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SYNC interface On/Off Control

The **Enable Control** checkbox enables the ON/OFF control module. If this box is unchecked, the output will be disabled but the module with all its settings will remain available to be enabled at a later time.

The **Inputs** dropdown lists the available input sources and will depend on how the device is configured in the Inputs tab.

The **Setpoint** field sets the threshold for activating the ON/OFF control module. The unit of the Setpoint field will be the same as the unit of the chosen Input.

The **Control Actions** dropdown has options for direct or reverse control. In direct mode, once the Setpoint value is reached then the output will be set to ON. In reverse mode, once the Setpoint value is reached then the output will be set to OFF.

The **DeadBand** field together with the direct or reverse control action configures a deadband range around the Setpoint where the ON/OFF control does not toggle. The unit of the DeadBand field will be the same as the unit of the chosen Input.

Pairing a Sensing Device

Refer to either the Wireless Pairing or Wired Pairing instructions as applicable:

Wireless Pairing

Pairing your wireless Smart Interface (IF-006) and attached Smart Probe is made easy with a one-button pairing system between the IF-006 and the Omega Link Gateway.

Step 1: Push the pairing button once on your IF-006. The LED Status Indicator will blink green indicating it 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.

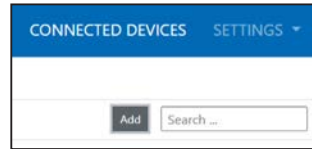
When the IF-006 has been successfully paired to the Omega Link Gateway, the LEDs will stop blinking on both devices.

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Wired Pairing

Wired Smart Probes connected directly to an Omega Link Gateway with an IF-001 cable or IF-002 will need to be added to the Gateway Internal User Interface.

The Connected Devices tab is the default page set once you are signed into the internal gateway UI. From here, you can add devices to your gateway to have them appear in your Omega Link Cloud account.



To add a device to the gateway from the internal gateway web UI, begin by clicking the **Add** button at the top right of the web page and fill out the **Add Device** menu according to the device specifications.

For more information regarding wired or wireless pairing, refer to the Omega Link Gateway User's Manual available on the Omega website.

Once the SP-006 has been successfully paired to an Omega Link Gateway the device may be placed in its final sensing location. Readings will transmit to the Omega Link Cloud or OEG according to the rate set in the Omega Link Cloud or OEG settings and subscription tier.

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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QUICK START

CE UK
CA



Wired Omega Link Smart Interface not included

SP-006 Omega Link Pressure Monitoring and Control Smart Probe

OMEGA™

omega.com info@omega.com

Omega Engineering, Inc.

800 Connecticut Ave. Suite 5N01, Norwalk, CT 06854, USA
Toll-Free: 1-800-826-6342 (USA & Canada only)
Customer Service: 1-800-622-2378 (USA & Canada only)
Engineering Service: 1-800-872-9436 (USA & Canada only)
Tel: (203) 359-1660 Fax: (203) 359-7700
e-mail: info@omega.com

For Other Locations Visit omega.com/worldwide

Introduction

Use this Quick Start Guide to set up the Omega Link SP-006 Pressure Monitoring and Control Smart Probe. For additional information regarding the SP-006, refer to the User's Manual available on the Omega website.

Materials

Included with your SP-006

- SP-006 Unit
- Quick Start Guide

Additional Materials Needed

- An Omega Link Smart Interface
- 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

- M12.8-T-SPLIT Sensor Splitter (For DIO access)
- M12.8-S-M-FM Screw Terminal Accessory (For DIO access)

Important: An Omega Link Smart Interface is required to connect your SP-006 to SYNC configuration software. For a list of available Smart Interfaces, visit the Omega website.

Before you Begin

Users must have a registered Omega Link Cloud account or a qualifying Omega Enterprise Gateway (OEG) license to complete the setup process and view sensor data.

For Omega Link Cloud setups, the user will need to first register an Omega Link Gateway to the account before the Smart Probe and Smart Interface can be paired.

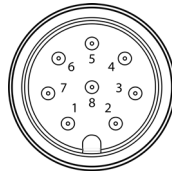
If the Omega Link Smart Probe will be paired wirelessly with an IF-006, the Omega Link Gateway firmware must be updated. Omega Link Gateways update automatically upon first-time setup. For instructions on how to manually update Omega Link Gateway firmware, refer to the Omega Link Gateway User's Manual.

Important: If the user intends on pairing the Smart Probe using an Omega Link IF-006 to an existing Omega Link Gateway, it is required to update the Gateway firmware to version 1.0.9 or higher to ensure the Gateway and IF-006 communicate and operate correctly.

Connecting your Smart Probe & Interface

Step 1: Connect the SP-006 to your Omega Link Smart Interface.

Step 2: Connect the Smart Interface with Smart Probe attached to a computer running SYNC configuration software.

