING KIT		SENSOR MOUNTING MAGNET KIT FRAME MOUNTING KIT

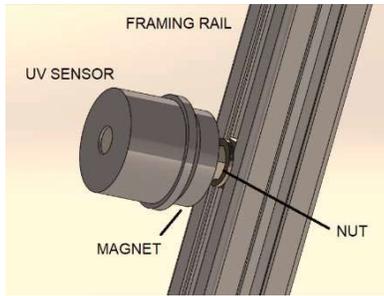
TOOL & EQUIPMENT REQUIREMENT INSTALLATION

TOOL & EQUIPMENT	MATERIAL
Power tool / drill bit set	Zip tie
Philips screwdriver	Two-part epoxy (not provided)
Pliers	
Hex wrench 1/4"	

LOCATION SELECTION

UVC Smart-Vu may be installed anywhere to monitor UVC devices. Locate Sensor with a direct line of sight to UVC Emitters, preferably 12 inches away from Emitters. When choosing the Relay installation site, make sure it can be supplied with the necessary electricity requirements. **Installation site should have enough space for future service access.**

GENERAL INSTALLATION & OPERATION



NOTE: Pre-selected Relay location should be within the Sensor cord length (6 feet) to ensure Sensor can be connected to the Relay. Relay is an electronic device. Avoid damp location. Secure sensor cord, as necessary.

Sensor location can be adjusted on Framing Arm. Loosen the nut, slide the sensor to desired position and lock the nut.

Mount the Framing Arm to the wall / floor.

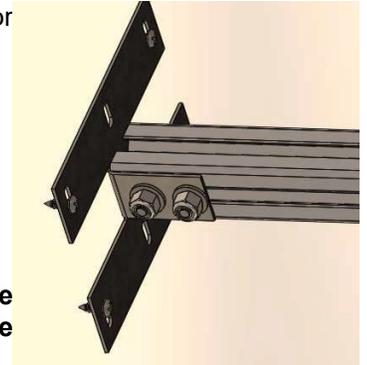
NOTE: STERIL-AIRE RECOMMENDS THAT THE SENSOR IS LOCATED 12" AWAY FROM EMITTER.

HORIZONTAL MOUNTING

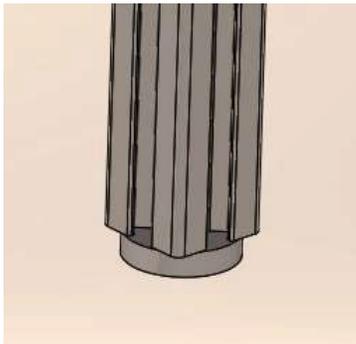
Use the H-Bracket as a template to mark mounting screw locations. Drill hole if necessary for self-tapping screws (included).

Mount Relay with screws.

Locate Gateway within specified distance and plug into 120V outlet.



VERTICAL MAGNETIC MOUNTING



Use two-part epoxy (not provided) to secure the Sensory Mounting Magnet on one end of the fixture frame.

Ensure pre-selected Relay location is within the Sensor cord length (6 feet) so that Sensor can be connected to the relay. Use zip tie to secure sensor cord, as necessary.

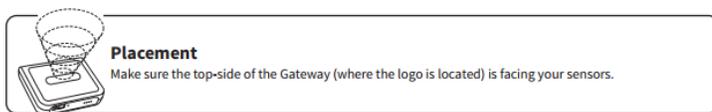
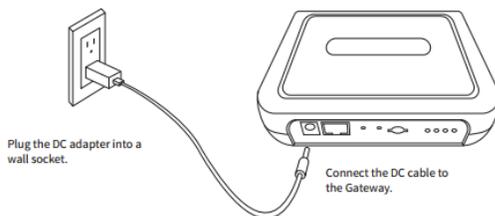
Record sensor mounting distance from a single reference point and the height / distance from the mounting base.

SENSOR MOUNTING ORIENTATION		MOUNTING LOCATION REFERENCE	
VERTICAL			
HORIZONTAL		DISTANCE TO MOUNTING FRAME	

Drill holes and mount the Relay.

Set Gateway and plug in to electrical outlet.

GATEWAY INSTALLATION



LED State	Function	Duration
Both LEDs off	No power to gateway	Until power is applied
Flashing Green	Normal operation	Continuous operation
Solid green	Normal operation	Continuous operation
Solid red	Gateway fault, requires service	Until fault is cleared

ADDING GATEWAY AND/OR SENSOR FROM APP

App Installation

View installation instructions here: <https://iot-help.scrollhelp.site/iotkb/app-download>

Add your first Gateway & Sensor

Additional Hardware Resources: <https://iot-help.scrollhelp.site/iotkb/hardware>

After setting up your Company & Location, you can start immediately adding Gateways and Sensors. Scan the QR Codes on your first Gateway and Sensor to add them into your account.

LoRaWAN Sensors are designed so that they will attempt to connect and transmit through any nearby gateways. The most common reason for missing readings is because the Sensor cannot reach a Gateway. Sensors will attempt to reach any gateway in range, but if there is interference or if the Sensor is located at the far end of range of a Gateway, you may experience missing readings.

Factors that can affect the maximum range of your Sensors include, number of walls between the Gateway and the Sensor, the thickness of the walls, the number of floors between the Gateway and the Sensor (for multiple story buildings), the amount of active radio frequency in the building, etc.

