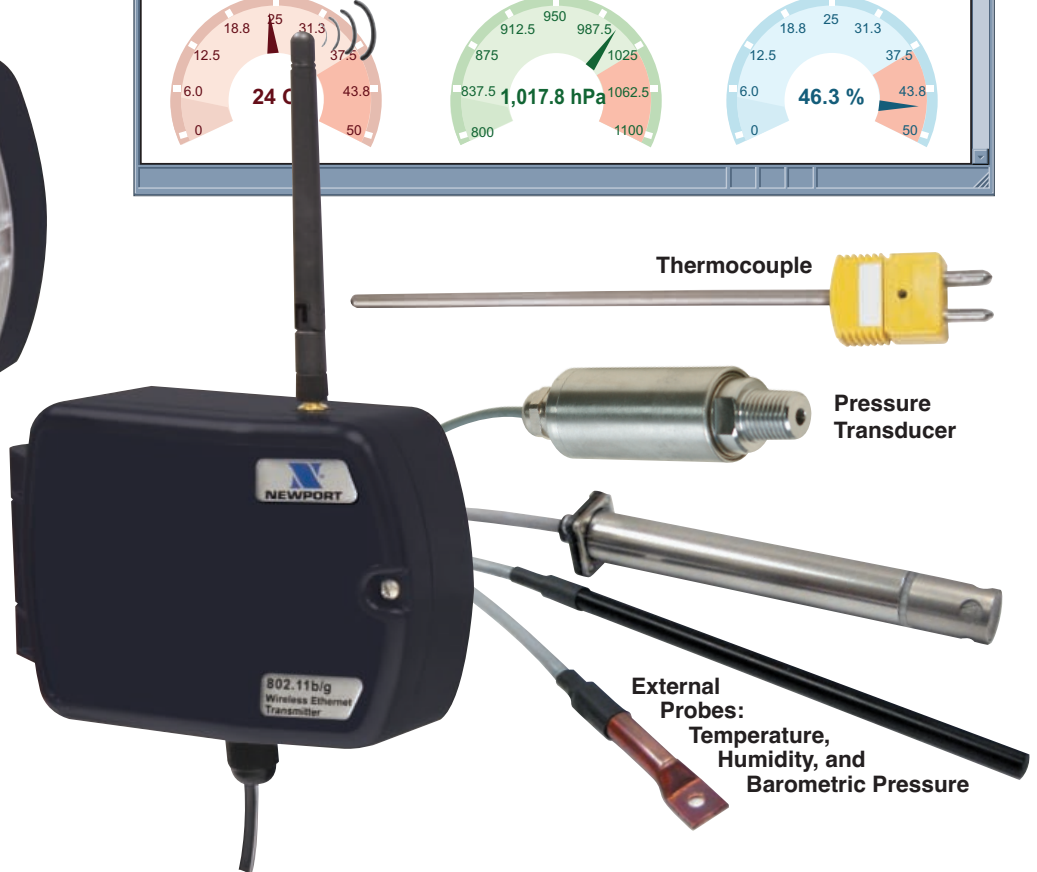
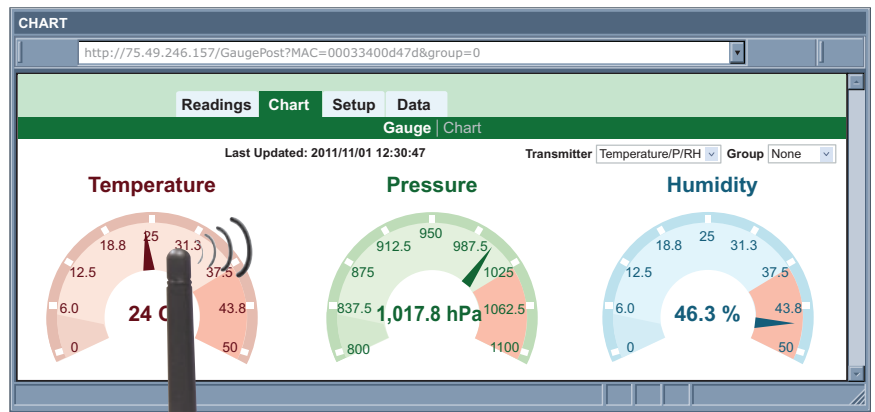