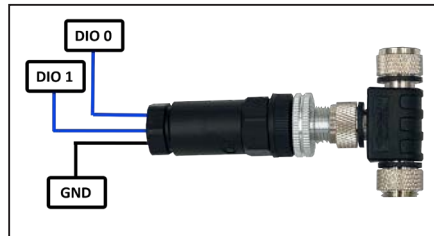


Smart Probe M12 8-pin male connector front view

	Name	Function
Pin 1	DIO 0	Discrete I/O Signal 0
Pin 2	INTR	Interrupt Signal
Pin 3	SCL	I2C Clock Signal
Pin 4	SDA	I2C Data Signal
Pin 5	Shield	Shield Ground
Pin 6	DIO 1	Discrete I/O Signal 1
Pin 7	GND	Power Ground
Pin 8	3.3VDD	Power Supply

Discrete I/O

If the smart probe discrete I/O will be utilized, an **M12.8-T-SPLIT** and an **M12.8-S-M-FM** will need to be connected between the Smart Interface and Smart Probe. Refer to the previous pin diagram and the diagram below to connect the accessories:



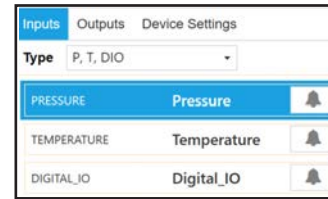
M12.8-T-SPLIT and M12.8-S-M-FM for DIO access

Smart Probe SYNC Configuration

The Smart Probe can be configured using Omega's free SYNC configuration software. Once the SP-006 is connected to the computer, SYNC will automatically detect it and begin displaying readings.

Input Configuration

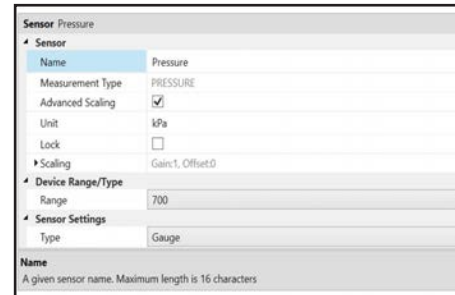
The SP-006 provides pressure readings that can be configured using SYNC. The SP-006 allows you to select an input mix consisting of **Pressure, Temperature, and Digital I/O**. To configure these features, follow these steps:



Step 1: Click the **Inputs** configuration tab on SYNC and choose your input mix from the **Type** drop down.

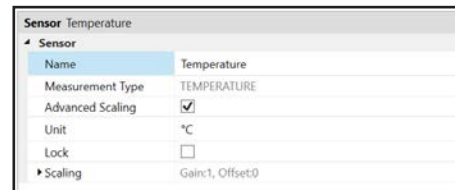
Pressure

The SP-006 Pressure range is fixed based on the specific model. The user may calibrate the Pressure sensor using Single or Dual-Point Calibration by clicking the **Calibration** button.




Temperature

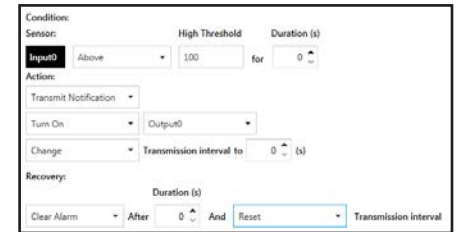
The SP-006 Temperature range is fixed. The user may configure the advanced scaling options which include Gain and Offset.



Setting Alarms

Alarms can be set at the Smart Probe level by clicking the

 icon in SYNC on the desired input signal found in the **Inputs** Tab.



SYNC interface configuring alarms

The **Condition** that triggers the alarm by selecting an option from the drop down such as Above, Below, Outside the Range, or Within the Range.

The **Threshold** field(s) will change to display whatever is appropriate for the option chosen such as a High Threshold for an Above condition or a Low Threshold for a Below condition.


A **Duration** can be set for the trigger as well where the condition must be met for a certain amount of time before the alarm flags.

Under the **Action** menu, the option to transmit or not transmit a notification can be set. The option to enable an output can also be set. The output chosen must not be currently used in a sensor mapping or ON/OFF control module. The data transmission interval may also be changed upon triggering an alarm, e.g. increase the rate of transmission if an excessive value is detected.

The **Recovery** menu allows the option to clear the alarm after a certain Duration (in Seconds) once the trigger condition is no longer met. The transmission interval can also be Reset to the normal system setting once the alarm is cleared.

ON/OFF Control

To configure an ON/OFF control module on a Smart Probe, first ensure that the desired output pin is not associated with any input alarms and that it is set as **No Mapping** in the Output Mapping menu of the Outputs tab. The ON/OFF control module can be used with any selected output type including ON/OFF, PWM, and SERVO. When enabled in PWM mode, ON corresponds to 100% duty cycle. When enabled in SERVO Mode, ON corresponds to 100% angular travel.

In the **Outputs** Tab in SYNC, click on the  icon located to the right of the available outputs. Clicking the icon will open the Define ON/OFF Control dialog box as seen below.