

5

## 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.

### 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.

6

Once the SP-001/SP-002 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.

## Accessories

Product No.	Description
SP-001-MB	Mounting Bracket

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

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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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2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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QUICK START

CE UK CA



Mounting bracket and wired interface not included

## SP-001/SP-002 Ultra-Miniature IR Smart Probe

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MQS5810/0223

## Introduction

Use this Quick Start Guide to set up your Omega Link SP-001/SP-002 Ultra-Miniature Infrared Smart Probe. For additional information regarding your SP-001/SP-002, refer to the User Manual available on the Omega website.

## Materials

### Included with your SP-001/SP-002

- SP-001/SP-002 Unit
- Quick Start Guide
- Two mounting nuts

### 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

- Secondary temperature measurement device
- 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-001/SP-002 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.

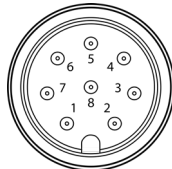


**Important:** If the user intends on pairing the Smart Probe using an Omega Link IF-006 to an existing Omega Link Gateway, it is required to update the Gateway firmware to version 1.0.9 or higher to ensure the Gateway and IF-006 communicate and operate correctly.

## Connecting your Smart Probe & Interface

**Step 1:** Connect the SP-001/SP-002 to your Omega Link Smart Interface.

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

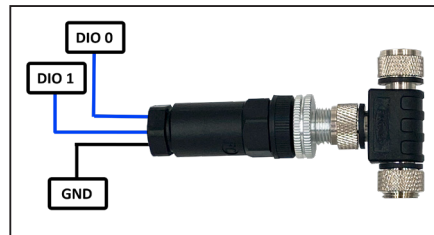


Smart Probe M12 8-pin male connector front view

	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:



## Smart Probe SYNC Configuration

The Smart Probe can be configured using Omega's free SYNC configuration software. Once the SP-001/SP-002 is connected to the computer, SYNC will automatically detect it and begin displaying readings.

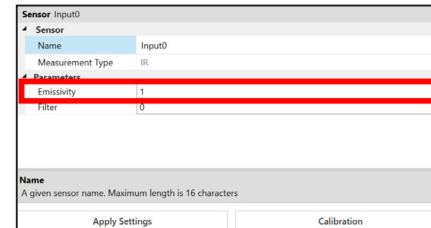
## Setting Emissivity

This guide will outline three different ways to set emissivity:

- Known Emissivity Value
- Setting Emissivity via Emissivity Table
- Setting Emissivity via Secondary Device

**Note**

**Note:** The default factory setting for emissivity is set to 1.



### Known Emissivity Value Method

If you already know the emissivity value of the target material, enter that value in the **Emissivity** drop down and click **Apply Settings**.

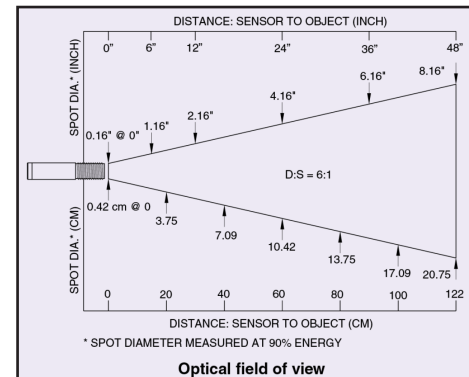
### Setting Emissivity with an Emissivity Table Method

For a list of reference materials and their corresponding emissivity values, view the Emissivity Table provided in the SP-001/SP-002 User's Manual available on the Omega website.

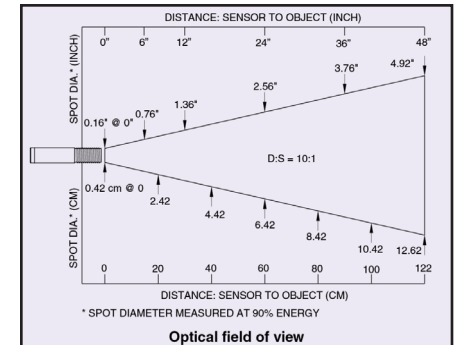
Enter the corresponding value in the **Emissivity** drop down and click **Apply Settings**.

### Setting Emissivity via Secondary Temperature Device Method

Ensure the SP-001/SP-002 is connected to SYNC and pointed at the material being measured at a distance that cover the entire field of view using either the 6:1 or 10:1 Optical Field of View Graphs, depending on the model being used:

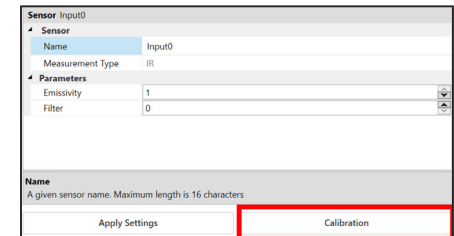


Optical Field of View Chart 6:1



Optical Field of View Chart 10:1

**Step 1:** Click Calibration.



**Step 2:** Use a secondary device to measure the temperature of the target material being measured by the SP-001/SP-002.

**Step 3:** Once the target temperature has been determined, input the target temperature into SYNC.

**Note**

**Note:** The emissivity value will update once the user clicks **Calibrate**.

**Step 4:** Click **Calibrate** to set the emissivity and exit the popup window. Click **Apply Settings** to finalize your changes.

## Adjusting Spike and Noise Suppression

The filter settings can be adjusted in SYNC to adjust for spikes and noise. The default factory setting is Low with a response time of 0.4 seconds according to the following table:

Filter Settings	Response Time (Seconds)	
Off	0	0.3
Low	1	0.4
Medium	2	0.5
High	3	1.5

To change the filter settings, click the **Filter** dropdown displayed below and refer to the table provided above. Click **Apply Settings** to finalize.