Wi-Fi wireless Sensor System
802.11b/g Wireless Ethernet



- Web Server
- Virtual Coordinator Data Logging Software
- Alarms by Email or Text Message
- Temperature
- Humidity
- Barometric Pressure
- Dual Thermocouple Input
- Analog Process Voltage & Current Inputs
- NEMA4/IP65 Enclosure

The new **NEWPORT® wSeries** transmitters communicate on a standard Wi-Fi network which is an ideal and economical solution for facilities with an existing Wi-Fi network as well as new installations.

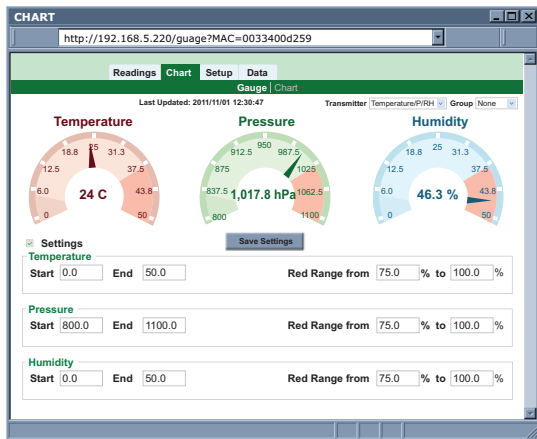
NEWPORT offers Wi-Fi transmitters for Analog Voltage and Current, Temperature from digital sensors and dual Thermocouples, Humidity, and Barometric Pressure.

Included with Wireless Sensor System is the Virtual Coordinator, a data logging software application running on a computer on the network. The "VC" collects and logs data from the transmitters and serves it to Web browsing clients.

You can view charts and graphs, monitor and record readings from virtually any type of transducer over an Ethernet network or the Internet from any computer, tablet, or smart phone with a Web browser.

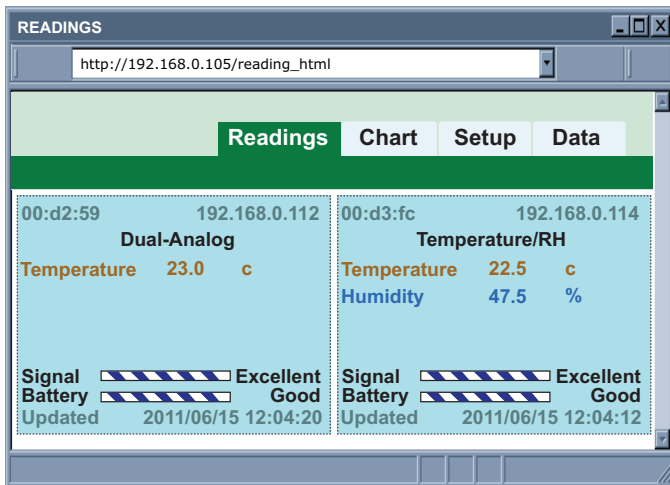
The Wi-Fi transmitters are powered by your choice of batteries or AC. The battery version comes with two ordinary alkaline C-CELL batteries that can last for two years depending on the frequency of readings. The AC version comes with a universal AC adapter that operates on any voltage worldwide (110 to 240 VAC) and also includes an alkaline AA backup battery.

The **wSeries** Wi-Fi transmitters are designed for demanding industrial applications and harsh outdoor environments. The electronics are protected in a rugged weatherproof, polycarbonate NEMA4/IP65 rated housing.



