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## Discrete I/O Connector (PRO Version Only)

**Note:** Only PRO versions of the transmitter support Discrete I/O. Options for these appear in the **Output Tab** in Omega Sync. Please refer to the User's Manual for more details on how to configure I/O.

| | |
|---|---|
| Pin 1 | I/O 1 |
| Pin 2 | I/O 2 |
| Pin 3 | Ground 2 |
| Pin 4 | Ground 1 |

The XW-ED and XW-EDA-PRO versions support 2 Discrete Open Drain Digital Inputs / Outputs on the 4-pin M12 Male connector. To connect an input or output, a standard M12 4-pin cable can be used. Omega also offers an optional field installable M12 connector.

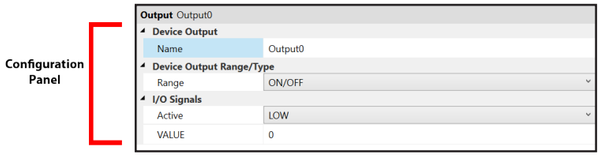


Figure 10

**Input**

To use a pin as an input make sure it is set to Active Low (default) in the **Output Configuration Tab** in Omega Sync. The Input can then be set as Active High or Low in the Input Tab.

Each pin has an internal pull-up but in order to save power, the internal pull-up is only active when unit takes a reading.

The state of both pins is always shown on the ZW-REC as the last input. Refer to the following table to decode the input state.

| Input 1 | Input 0 | Reading |
|---|---|---|
| Inactive | Inactive | 0 |
| Inactive | Active | 1 |
| Active | Inactive | 2 |
| Active | Active | 3 |

**Output**

Output options are set in the **Output Configuration Tab** of Omega Sync. Each output can be configured as either Active High or Active low.

To use a pin as an output first set up the Output Options and assign the output to an Alarm using Omega Sync. Please see the full User's Manual for an in depth description on how to assign the output to an alarm.

## What's Next?

You may now navigate to the ZW-REC webpage. Your XW Transmitter and the data it is reading will now appear on the ZW-REC webpage.

For additional information on the features of the XW Transmitter or the ZW-REC, refer to the following User's Manuals.

•XW Transmitter:
https://assets.omega.com/manuals/M5745.pdf
• ZW-REC:
https://assets.omega.com/manuals/M5546.pdf

For long-term data logging and OPC integration, consider using the Omega Gateway Enterprise software downloadable at:
https://www.omega.com/en-us/oeg

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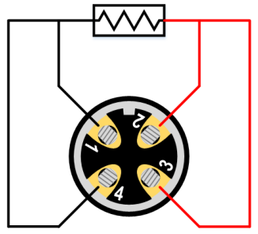
## XW-ED Input Connector

| | Frequency Pulse Width Duty Cycle Counter | Delay | Up/Down Counter | Digital Input | Process Input |
|---|---|---|---|---|---|
| **Pin 1** | NC | | | | |
| **Pin 2** | Enable | Clock B | Direction | Input 3 | Proc Input 1 |
| **Pin 3** | Clock | Clock A | Clock | Input 1 | Proc Input 2 |
| **Pin 4** | Reset | Reset | Reset | Input 2 | N/C |
| **Pin 5** | Shield | | | | |
| **Pin 6** | NC | | | | |
| **Pin 7** | GND | | | | |
| **Pin 8** | 3.3V Output | | | | |

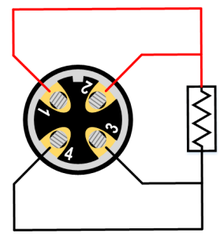
## XW-EDA Input Connector

| | Thermocouple | Voltage | Current |
|---|---|---|---|
| **Pin 1** | TC 2 Negative | Input 1 | Input 1 |
| **Pin 2** | TC 1 Positive | Input 2 | Input 2 |
| **Pin 3** | TC 1 Negative | Ground 2 | Ground 2 |
| **Pin 4** | TC 2 Positive | Ground 1 | Ground 1 |

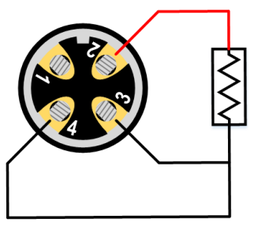
**RTD 4 Wire Option 1**



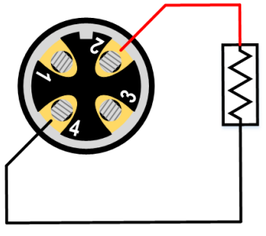
**RTD 4 Wire Option 2**



**RTD 3 Wire**



**RTD 2 Wire**



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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.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:
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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MQS5811/0720