After deploying Gateways and Sensors into a facility, ensure data transmission using dashboard application.

Deploy multiple Gateways

- **Redundancy** - Sensors will attempt to connect with any nearby gateway. If one Gateway drops offline for any reason, there is a better chance that nearby Sensors will continue transmitting if they can reach an additional Gateway as backup.
- **Improved Signal Strength** - If a Sensor's signal strength (RSSI) drops too low, it may have difficulty reliably transmitting readings. The closer a Sensor is to a Gateway the better, yielding more certainty of capturing every data point and a stronger resistance to any intermittent interference.

Deploy Gateways up high or on different floors

If your facility has multiple floors, we recommend deploying a Gateway at the top level and then on every other floor if possible. If you have a facility with substructure, we recommend deploying gateways on those levels as well.

Deploy Gateways at opposite ends of the facility / opposite wings

- If your facility has wings where line of sight to nearby Gateways is difficult (i.e., it will pass through several walls, including possibly to the exterior and then back to the interior), we recommend deploying a Gateway at both ends of the facility. This will ensure Sensors will be able to easily communicate to their Gateway and Sensors in the middle will be able to use whichever Gateway they choose is better. Overlap Gateways where there are large concentration of Sensors.
- If you will be deploying multiple Sensors in a single area, we recommend having two overlapping Gateways to insure: A) Backup in case of a failure in one of the Gateways (redundancy) and B) To ensure adequate throughput should a burst of data occur (this is especially true in cases where your Sensors support local backup and may start data a burst of data recovery in the event of prolonged outages).

RELAY ID	
GATEWAY ID	

SENSOR DATA TRANSMISSION VERIFICATION

THE MOST COMMON REASON FOR 'MISSING' DATA READING IS THE GATEWAY IS OUT OF SIGNAL RANGE.

- Add the Sensor into your dashboard account.
- Activate and Deploy the Sensor into the facility.
- Watch the Sensor for 1 - 2 hours (more for devices which do not transmit regularly).
- Using the web app to verify 100% transmission success.

ADJUSTMENT FOR 100% TRANSMISSION

- Log into your app dashboard where the newly deployed Sensor was added.
- From the Manage screen, select the Sensor to open Device History.
- There you will see a complete history of the latest readings received for the Sensor.
- Look for any gaps in history that indicate issues with transmission.
- If the sensor transmits in 20-minute intervals, you should see a reading every 20 minutes, without any gaps.

Look for any instances where the Signal Strength (RSSI) drops.

The signal strength should be at least -90 dBm or less (close to zero).

- Reposition the relay.
- Consider deploying additional Gateways.
- Try reconnecting / resetting the Sensor

WARRANTY

Steril-Aire warrants that its products shall be free from defects in material or workmanship for the periods of time set forth below. This warranty is voided if adjustments, repairs, or parts replacement is required because of an accident, unusual physical, electrical, or electro- mechanical stress, neglect, misuse, failure of electric power, transportation, unauthorized repair actions, or if installation or maintenance is not in accordance with Steril- Aire's specifications. Steril-Aire's obligation under this warranty shall not arise until the Purchaser of the Product returns the defective part to Steril-Aire. This warranty is limited to the repair and replacement of parts or fixtures at Steril-Aire's option. This warranty does not cover any labor, or any subsequent damage incurred as the result of product failure.

Under the conditions specified above, Steril-Aire warrants warranty. Buyer must provide proof of purchase.

Except for the express warranties stated here, Steril-Aire disclaims all warranties on products furnished hereunder, including without limitations, all implied warranties of merchantability and fitness; and the stated express warranties are in lieu of all obligations or liabilities on the part of Steril-Aire arising out of or in connection with the performance of the Products.

TROUBLESHOOTING

Symptom	Possible Causes	Corrective Action
Device offline	Power is off	Turn on power
	Gateway freeze	Resetting / reactivate
	Out of range	Check the distance to the sensor & move close to sensor
	Interference	Check for possible data transmission & move gateway
Gateway offline	Power is off	Turn on power
	Internet connection is off	Check network/Internet connection Check Firewall status (need to connect to port 1700) Reset Gateway
Sensor/Relay offline	Low battery	Replace battery

GATEWAY REST PROCEDURE

1. Unplug the Gateway from wall.
2. Unscrew the battery cover on the bottom (2 screws).
3. Unplug the battery backup (just one cable with a white connector, tug on the connector to unplug).
4. Wait 20 seconds.

5. Reconnect the battery backup.
6. Plug the Gateway back into the wall.
7. Refer to the LED States above to verify normal operation (flashing or solid green).

REPLACEMENT PARTS

Part Number	Description
80000550	BATTERY SENSOR KIT
8WXS0048	SENSOR: WXS8800-EXT048 (BATTERY POWERED)
80TEKTEL	GATEWAY; CELLULAR: TEKTELIC
8000IARM	IOT INSTALLATION ARM
90000142	NEODYMIUM RARE EARTH N52 NDFEB PERMANENT NICKEL COATED DISC MAGNETS
90000143	ROUND CUP MAGNET WITH 1/4"-20 MALE THREADED STUD

THANK YOU FOR CHOOSING STERIL-AIRE.
 ANY FURTHER INFORMATION OR SERVICE, PLEASE VISIT WWW.STERIL-AIRE.COM