ALARM AND EMAIL

The **wSeries** wireless sensor system can trigger an alarm if variables go above or below a set point that you determine. You can even set alarms to be notified by email. Alarms can be sent to a single user or to a group distribution list, including text messages to cell phones.



CHARTS AND GRAPHS

The NEWPORT **wSeries** system serves Active Web Pages to display real time readings and charts of Analog Voltage and Current, Temperature, Humidity, and Barometric Pressure. You can also log data in standard data formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month or one year. Temperature and humidity can be charted across the full span (-40 to 125°C, and 0 to 100% RH) or within any narrow range such as (20 to 30°C). NEWPORT offers an OPC Server software that makes it easy to integrate the **wSeries** wireless sensor system with many popular Data Acquisition and Automation programs offered by NEWPORT, Wonderware, iConics, Intellution, Rockwell Automation, and National Instruments, among others.

SPECIFICATIONS

RELATIVE HUMIDITY

Accuracy/Range: wTHP, wTHP2, wBTHP

±2% for 10 to 90%;

±3% for 5 to 10% and 90 to 95%;

±4% for 0 to 5% and 95 to 100%

Hysteresis: ±1% RH

Non-linearity: ±3%

Repeatability: ±0.1%

Resolution: 0.1%

TEMPERATURE

Accuracy/Range*: wTHP, wTHP2

±0.5°C for 5 to 45°C (±0.9°F for 41 to 113°F);

up to ±1.5°C for -40 to 5°C and 45 to 124°C

(up to ±2.7°F for -40 to 41°F and 113 to 255°F)

Accuracy/Range*: wTP1, WTP2

±0.5°C for 10 to 85°C (±0.9°F for 50 to 185°F);

±1°C for -40 to 10°C and 85 to 125°C

(±1.8°F for -40 to 50°F and 185 to 257°F)

Accuracy/Range*: wBTHP

±0.5°C for 5 to 45°C (±0.9°F for 41 to 113°F);

up to ±1.5°C for -40 to 5°C and 45 to 85°C

(up to ±2.7°F for -40 to 41°F and 113 to 185°F)

Accuracy/Range*: wBTP

±0.8°C @ 25°C (±1.5°F @ 77°F)

±4°C for -40 to 85°C (±7.2°F for -40 to 185°F)

*Note: extended temp range is for Probe only, the Controller's operating temp is -10 to 55°C

Resolution: 0.1°C

BAROMETRIC PRESSURE

Accuracy/Range: wBTP, wBTHP

±2 mbar for 300 to 1100 mbar @ 0 to 50°C

±6 mbar for 300 to 1100 mbar @ -40 to 85°C

Resolution: 0.1 mbar

ANALOG VOLTAGE & CURRENT INPUT (wVI)

Voltage Input: Differential; bipolar; ±100 mV, ±1 V, ±10 V

Input Impedance: 38 K ohm for voltage

Current Input: Differential; bipolar; ±20 mA (5 Ohm load)

Accuracy: ±0.1% Full Range @ 25°C

Reading Rate: Periodic (1 sample/update) or continuous (3 samples/second)

A/D Conversion: Sigma-Delta

Resolution: 16 bits

Temperature Coefficient: ±50 ppm/°C

Common Mode Rejection: 105 dB

Normal Mode Rejection: 98 dB

Warm-Up to Rated Accuracy: 30 minutes

THERMOCOUPLE INPUT (wTC)

Temperature Range: refer to Thermocouple Chart

Temperature Accuracy: refer to Thermocouple Chart

Temperature Stability: 0.08°C/°C

Temperature Coefficient: ±25 ppm/°C

Thermocouple Cold End Tracking: 0.1°C/°C

Thermocouple Lead Resistance: 100 ohm max.

