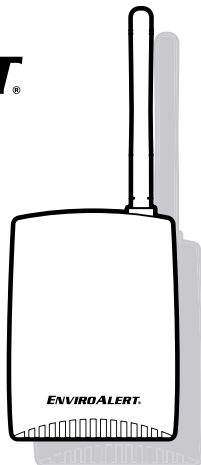# WINLAND ELECTRONICS, INC.

ENVIROALERT®

WIRELESS SENSOR PLACEMENT GUIDE

To ensure optimal performance of your EnviroAlert EA800-ip and each wireless sensor, please follow the sensor placement recommendations listed below.
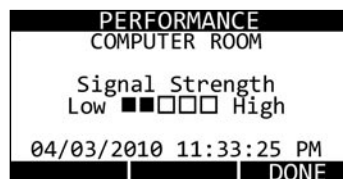
SENSOR PLACEMENT RECOMMENDATIONS:

1. Place the sensors as close as possible to the EA800-ip console.
    a. Actual range depends greatly on the construction of walls/floors and other environmental factors. The table below contains reasonable expectations of wireless range with all devices placed on the same level of the building:

Environment	RF Path Description	Typical Range (2 bars)
Outdoor - Flat Ground	Line of sight	45' to 100' indoor (results may vary)
Indoor - Open Factory	No walls	100' (30.5 m)
Indoor - Convenience Store	1 wall	75' (22.86 m)
Indoor - Home	2 walls	45' (13.72 m)

2. Whenever possible, place sensors so there is a direct signal path to the EA800-ip console.
    a. Do not place sensors directly between large objects and a wall.
    b. Do not place large metal objects between the sensors and the EA800-ip console.

3. Avoid placing the wireless sensors or the EA800-ip console directly on the floor.

4. Multilevel environment considerations:
    a. If the sensors and EA800-ip console are placed on the same level of the building:
        i. Place the sensors and the EA800-ip console approximately 4.5' – 6.5' (1.37 - 1.98 m) off the floor. In general, the sensors and EA800-ip console should be higher then the majority of objects but lower then the tops of doors that are between them.
        ii. When mounting the sensor, position the antenna perpendicular to the floor.

    b. If the sensors and EA800-ip console are placed on different levels of the building:
        i. The typical wireless range will be less then normal.
        ii. Devices on the lowest level should be placed at least 4.5' (1.37 m) off of the floor.
        iii. Do not mount sensors more then one level away from the EA800-ip console. For three levels of coverage, place the EA800-ip console in the middle level.

5. After all above criteria are met, check the wireless performance of each sensor (consult the EA800-ip manual if you are unsure of how to do this). Ensure that at least two bars are displayed on the screen for each sensor, as shown below:


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        PERFORMANCE
      COMPUTER  ROOM

      Signal Strength
   Low ■■□□□ High

04/03/2010 11:33:25 PM
                    DONE
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Due to the antenna algorithm and other environmental conditions, it is normal for the signal strength to vary as you are viewing it. If there are not at least two bars for the majority of the time, move the sensor to a new location (following the above recommendations) and try again. Placing sensors in locations that result in low signal strength will:
    a. Increase sensor alarm latency
    b. Increase likelihood of a wireless communication alarm
    c. Decrease battery life

To insure proper operation, test weekly.

