

Wireless 0 - 500VAC Sensor - 610

Part Number: SS3-610

Overview

Swift Sensors Wireless 0 – 500 VAC Voltage Meter measures up to 500 VACrms. In software, users can apply conversions to calculate voltage peak (VACpk) or voltage peak-to-peak (VACp-p) measurements for additional information. Users configure an Inspection Rate Period for transferring measurement values up to once per minute. The sensor monitors voltage levels every 6 seconds and can identify voltage events that may happen between inspection cycles using a proprietary averaging algorithm. Users can set voltage value thresholds for notifications via SMS text, email, and phone call.

Simple, Plug-and-Play Deployment

Place the small battery-powered sensor in the location or on the equipment you need to monitor. Sensors are powered with 2 AAA lithium polymer batteries with an average lifespan of 6 - 8 years. The Swift Sensors Gateway instantly identifies the sensor and establishes secure communication. No wires to connect. No software to install.





Secure, Scalable, Cloud Architecture and Analytics

The system is 100% cloud-managed. The gateway securely transmits sensor data to the Swift Sensors Cloud using 256-bit AES encryption. The system is scalable from a single sensor, one site application to multi-site enterprises with thousands of sensors. SMS text, email, and phone call notifications can be set based on customizable threshold values and complex rules by individual sensors or sensor groups. Built-in analytics provide historical reporting and operational insights.

Applications

- ✓ Manufacturing and Production
- ✓ Facility Monitoring
- ✓ Museums
- ✓ Datacenters
- ✓ Warehouses
- ✓ Greenhouses
- ✓ Restaurants and Food Service
- ✓ Cold Chain Monitoring
- ✓ Transportation
- ✓ Building Management

Operational Specifications:

Power	1.8 - 3.6VDC, 0.07mW Average
Battery Type	AAA x2 Replaceable "L92" Lithium Polymer
Operating Voltage	1.8VDC - 3.6VDC
Avg. Current Consumption	23uA (Active), 500uA (Command ACK), <5uA(Sleep)
Operating Temperature	-40°C to +60°C (-40°F to +140°F) (Defined by batteries)
Operating Environment	Indoor/Outdoor, 0-95%+ RH (Brief Condensation Tolerated)
Battery Life (Average)	6 - 8 Years
Communication Protocol	BLE/BT5 2.4Ghz
BLE Chipset	nRF52840
TX Strength	+8dBm (Default)
Range	70m - 90m (250ft - 300ft) Line-of-Sight 30m - 45m (100ft - 150ft) Non Line-of-Sight
Encryption	128-Bit AES Encryption
Button Press	Click to turn on. Press and Hold 2 sec to put in sleep mode
LED	Green LED: 2 sec. blinking when turning on Green LED: 2 sec. solid when entering sleep mode
Find My Sensor	Command from Console to blink sensor LED
Weight	84g (3 oz)
Dimensions	77.5mm x 57.5mm x 44mm (2.26in. x 1.73in. x 0.73in.)
Enclosure Material	ABS PA-765+
IP Rating	IP66
Cable Dimensions	0.5m (19") Length White and Black Leads for Neutral and Live AC Leads Levernuts Included for Easy Connection
Certifications    	FCC ID: X8WBT840F IC ID: 4100A-BT840F CE Compliance: 2014/35/EU, 2014/53/EU, 2014/30/EU



Operational Specifications Cont.:

EMC Compliance	FCC Part 15 Class B
Flammability Rating	UL94-0V
Warranty	2-year

Measurements Specs:

General Use Indications	Single Phase VACrms for Any Single Phase Application
Measurement Range	0 - 500VACrms
Resolution	14-Bit
Accuracy	0.2VACrms with +/-0.1VAC Swing
Precision	1mVACrms
Inspection Rate	1 - 30 Minutes, (Default 1 Minute)

Special Features:

Control Loop	6 seconds
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Control Loop Operation

The SS3-610 Makes Measurements every Inspection Rate Period, but is always monitoring Voltage Level every 6 seconds. Proprietary averaging enables the user to catch Voltage Events that may happen in-between Inspection Cycles, without reducing accuracy of the measurement made every inspection rate period.