Thermocouple Type (ITS 90):

J, K, T, E, R, S, B, C, N, L (DIN J)

Warm-Up to Rated Accuracy: 30 minutes

Reading Rate: Periodic (1 sample/update) or continuous (3 samples/second)

High Power Wireless Transmitters

METER SPECIFICATIONS

Supported Protocols Transmitter:
TCP/IP, UDP, ARP, ICMP, DHCP, HTTP and FTP

Supported Protocols VC:
TCP/IP, UDP, HTTP, FTP, SMTP and Telnet

WIRELESS COMMUNICATION

Standard: IEEE 802.11 b/g

Frequency: 2.4 GHz (2402~2483.5 MHz)

Range: indoor line-of-site or more depending upon sensitivity, data rate, wireless access point and environmental considerations

Radio Power Output Level (Class 1):
91.4 mW EIRP (19.6 dBm EIRP)

Modulation:

802.11b Compatibility: DSSS (CCK-11, CCK-5.5, DQPSK-2, DBPSK-1);
802.11g: OFDM (default)

Channels: 1-13; Channel 14 for Japan use only and is not certified.

Channel Spacing (Bandwidth): 20 MHz

Transmission Rate (Over the Air):

1-11 Mbps for 802.11b /

6-54 Mbps for 802.11g

Receiver Sensitivity: -85 dBm, typ.

POWER

Power Input: 5 Vdc or 9 Vdc (wVI only)

Consumption:

0.7W max or 1.3W max (wVI only)

Safety Qualified

AC Power Adapter (included)

Nominal Output:

5 Vdc @ 0.6 A or

9 Vdc @ 0.5 A (wVI)

Input:

100 to 240 Vac,

50/60 Hz



Safety Qualified Universal AC Power Adapter, included

Back-up Alkaline Battery:

One AA 1.5 Vdc, supplied

POWER (wSeries-CCELL)

Alkaline Battery:

Two C-CELL 1.5 Vdc, supplied

Lifetime: Estimate of 2.4 years (wTc/wVI) and 4.3 years (wTxP/wBxP) with frequency of 1 reading per 1 minute (see Chart)

ENCLOSURE PACKAGING

Material: Polycarbonate Sabic Ilexan

Protection: NEMA4/IP65 rated housing

Dimensions:

96.5H x 146.3W x 50.8D mm

(3.8 x 5.76 x 2"), not including connectors or antenna

GENERAL

Approvals:

FCC Part 15C; CE EMC; 2004/108/EC, LVD 2006/95/EC, R&TTE 1999/5/EC

Operating Temperature:

-10 to 55°C (14 to 131°F), 90% RH

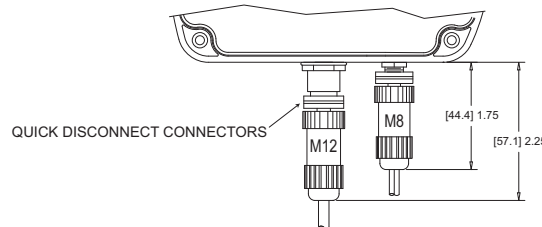
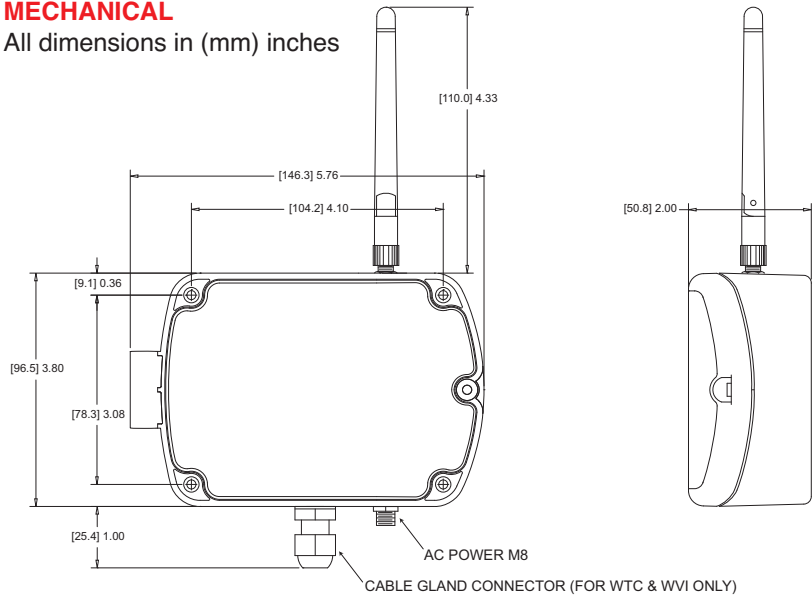
non-condensing

