# XW-EDA / XW-EDA-PRO
## Long Range Wireless Transmitter

**ΩE OMEGA™**

- **Wireless communication up to 1000 m\* (3280') outdoor and 100 m\* (328') indoor**
- **Wide range of measurements supported (4-20 mA, 0-10 V, mV, TC, and RTD)**
- **Discrete I/O for local control and alarm**
- **Data Assurance and logging up to 4096 readings per measurement**
- **Direct USB configuration for easy set-up**
- **IP65 with long battery life (up to 5 years)**

The XW Series Transmitters provide a wireless interface to a range of analog process signals and precision analog temperature (thermocouple and RTD) sensors. The radio is an IEEE 802.15.4 compliant transmitter operating at 2.4 GHz designed to transmit up to 1000 m\* (3280') and 100 m\* (328') to a ZW-REC coordinator.

The ZW-REC connects directly to an Ethernet network to serve active web pages and display the data. You can monitor and record data over an Ethernet network or the internet. These wireless devices are designed for demanding industrial applications indoors and harsh outdoor environments. The electronics are protected in a rugged weatherproof polycarbonate NEMA 4 (IP65) rated housing. The XW-EDA Transmitters come in two variants:
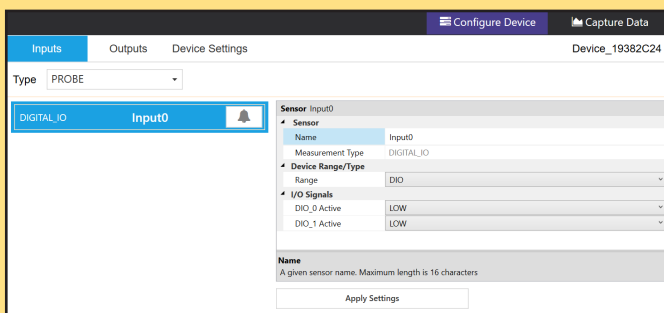
### XW-EDA
The XW-EDA model support thermocouples, RTD's, and precision process inputs.

### XW-EDA-PRO
The XW-EDA-PRO variants adds 2 Discrete Open Drain Digital Inputs / Outputs on a 4 Pin M12 Male connector. These can be used to trigger alarms, monitor a switch, or control other equipment.

### Easy Configuration with SYNC
SYNC by Omega allows you to configure device runtime parameters, view process values, export data, and allows you to efficiently set your XW Transmitter to operate under your preferred preferences.

# Specifications

## Wireless Communication

**Standard:** IEEE 802.15.4, DSSS
**Frequency:** 2.4 GHz (2400 to 2483.5 MHz), 16 channels
**Network Topology:** Star topology
**Transmit Power:** 9.5 dBm
**Receiver Sensitivity:** -96 dBm
**Range:** Up to 1000 m* (3280') outdoor and 100 m* (328') indoor
*without obstruction*

## Power

**Input Voltage:** 5 to 36 Vdc, 24 Vac ±10%
**Input Power:** 0.8 W maximum
**Alkaline Battery:** Two C-cell 1.5Vdc (included)
**Lifetime:** Up to 5 years with frequency of 1 reading per 10 minutes
**Lithium Back-Up** Battery:** CR2032 (included)
***RTC back-up only*
**Safety Qualified AC Power Adaptor (optional):**
  **Nominal Output:** 5 Vdc @ 0.6 A
  **Input:** 100 to 240 Vdc, 50/60 Hz
  **Operating Temperature:** 0 to 40°C (32 to 104°F)

## Environmental

**Operating Conditions:**
  **Base Unit:** -20 to 70°C (-4 to 158°F), 90% RH
      non-condensing
  **CR2032 Battery:** -20 to 60°C (-4 to 140°F),
      90% RH
  **Alkaline Battery:** -18 to 55°C (-0.4 to 131°F),
      90% RH non-condensing

## Packaging

**Enclosure Material:** Polycarbonate
**Enclosure Protection:** NEMA 4 (IP65)
**Enclosure Dimensions:** 135.9 L x 82 W x 39 mm D
      (5.35 x 3.23 x 1.56")

## General

**Agency Approvals:** ECCN, EAR99, EMC 2014/30/EU,
      LVD 2014/35/EU, RED 2014/53/EU
**Software:** Compatible with SYNC by Omega and OEG
**Compatibility:** Thermocouple, RTD, and Process

