

SS-002 (-NA) Series



Wireless TC and RTD Smart Sensor with Cloud Connectivity

- SS-002: Configurable sensor mix of Temperature, Humidity, Barometric Pressure, Light sensor, Thermocouple, RTD, or Contact Closure
- Free Omega Link Standard Cloud service accessible from any connected device¹
- Easy setup with one-button pairing
- Transmits up to 1.2 km with standard AA batteries²
- Transmits up to 3.2 km when powered with USB²
- AES-256 Encrypted wireless link keeps your data secure
- Local data logging up to 10,649 data points³



Introduction: SS-002

Omega Link SS-002 Smart Sensors provide an external 3-wire RTD, thermocouple, or contact closure solution in addition to the built in suite of precision internal sensing elements that come standard with the SS-002 to accurately measure environmental conditions for a wide range of applications.

The SS-002-0 offers a configurable choice of an external thermocouple, RTD, or DIN (contact closure).

The SS-002-1 offers a configurable mix of any three of the four internal sensors: Temperature, Humidity, Barometric Pressure, Ambient Light, **AND** one external sensor option: Thermocouple, RTD, or DIN (contact closure).

Intuitive Configuration

Configure your Omega Link Smart Sensor using our free SYNC configuration software. Configurable features include selective data extraction, measurement and device traceability, local alarms, and adaptive transmission rates to reduce data congestion and extend battery life.

Long Range

The SS-002 utilizes Sub GHz Frequency Hopping Spread Spectrum (FHSS) technology to ensure robust, long range communications. Transmission ranges of up to 1.2 km can be achieved with the standard AA batteries and transmission ranges of up to 3.2 km can be achieved when powered by a standard 5 V USB².

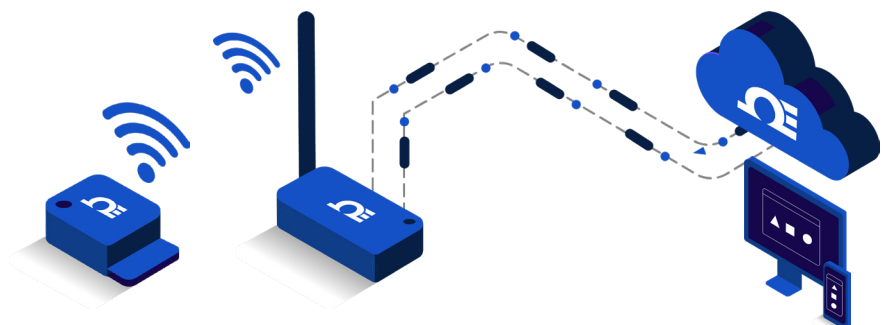
Security and Access Control

Omega Link wireless products are designed with state of the art security features to protect your data with robust AES-256 encryption and advanced PKA-EC521bit (NIST) elliptic-curve cryptography to protect your data. Password protection ensures that access to device data is restricted and only accessible by authorized users. Device Authentication ensures that Omega Link Smart probes connect to validated Omega devices.

One-Button Pairing

The SS-002 is easily paired to the Omega Link Gateway with the press of a button and will automatically show up on your Omega Link Cloud account. The Omega Link Gateway can connect up to 100 Smart Sensors⁴ per unit. Local data logging keeps your data secure in the event of a power or network outage. Reports, History, and E-mail alerts from the Omega Link Cloud keep you informed on the status of all your vital processes.

How Do Omega Link Smart Sensors Work?



Smart Sensor

Sense, store, and process real-time data with superior wireless connectivity to the Gateway.

Gateway

Collect and securely transport data from the sensor layer to the Cloud.

Cloud & Mobile Access

Continuously collects and processes sensor data providing real-time reporting and analytics anytime, anywhere with an Internet Connection.

Specifications

Wireless Communication

Frequency: 915 MHz

Range: Up to 3.2 km*

*When powered by USB, without obstruction

Power

Alkaline Battery: 2x AA batteries (included)

Lifetime: Up to 1.5 years with frequency of 1 reading per hour

USB Power*: 500mA @ 5V

*Micro USB cable not included

Environmental

Operating Conditions for Base Unit

Battery Powered: -15°C to 55°C, non-condensing

USB Power: -20°C to 65°C, non-condensing

Rating: IP40

General

Software: Compatible with SYNC configuration software and Omega Link Cloud

Certifications

Contains IC ID: 8205A-SS001XNA

Contains FCC ID: WR3SS001XNA

Thermocouple Types

Type	Range	Accuracy
J	-210°C to 1200°C	±1.0°C
K	-160°C to 1372°C	±2.0°C
T	-190°C to 400°C	±1.5°C
E	-200°C to 1000°C	±1.0°C
N	-100°C to 1300°C	±2.0°C
R	140°C to 1788°C	±5.0°C
S	200°C to 1768°C	±5.0°C
B	640°C to 1820°C	±5.0°C
C	0°C to 2000°C	±5.0°C

RTD Types

Type	Ohm	Range	Accuracy
385, 3 Wire	100, 500, 1000	-200°C to 850°C	1.5°C
392, 3 Wire	100	-200°C to 660°C	1.5°C
3916, 3 Wire	100	-200°C to 660°C	1.5°C

Smart Sensor Device

Measurement	Range	Accuracy
Temperature	-20°C to 70°C	±0.3°C
Humidity @ 25°C	0% to 80%	±2.5%
	80% to 100%	±3.5%
Barometric Pressure @ 25°C	700mbar to 1100mbar	±4mbar
Barometric Pressure @ Full Range	300mbar to 1100mbar	±6mbar
Light	0-43691 illuminance	Relative level only

Wireless Sub GHz Smart Sensor

Model Number	Description
SS-002-0-NA	External Thermocouple, RTD, or DIN (Contact Closure) Smart Sensor - 915 MHz
SS-002-1-NA	Configurable mix of 3 of the 4 internal sensors: Temperature, Humidity, Barometric Pressure, Ambient Light AND one external sensor: Thermocouple, RTD, or DIN (Contact Closure) Smart Sensor - 915 MHz

Omega Link Wireless Gateways

An Omega Link Wireless Gateway is **required** to connect your Smart Sensor to the Omega Link Cloud.

Model Number	Description
GW-001-2-NA	Wireless IIoT Gateway Standard, Ethernet connectivity, connects up to 100 Omega Link Smart Sensors- 915 MHz
GW-001-3-NA	Wireless IIoT Gateway Pro, Ethernet connectivity, power over Ethernet, connects up to 100 Omega Link Smart Sensors, Modbus RTU RS232/RS485 and Modbus TCP, 2x USB ports- 915 MHz
GW-002-1-LTE	Wireless LTE IIoT Gateway Pro connects up to 40 Omega Link Smart Sensors, Modbus RTU RS232/RS485 and Modbus TCP, 1x RJ45 port, 1x USB port - 915 MHz

1. Visit <https://omega.com/en-us/omega-link-cloud> for subscription options. Total number of sensors that can connect to Omega Link Cloud varies with subscription tier.

2. Actual range may vary depending on environment.

3. The number of data points available are on a per sensor basis. Local Data can be downloaded using downloadable SYNC configuration software.

4. 100 sensors are supported at typical update intervals, on the order of 60 minutes, higher data rates or adverse environmental conditions may diminish the number of sensors supported.

Your Data at a Glance with the Omega Link Cloud

The Omega Link Cloud consolidates and brings your data to you when you need it, wherever you are. The intuitive cloud interface allows you to monitor and store your data, set alarms and alerts, and provides insights on device activity. Visit the OMEGA website for more details.