AC Power Adapter:

0 to 40°C (32 to 104°F)

MECHANICAL

All dimensions in (mm) inches



Estimated Alkaline Battery Lifetime		
Update Rate	C Cell units	AA back-up / AC units
Continuous* (wTc, wVI)	2 weeks	2 days
10 seconds* (default)	9.6 to 20.5 months	4 weeks
1 minute	2.4 to 7 years	3.6 to 9.6 months
2 minutes	4.3 to 7 years	6 months to 1.5 years

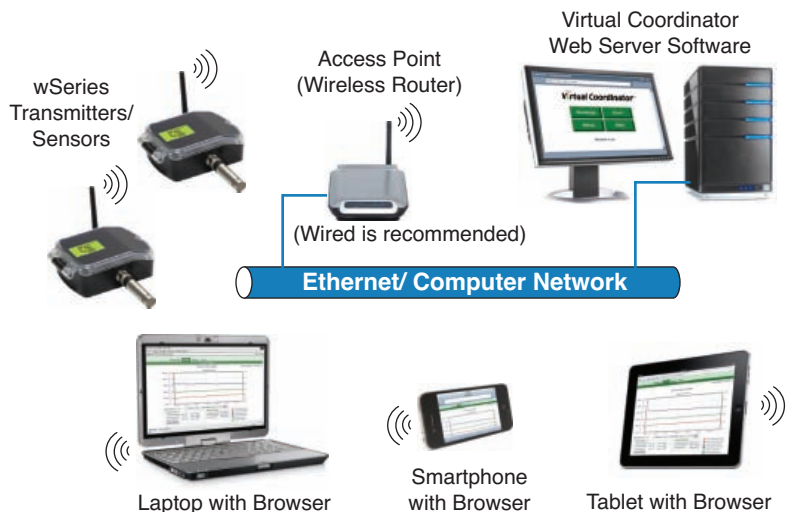
*Power Save mode



Battery life is dependent on environmental conditions and transmitter settings.

THERMOCOUPLE CHART

Input Type	
J	Iron - Constantan
K	CHROMEGA® - ALOMEGA®
T	Copper - Constantan
E	CHROMEGA® - Constantan
R	Pt / 13%Rh-Pt
S	Pt / 10%Rh-Pt
B	30%Rh-Pt / 6%Rh-Pt
C	5%Re-W / 26%Re-W
N	Nicrosil - Nisil
L	J DIN



To Order (Specify Model No.)