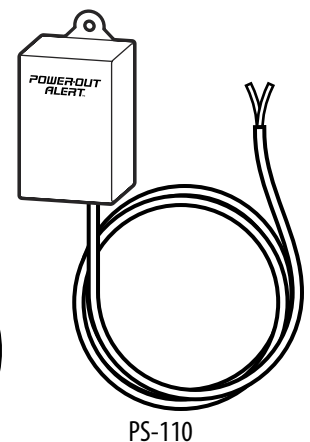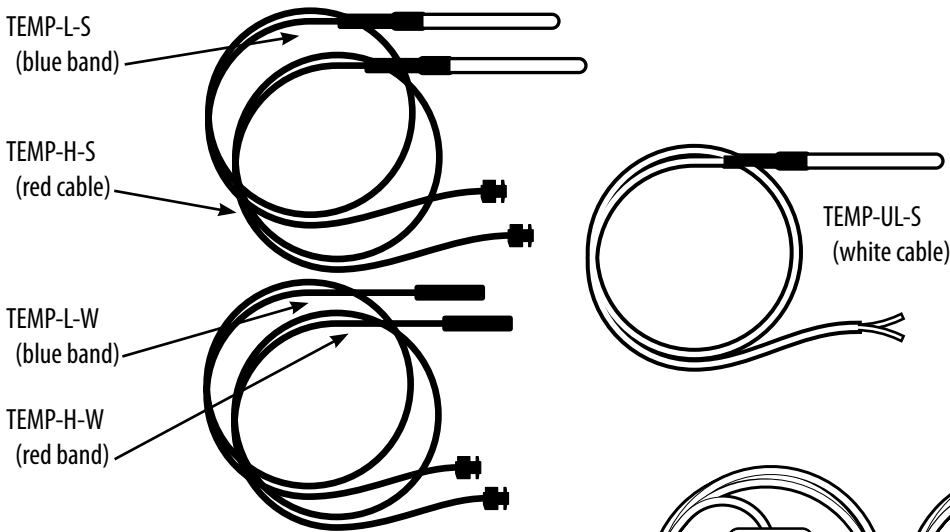| SPECIFICATIONS	EA-WTS (Wireless Temp Sensor)	EA-WHS (Wireless Humidity Sensor)	EA-WMFS (Wireless Multi-Function Sensor)
Monitoring Ability Sensing Range	32° to 122° F (0° to 50° C)	5% to 95% R.H.	Remote sensor dependent
Power Requirement	Battery Power: 2 - AA Alkaline Batteries (Line Power: 12 VDC @ 100mA)		
Battery Life	1 year (batteries not included)		
Remote Sensor Input	N/A		Requires remote sensor - see below
Operating Range	32° to 122° F (0° to 50° C) Non-condensing environment - indoor use only. Not for placement in coolers/freezers.		
Wireless Frequency	2.405 GHz - 2.480 GHz, 16 channels - See EA800 owners manual for more information.		
Transmission Distance	45' to 100' indoor (results may vary)		
Weight	0.25 lb (0.11 kg)		
Dimensions	3.67 x 2.65 x 1.17" (9.3 x 6.7 x 2.9 cm)		
Case Material	ABS		
Mounting	Surface mount		

EA-WMFS Accepted Probes

TEMP-H-S	Temperature Probe, High Temp Range, Stainless Steel (Red) 32° to 302° F (0° to 149° C)
TEMP-L-S	Temperature Probe, Low Temp Range, Stainless Steel (Blue) -58° to 158° F (-50° to 70° C)
TEMP-L-W	Temperature Probe, Low Temp Range, Waterproof (Blue) -58° to 158°F (-50° to 70° C)
TEMP-H-W	Temperature Probe, High Temp Range, Waterproof (Red) 32° to 221° F (0° to 105° C)
TEMP-UL-S	Temperature Probe, Ultra-Low Temp Range, Stainless Steel (White) -148° to 32° F (-100° to 0° C)
W-S-S	WaterBug Water Sensor, Surface, Supervised
W-UC-S	WaterBug Water Sensor, Under Carpet, Supervised
PS-110	Power-Out Alert
N.O./N.C. Devices	Non-proprietary closed-contact devices.
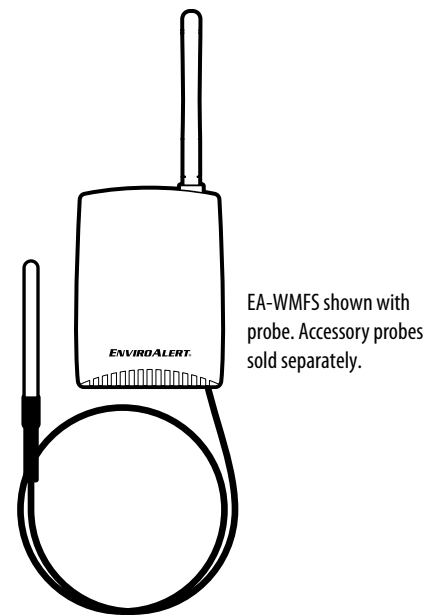
Extend the probe wiring using 22-18 AWG twisted pair.

EA-WMFS shown with probe. Accessory probes sold separately.

TEMP-L-S
(blue band)

TEMP-H-S
(red cable)

TEMP-L-W
(blue band)

TEMP-H-W
(red band)

TEMP-UL-S
(white cable)

PS-110

W-S-S

W-UC-S

Symbols on the Product or Manual Labeling

For product disposal, ensure the following:
• Do not dispose of this product as unsorted municipal waste.
• Collect this product separately.
• Use collection and return systems available to you.

WEEE Waste Electrical and Electronic Equipment
RoHS Restriction of Hazardous Substances

RoHS
WEEE
COMPLIANT