Pk, P-P Conversion

Customers may create console conversion to VACpk or VACp-p, for alternative Displays + more information.

Applications:

Main Use Applications	General Power Mains Monitoring Surge/Brownout Monitoring Conditioned Power Monitoring AC Voltage Signal Monitoring
Application Environment	Indoor/Outdoor*
Application Restrictions SS3-610 Makes Single-Phase Measurements, and does not measure multi-phase power.	

*Customer is responsible for protecting Lead Connections in Any Environment.

Installation and Wiring Considerations

The SS3-610 Voltage Meter can be used indoors or outdoors. Users are responsible for protecting lead connections in outdoor or harsh environments. Two lever nuts are included for fast, secure wiring connections.

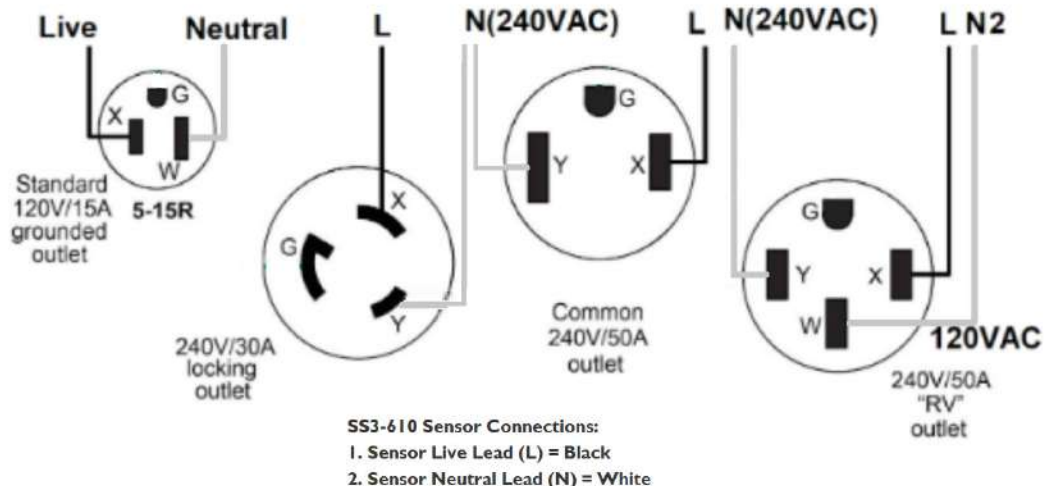
The SS3-610 has two leads:

Black: for live/hot connection

White: for neutral connection

*Improper connection to GND could result in damage to the sensor. It is recommended to make connections to Live and Neutral wires only.

Common US/EU Connections for Mains Monitoring





HIGH VOLTAGE: HAZARD OF ELECTRICAL SHOCK. DISCONNECT INCOMING POWER BEFORE WORKING ON HIGH-VOLTAGE POWER MONITORING.

When working with high-voltage measurements, this equipment should be installed, adjusted, and serviced by qualified electrical maintenance personnel familiar with the operation of the equipment and the hazards involved. Failure to observe this precaution could result in bodily injury.

Swift Sensors Gateway

The Swift Sensors Gateway collects encrypted data from sensors located within the specified communication range (< 90m/300ft) and then transmits the sensor data to the Swift Sensors Cloud through either Ethernet, Wi-Fi, or cellular. The gateway auto-detects all sensors within range and will immediately establish secure communication without any user configuration or setup. Each gateway can support up to 150 Series 3 sensors.

Swift Sensors Console

All sensor data is logged and stored in the Swift Sensors Cloud. The Swift Sensors Console is configured to monitor and track all sensor data in the cloud. Multiple thresholds and alerts can be set separately for each sensor to supply notification via SMS text, email, or phone call. The console can be viewed in a web browser on a computer, tablet, or smartphone.

No programming is required to configure the console. An API to the Swift Sensors Platform allows integration with other data sources and 3rd-party data analytics tools.