

Pairing to your Omega Link Gateway

Once the **Pairing Button** displays a solid orange LED light in the center of the pairing button, your Smart Sensor is ready to be connected to an Omega Link Gateway. Pairing your SS-015 with an Omega Link Gateway is made easy with a one-button pairing system between the two devices.

Step 1: Push the pairing button once on your SS-015 unit. The LED status indicator will blink green indicating the device is in Pairing Mode.

Step 2: Quickly push the pairing button on the Omega Link Gateway. The LED on the gateway will blink green indicating the gateway is in Pairing Mode.

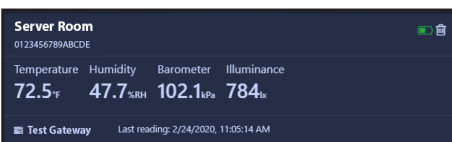
When the Smart Sensor has been successfully paired to your Omega Link Gateway, the green LEDs on both devices will stop flashing within 2 minutes.

The Smart Sensor LED will periodically flash green each time data is transmitted to the gateway.

As measurements are transmitted, you will begin to see data appearing on the Omega Link Cloud or OEG interface. The transmission interval can be adjusted from the Omega Link Cloud Interface or from the OEG interface, depending on which platform the Gateway is connected to.

View Readings on Omega Link Cloud or OEG

Once your SS-015 has successfully paired to your registered Omega Link Gateway, the SS-015 will appear on the Omega Link Cloud interface or the OEG interface and begin transmitting data.



For additional information on the customizable features made available through the micro USB connector, continue to the sections titled **Advanced Configuration with SYNC and Smart Sensor USB Connector**.

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

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1. Purchase Order number to cover the COST of the repair or calibration,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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SS-015 (-NA)

Long Range Wireless Process and Pulse Input Smart Sensor



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Introduction



Important: Do not power on the Omega Link Gateway or Omega Link Smart Sensor before the Gateway registration is complete for Omega Link Cloud connections.

Use this Quick Start Guide to set up your Omega Link SS-015 Digital and Process Smart Sensor.

Materials

Included with your SS-015

- Omega Link SS-015 Unit
- Quick Start Guide
- 2x C-Cell Batteries

Additional Materials Needed

- Micro USB 2.0 cable
- Digital or Process signal measurement device or wires
- Phillips screwdriver
- A Windows 7, 8, 9, 10, or 11 OS PC or laptop with Omega's free SYNC configuration software
- A compatible Omega Link Gateway
- An Omega Link Cloud account or a qualifying Omega Enterprise Gateway license tier (Pro, Business, or Business Pro)

Optional Materials

- M12.5-S-M-FM Screw Terminal Accessory
- UNIV-AC-100/240-5-M8 Universal AC Adapter w/ M8 Connector

Before you Begin

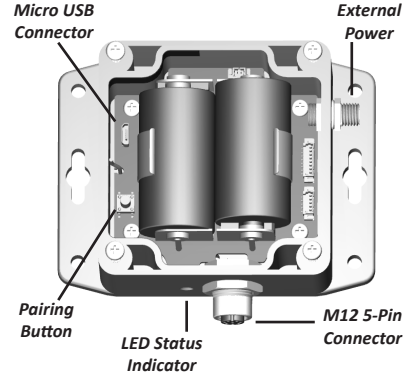


Important: If you are adding an SS-015 to an existing Omega Link Gateway it is required to update your Gateway to the latest firmware to ensure your Gateway and SS-015 communicate and operate correctly. During the update process, your Gateway will not be able to send or receive readings until the update process is complete.

Before you begin setting up your SS-015, ensure you have created an Omega Link Cloud or Omega Enterprise Gateway account and registered the Omega Link Gateway that will be paired with the SS-015 device.

During the gateway setup process, the gateway will automatically download the latest firmware and re-boot. Once the gateway is registered and the pairing button LED is green you may continue with the SS-015 installation.

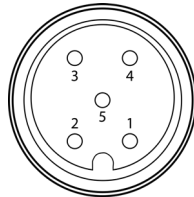
SS-015 Hardware Setup



Refer to the following table for a description of the different LED statuses of the SS-015 unit.