Model No.	Description
wTP1	Wireless transmitter: Temperature sensor with stick probe, AC powered
wTP2	Wireless transmitter: Temperature sensor with lug mount probe, AC powered
wTHP	Wireless transmitter: Temperature and humidity sensor, AC powered
wTHP2	Wireless transmitter: Temperature and humidity sensor, short probe, AC powered
wBTHP	Wireless transmitter: Barometric pressure, temp and humidity sensor, AC powered
wBTP	Wireless transmitter: Barometric pressure and temperature sensor, AC powered
wTC	Wireless transmitter: Dual thermocouple inputs, AC powered
wVI	Wireless transmitter: Analog input, AC powered
wTP1-CCELL	Wireless transmitter: Temperature sensor with stick probe, battery powered
wTP2-CCELL	Wireless transmitter: Temperature sensor with lug mount probe, battery powered
wTHP-CCELL	Wireless transmitter: Temperature and humidity sensor, battery powered
wTHP2-CCELL	Wireless transmitter: Temperature and humidity sensor, short probe, battery powered
wBTHP-CCELL	Wireless transmitter: Barometric pressure, temp and humidity sensor, battery powered
wBTP-CCELL	Wireless transmitter: Barometric pressure and temperature sensor, battery powered
wTC-CCELL	Wireless transmitter: Dual thermocouple inputs, battery powered
wVI-CCELL	Wireless transmitter: Analog input, battery powered
wTP1-LCD	Wireless Transmitter: Temperature sensor with stick probe, AC powered, LCD display
wTP2-LCD	Wireless Transmitter: Temperature sensor with lug mount probe, AC powered, LCD display
wTHP-LCD	Wireless Transmitter: Temperature and humidity sensor, AC powered, LCD display
wTHP2-LCD	Wireless Transmitter: Temperature and humidity sensor, short probe, AC powered, LCD display
wBTHP-LCD	Wireless Transmitter: Barometric pressure, temp and humidity sensor, AC powered, LCD display
wBTP-LCD	Wireless Transmitter: Barometric pressure and temperature sensor, AC powered, LCD display
wTC-LCD	Wireless Transmitter: Dual thermocouple inputs, AC powered, LCD display
wVI-LCD	Wireless Transmitter: Analog input, AC powered, LCD display
wTP1-LCD-CCELL	Wireless Transmitter: Temperature sensor with stick probe, battery powered, LCD display
wTP2-LCD-CCELL	Wireless Transmitter: Temperature sensor with lug mount probe, battery powered, LCD display
wTHP-LCD-CCELL	Wireless Transmitter: Temperature and humidity sensor, battery powered, LCD display
wTHP2-LCD-CCELL	Wireless Transmitter: Temperature and humidity sensor, short probe, battery powered, LCD display
wBTHP-LCD-CCELL	Wireless Transmitter: Barometric pressure, temp and humidity sensor, battery powered, LCD display
wBTP-LCD-CCELL	Wireless Transmitter: Barometric pressure and temperature sensor, battery powered, LCD display
wTC-LCD-CCELL	Wireless Transmitter: Dual thermocouple inputs, battery powered, LCD display
wVI-LCD-CCELL	Wireless Transmitter: Analog input, battery powered, LCD display
Replacement Probes	
zTP1-P	External stick probe with temperature sensor, 3 m (10') cable
zTP2-P	External lug mount probe with temperature sensor, 3 m (10') cable
zTHP-P	External industrial probe with temperature and humidity sensor, 3 m (10') cable
zTHP2	External short industrial probe with temperature and humidity sensor
wBTP-P	External industrial probe with barometric pressure, temperature sensor, 3 m (10') cable
wBTHP-P	External industrial probe with bar. pressure, temp. and humidity sensor, 3 m (10') cable
Calibration for New Units	
CAL-3-HU	NIST traceable calibration certificate. Three humidity points: 25%, 50%, 75%, one temperature point 25°C (for new units)
CAL-3-HU-P-T	NIST traceable calibration certificate. Three humidity, barometric pressure, and temperature points (for new units)
CAL-3-P	NIST traceable calibration certificate. Three barometric pressure points and one temperature 25°C (for new units)
CAL-3-T	NIST traceable calibration certificate. Three temperature points (for new units)
CT485B-CAL-KIT	Calibration kit, 33% and 75% RH standards

Ordering Example: a NIST traceable calibration certificate for your new unit: **CAL-3-T**; For a replacement external stick probe: **zTP1-P**;
For a calibrated replacement probe including calibration certificate: **zTP1-CAL-3-T**.

Note: 2 type K thermocouples with 1m of 24 AWG PFA insulated wire with stripped lead termination included with WTC models.