QUICK START


# XW-ED, XW-ED-PRO, XW-EDA, XW-EDA-PRO

## XW Series Transmitter

ANATEL
Agência Nacional de Telecomunicações
03701-20-10266
Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

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**For Other Locations Visit omega.com/worldwide**

The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

START HERE

## Introduction

Use this Quick Start Guide to set up your XW Transmitter. For additional information on all setup options, refer to the User's Manual available on the Omega website.

| Transmitter Versions | Description |
|---|---|
| XW-ED | 8-Pin Digital Probes, Timer/Totalizer, Process |
| XW-ED-PRO | 8-Pin Digital Probes, Timer/Totalizer, Process, Discrete I/O |
| XW-EDA | TC, RTD, Process |
| XW-EDA-PRO | TC, RTD, Process, Discrete I/O |

## Materials

### Included with your XW Transmitter

- 2.4 GHz Antenna
- Mounting Kit
- CR2032 Coin Cell Battery (Pre-Installed)
- 2x C-Cell Batteries
- Micro USB Cable
- Quick Start Guide

### Additional Materials Needed

- Computer/Laptop with Windows OS
- Omega Sync software
  (Downloadable on the Omega website)
- ZW-REC
- Micro USB Cable

Note: **Note:** A second Micro USB cable is needed to connect the ZW-REC to your computer.

## Safety and Regulatory Compliance

**Safety:**
EN 61010-1 3rd Edition

**EMC:**
EN61326-1: 2013

**Radio:**
EN 301 489-17 V3.3.1
EN 300 328 V2.1.1:2016-11

**CE:**
The product herewith complies with the essential requirements and other relevant provisions of the Radio Equipment Directive 2014/53/EU, the EMC Directive 2014/30/EU, and the Low Voltage Directive 2014/35/EU, and carries the CE-Marking accordingly.

The following CE Mark CE ⓘ is affixed to this equipment.
The CE declaration is available at the website listed on the cover page of this quick start guide.

**FCC/IC:**
Part 15C, Class DTS International radiator
Contains TX FCC ID: TYOJN5168M5
Contains Industry Canada ID IC: 7438A-CYO5168M5

**FCC Radiation Exposure Statement:**
This portable equipment with its antenna complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance, follow the instructions below:
1. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. Avoid direct contact to the antenna or keep it to a minimum while using this equipment.

2

## Before You Start

To setup your XW Transmitter, ensure the Omega Sync software is downloaded, setup, and running before continuing.

## Connecting Your ZW-REC

Before continuing, make sure your ZW-REC is setup. Follow these directions to ensure your ZW-REC is properly connected.

Note: **Note:** For a complete guide on how to set up your ZW-REC, refer to the Quick Start Guide available on the Omega website.

**Step 1:** Plug in your ZW-REC to your computer with a **Micro USB** cable. Omega Sync will then auto-detect the ZW-REC and pull the following information from the ZW-REC to ensure proper communication between the receiver and the transmitter:

- IP Address
- Network Mask
- Gateway
- PAN ID

Note: **Note:** If the auto-detect feature is unsuccessful, click the ⟳ button on Omega Sync to search for connected devices.


Figure 1

## Setting Up Your XW Transmitter

**Step 1:** Connect the antenna to the XW Transmitter.

Note: **Note:** 8-pin digital probes, including Omega Smart Probes, can be plugged in at this point. Digital I/O or Analog connections should be made after the XW Transmitter is setup.

**Step 2:** Remove the pull-tab from the coin cell. See **Figure 2**.

**Step 3:** Install the batteries or plug in the optional **AC Adaptor**. See **Figure 2**.

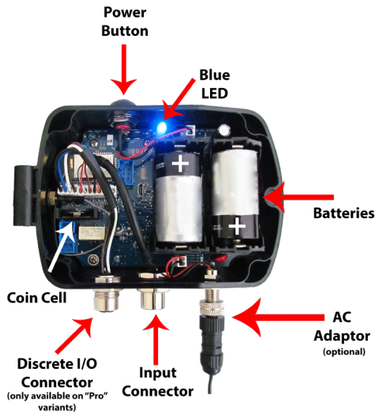


Figure 2

3

Note: **Note:** Take note of the battery orientation of the device as displayed in **Figure 2**.