**Thermocouple**

| Type | Range | Accuracy |
|------|-------|----------|
| J | -210°C to 1200°C | 0.4°C |
| K | -160°C to 1372°C | 0.4°C |
| T | -190°C to 400°C | 0.4°C |
| E | -220°C to 1000°C | 0.4°C |
| N | -100 to 1300°C | 0.4°C |
| R | 40°C to 1788°C | 0.5°C |
| S | 100°C to 1768°C | 0.5°C |
| B | 640°C to 1820°C | 0.5°C |
| C | 0°C to 2320°C | 0.4°C |

**RTD**

| Type | Range | Accuracy |
|------|-------|----------|
| 385, 4 Wire | -200°C to 850°C | 0.3°C |
| 385, 3 Wire | -200°C to 850°C | 0.3°C |
| 385, 2 Wire | -200°C to 850°C | 0.6°C |
| 392, 4 Wire | -200°C to 660°C | 0.3°C |
| 392, 3 Wire | -200°C to 660°C | 0.3°C |
| 392, 2 Wire | -200°C to 660°C | 0.6°C |
| 3916, 4 Wire | -200°C to 660°C | 0.3°C |
| 3916, 3 Wire | -200°C to 660°C | 0.3°C |
| 3916, 2 Wire | -200°C to 660°C | 0.6°C |

**Process Inputs**

| Type | Range | Accuracy |
|------|-------|----------|
| Current | 0-24 mA | ±10 uA |
| Voltage | 0-10 V | ±5.0 mV |
| Voltage | 0-1 V | ±0.5 mV |
| Voltage | 0-100 mV | ±0.05 mV |

**XW Wireless End Device Transmitter**

| To Order | |
|----------|---|
| **Model No.** | **Description** |
| XW-EDA | Long range wireless end device for use with Dual TC, RTD, and Process |
| XW-EDA-PRO | Long range wireless end device and Edge Controller for use with Dual TC, RTD, and Process |

**XW-EDA and XW-EDA-PRO Accessories**

| Wireless Coordinator/Receiver and Optional External Power Supply | |
|---|---|
| ZW-REC | Wireless Receiver |
| UNIV-AC-100/240-5-M8 | Universal adaptor with M8 connector |
| **M12 TC Probes** | |
| M12 Series | J Type (Stainless Steel) / K Type (Inconel 600) 6" Thermocouple probes, single and dual element configuration, -50 to 85°C (-58 to 185°F) temp range, available in ⅛" or ¼" diameter |
| M12M Series | J Type (Stainless Steel) / K Type (Inconel 600) multi-length Thermocouple probes, single and dual element configuration, -50 to 90°C (-58 to 194°F) temp range, available in ¼" or ⅛" diameter |
| **M12 TC Cables and Connectors - Note: A cable is required for TC Probe connection to XW-EDA** | |
| M12CM Series | Straight and right-angled M12 Field mountable connector sensor end, compensated thermocouple pins, IEC or ANSI color coded cable insulation options, variety of connection methods |
| **M12 RTD Probes** | |
| PR-21A Series | 6" RTD Probes, -50 to 250°C (-58 to 482°F) sensing end, 85°C (185°F) max at connector, Class A, Pt100, or PT1000 element, available in ¼" or ⅛" probe diameter |
| PR-22 Series | Multi-Length RTD Probes, -30 to 350°C (-22 to 622°F) Class A probe temp range, -50 to 500°C (-58 to 932°F) Class B probe temp range, -50 to 90°C (-58 to 194°F) connector temp range, available in ¼" or ⅛" diameter |
| PR-23 Series | Multi-Length RTD Probes, -30 to 350°C (-22 to 622°F) Class A probe temp range, -50 to 500°C (-58 to 932°F) Class B temp range, -50 to 90°C (-58 to 194°F) connector temp range, ⅛" diameter |
| **M12 RTD Cables and Connectors - Note: A cable is required for RTD Probe connection to XW-EDA** | |
| M12C-PVC-4-S-M-R-F-2 | M12, 4 pin Straight Plug to Angled Socket cable - 2m |
| M12C-PVC-4-S-M-R-F-5 | M12, 4 pin Straight Plug to Angled Socket cable - 5m |
| M12-S-M-FM | M12, 4 pin Straight Plug Field mountable connector |
| **M12-4 Accessories -PRO Models Only** | |
| M12C-P24STPC-SFSR-FL-3 | M12, 4 pin Straight socket to stripped leads cable - 3m |
| M12C-P24STPC-SFSR-FL-5 | M12, 4 pin Straight socket to stripped leads cable - 5m |
| M12C-P24STPC-SFSR-FL-10 | M12, 4 pin Straight socket to stripped leads cable - 10m |
| M12-S-F-FM | M12, 4 pin Straight Socket Field Mountable connector |