XW-ED / XW-ED-PRO
Long Range Wireless Transmitter

ΩΞ OMEGA™

- **Wireless communication up to 1000 m* (3280') outdoor and 100 m* (328') indoor**
- **Wide range of measurement types (4-20 mA, mV, Frequency, Counters, Pulse-Width, and Smart Probes)**
- **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 digital probes, digital I/O, and analog process signals. 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-ED Transmitters come in two variants:

XW-ED
The XW-ED model accepts a wide variety of digital probes, function as a rate/timer/totalizer, or as an mA/mV meter.

XW-ED-PRO
The XW-ED-PRO variant 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
Optional AC Power Adaptor (UNIV-AC-100/240-5-M8):
    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

Environmental Rating: NEMA 4 (IP65)
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

Mechanical

Enclosure Material: Polycarbonate
Enclosure Dimensions: 135.9 L x 82 W x 39 mm D (5.35 x 3.23 x 1.56")

General

Agency Approvals: ECCN, 5A992,
    EMC 2014/30/EU,
    LVD 2014/35/EU,
    RED 2014/53/EU
Software: Compatible with SYNC and OEG
Compatible probes: zSeries*, Smart Probes
*when using zSeries probes with the XW-ED-PRO, the discrete I/O will be disabled.

Digital Inputs

Type	Range	Accuracy
Frequency	0.01Hz to 100 Hz	±0.5%
Frequency	100Hz to 1000Hz	±1 Hz averaged over 1s
Counter	0 to +8388608	±1 count max
Up/Down Counter	-8388608 to +8388608	±1 count max
Pulse Width (Tpw)	0.2ms min	±50uS ±1%
Pulse Delay (Tpp)	0.2ms min	±50uS ±1%
Duty Cycle	1% to 99%	±50uS ƒ

Process Inputs

Type	Range	Accuracy
Current	0 to 24 mA	±0.1 mA
Voltage	0 to 1V	±5.0 mV

XW Wireless End Device Transmitter

To Order	
Model No.	**Description**
XW-ED	Long range wireless end device for use with Digital Probes
XW-ED-PRO	Long range wireless end device and Edge Controller for use with Digital Probes

XW-ED and XW-ED-PRO Accessories

Wireless Coordinators/Receivers and Optional External Power Supply	
ZW-REC	Wireless Receiver
UNIV-AC-100/240-5-M8	Universal AC adaptor with M8 connector
Field Mountable Connectors	
M12.8-S-M-FM	M12-8 pin straight plug field mountable connector (for Rate/Process measurement)
M12-S-F-FM	M12-4 straight socket field mountable connector (for Digital I/O connector)
Digital Probes	
SP-001-0	Smart Probe IR, 6:1 FOV
SP-002-0	Smart Probe IR, 10:1 FOV
BT-SMP	Smart Probe, Barometric/Temp, M12
TH-SMP	Smart Probe, Temp/RH, M12
BTH-SMP	Smart Probe, Barometric/Temp/RH, M12
Pre-Calibrated Probes	
zTHP-P-CAL-3-HU	Replacement external industrial probe with temperature and humidity sensor, cable 3m with NIST traceable calibration certificate. Three (3) humidity points of 25%, 50%, and 75%, one temperature of 25°C
zTHP2-P-CAL-3-HU	Replacement external industrial probe with temperature and humidity sensor, short probe and M12 connection with NIST traceable calibration certificate. Three (3) humidity points of 25%, 50%, 75% one temperature of 25°C
zBTP-P-CAL-3-P	Replacement Eternal industrial probe with barometric pressure and temperature sensor, cable 3m with NIST traceable calibration certificate. Three (3) Barometric Pressure Points, temperature of 25°C
zBTHP-P-CAL-3-HU-P-T	Replacement external industrial probe with barometric pressure and temperature sensor, cable 3m with NIST traceable calibration certificate. Three (3) humidity, barometric, pressure, and temperature points.
M12-8 Extension Cables for Probes	
DM12CAB-8-1-RA	1m (3.3') cable dual M12-8 connector, right angle terminator
DM12CAB-8-3-RA	3m (9.8') cable dual M12-8 connector, right angle terminator
DM12CAB-8-5-RA	5m (16.4') cable dual M12-8 connector, right angle terminator
M12-4 Accessories for I/O Connector - PRO Models Only	
M12C-P24STPC-SFR-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