The blue LED will illuminate immediately and begin flashing, indicating the device is on.

## Connecting to Omega Sync

**Step 1:** Ensure the XW Transmitter is powered on.

**Step 2:** Connect the XW Transmitter to your computer using a **Micro USB** cable.

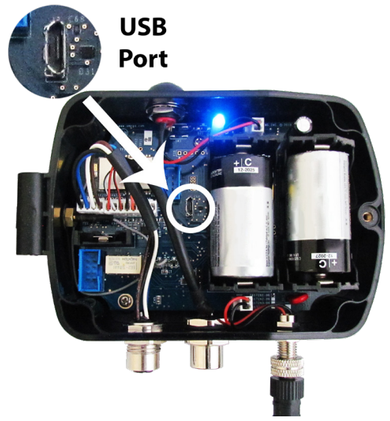


Figure 3

You should now have your ZW-REC and your XW Transmitter connected to the computer running Omega Sync. See **Figure 4**.

Note: **Note:** Omega Sync will auto detect your XW Transmitter. If the auto-detect feature is unsuccessful, click the ⟳ button on Omega Sync to search for connected devices.

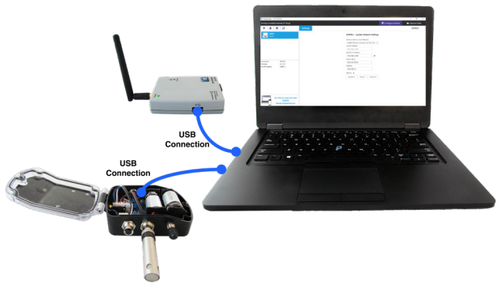


Figure 4

## Onboarding the XW Transmitter

**Step 1:** Once the XW Transmitter is auto-detected, Omega Sync will guide you through an Onboarding sequence.

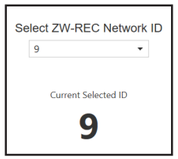


Figure 5

4

**Step 2:** Omega Sync will detect the Network ID of the connected ZW-REC. See **Figure 5**. Click **Next** to accept network ID.

Note: **Note:** The default Network ID for the ZW-REC is set to 0. You may manually enter the Network ID of a different ZW-REC if the receiver you wish to connect to is not available.

**Step 3:** Assign a unique Device ID and a name to your device. Click **Next** to proceed. See **Figure 6.**

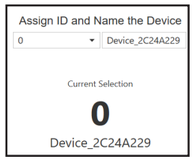


Figure 6

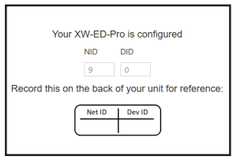


Figure 7

**Step 4:** Review your selections and click **Finish**. Record your network ID selection on the back of the transmitter.

If you are using a Digital or Smart Probe, setup is now complete. Please proceed to the next section to customize inputs.

## Customizing Inputs

Click **Inputs** from the **Configuration Tabs** to begin customizing your transmitter. See **Figure 8.**

Select the desired type from the **Input Type** drop-down menu. See **Figure 8.**

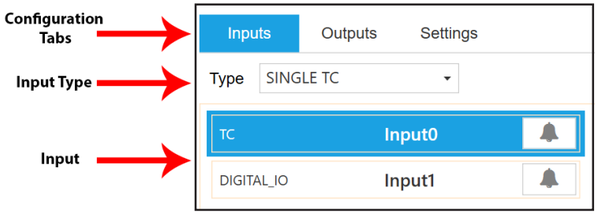


Figure 8

The desired **Input** (**Figure 8**) and the **Configuration Panel** (**Figure 9**) will appear below the drop down menu once it has been selected.

Note: **Note:** If your transmitter supports multiple inputs, click on the one you wish to configure.

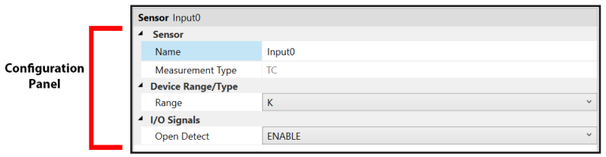


Figure 9

You may use the configuration panel to customize the available inputs on your XW Transmitter. For more details on the inputs available on your XW Transmitter, see the User's Manual available on the Omega website.

Refer to the wiring diagrams in **Section 6** to connect your input.