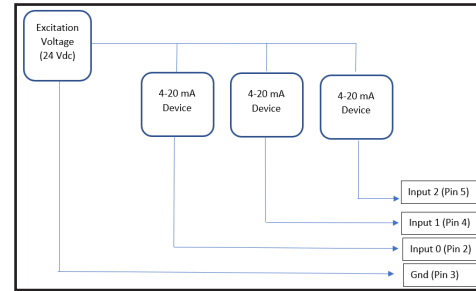
LED Color	Status
Amber (solid)	SS-015 powered on; not connected to Gateway
Green (blinking repeatedly)	SS-015 in Pairing Mode
Amber (blinking repeatedly)	SS-015 is paired and is reconnecting to the paired Gateway
Green (flash periodically)	SS-015 communicating to Gateway
Green (solid)	SS-015 is performing a radio firmware update
Red (solid)	Reset button has been held for Gateway radio factor reset
No Light	SS-015 is asleep or the battery is drained

Step 1: Connect your digital or process signal measurement device to your M12.5-S-M-FM connector using the wiring diagram below:



Pin	Process/ Analog	Digital	Mixed
Pin 1	Excitation Power (3.3 V _{DC} , 100 mA)	Excitation Power (3.3 V _{DC} , 100 mA)	Excitation Power (3.3 V _{DC} , 100 mA)
Pin 2	Process 0	DIN 0 / Pulse A	DIN 0 / Pulse A
Pin 3	Ground Reference	Ground Reference	Ground Reference
Pin 4	Process 2	DIN 2 / Enable, Direction / Pulse B	Process 0
Pin 5	Process 1	DIN 1 / Reset	DIN 1 / Reset

For 4-20 mA devices, use the wiring diagram below to connect your device. Refer to the User's Manual for additional information.



Step 2: Attach your M12.5-S-M-FM connector (with digital/process device already connected) to the M12 5-pin connector on the Omega Link SS-015.

Step 3: Use a Phillips screwdriver to remove the 4 screws on the top cover of the SS-015 unit.

Step 4: Insert 2x C-Cell batteries into the battery compartment or plug in an external power source (external power supply sold separately).

The **LED Status Indicator** on the SS-015 unit will blink an amber light indicating that the device has been successfully powered on and is searching for an Omega Link Gateway.

Advanced Configuration with SYNC



Note: SYNC configuration software is downloadable on the OMEGA website.

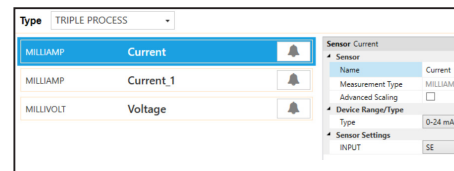
The SS-015 can be configured using SYNC configuration software by connecting through the micro USB 2.0 port. SYNC can be used to configure Process and Digital Input signals, alarms in the sensor, set device passwords, and update firmware.

Configuring Process Inputs

The SS-015 can accept up to 3 industry standard process signals including 0-24 mA and 0-1 V_{DC}.



Caution: All three inputs share the same ground connection.



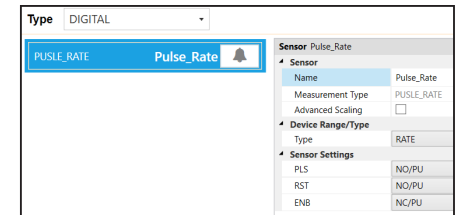
Step 1: Click the **Inputs Configuration Tab** on SYNC and choose an input type that lists **Process** from the **Type** drop down.

Step 2: Click the **Device Range/Type** drop down and select from the available **mA** and **mV** options.

Once you have finished configuring your device, skip ahead to the section titled Connecting to your Omega Link Gateway.

Configuring Digital Inputs

The SS-015 accepts digital pulse inputs and may be configured to monitor the on/off state of the input signals, the pulse rate or pulse duty cycle of the primary input, or the pulse delay between two signals. To use these features, follow these steps:



Step 1: Click the **Inputs Configuration Tab** on SYNC and choose the **Digital** input type from the **Type** drop down.

Select the type of digital input in the **Device Range/Type** drop down in SYNC. The following types are available:

Selection	Measurement	Description
DIN	Digital Input	3-bit Binary Digital Input
RATE	Frequency	Measure the Frequency of Rising or Falling Edges
WIDTH	Pulse Width	Measure the active time of a signal
DUTY	Duty Cycle	Measure the % of active time of a signal
DELAY	Delay Timer	Measure the time between the rising or falling edges of 2 signals
CNT	Up Counter/Totalizer	Counter with Enable and Reset
U/D_CNT	Up/Down Counter/Totalizer	Counter with Direction and Reset

Each of the three input pins can be independently set to either have an internal 1.5k **Pull Up (PU)** or **Pull Down (PD)** and can be set to be either Active High or Active Low by selecting **Normally Open (NO)** or **Normally Closed (NC)**. Some typical circuits are shown in the next section: