



## Wireless Sensor Hub & Powered Relay

### Instructions For Installing The WiSPR Sensor

The Wireless Sensor Hub & Powered Relay (WiSPR Sensor) is a wireless hub that is used exclusively to relay sensor data from internal, connected and WiSH sensors back to the Room Alert 32W and 26W IT environment monitoring hardware. The WiSPR Sensor communicates ONLY with Room Alert WiSH Sensors, the Room Alert 32W and the Room Alert 26W via a secure, private protocol on a ZigBee based 2.4 Ghz wireless connection. Data sent and retrieved is encrypted and will not interfere with other wireless devices in the environment.

The WiSPR Sensor is a small surface mountable device that includes mounting screws. It consists of one (1) built-in Digital Temperature Sensor, two (2) External Environment Sensor Channels (i.e. digital sensor ports) for connecting AVTECH digital sensors and one (1) Switch Sensor Contact Set for connecting non-voltage switch sensors. The WiSPR Sensor is plugged directly into a power source via AVTECH's 5V power adapter.



Additional environment sensors can be connected to the WiSPR using the two (2) digital sensor ports and set of switch sensor contacts on the unit. The digital sensor ports can accommodate an AVTECH Software Digital Temperature, Digital Temperature/Humidity, Digital Fluid or Digital Outdoor Temperature Sensors. The set of switch sensor contacts can be used to monitor any connected non-voltage switch sensor or dry contact device. See the respective sensor application note for more information. The WiSPR Sensor also acts as a relay and repeats information from configured WiSH sensors to the Room Alert 32W and/or 26W unit so that users can extend the length between WiSH sensors and the monitoring unit.

Initial configuration of the WiSPR Sensor is performed after the initial setup of the Room Alert 32W and/or 26W unit (as with the WiSH Sensor) and as directed in the appropriate *User's Guide & Reference Manual*. Once this is completed, activate the WiSPR Sensor by depressing the red button on the left side of the WiSPR Sensor until it clicks and locks. If the red button is recessed, the WiSPR Sensor is 'On'. If the red button is flush with the WiSPR Sensor casing, the WiSPR Sensor is 'Off'.

If multiple WiSPR Sensors are being configured during setup, it is recommended that you do so one at a time. This will allow you to record the serial number (internal chip serial number) of each WiSPR Sensor to the label on the back of each WiSPR Sensor. These internal serial numbers are displayed in the Room Alert 32W and/or 26W 'Status' screens as each WiSPR Sensor device is discovered. After recording the serial number on to the WiSPR Sensor label, the WiSPR Sensor can be moved to the desired location at a distance of up to approximately 250' away from the Room Alert 32W and/or 26W unit. If the monitoring unit stops receiving updates from the WiSPR Sensor, move the WiSPR Sensor closer to the Room Alert 32W and/or 26W or away from any device or structure that may be impeding signal transmission.

The WiSPR Sensor communicates with a Room Alert 32W and/or 26W unit by sending an update transmission every 60 seconds that contains current sensor status information for all internal and attached sensors as well as sensor status information from other configured WiSH sensors. The Room Alert unit will list the date and time of the last update received from a detected WiSPR Sensor on the 'Status' screen as well as the information received by other WiSH sensors it has relayed. If an extended period of time has occurred since the last update transmission, the WiSPR Sensor display will be removed from the 'Status' screen and an email alert will be sent if the WiSPR Sensor is no longer being detected by the Room Alert 32W and/or 26W unit for more than 30 minutes. This typically indicates that the WiSPR Sensor is too far away from the Room Alert 32W and/or 26W unit or turned off. If the environment around the WiSPR Sensor changes due to construction or new equipment have occurred and signal transmission is impeded, be sure to investigate those changes before relocating the sensor.

**NOTE:** Effective wireless distances will vary dramatically based on the physical environment and directional positioning of the Room Alert 32W and/or 26W antenna, WiSH Sensor antenna and WiSPR placement. If necessary, experiment for the best results and locate WiSH Sensors where signal strength is the strongest and WiSPR Sensors where longer distances between WiSH sensors and the main unit are desired.

#### **IMPORTANT SAFETY NOTICE**

The Screw Connectors On The Sensor ID Boxes Are Volt-Free Contacts Only. Do Not Connect These Terminals To Any Live Circuit. A Qualified Electrician Should Be Consulted To Test Any Wires You Connect To The Room Alert ID Box For The Presence Of Electrical Voltages And If Any Are Detected, They Must Not Be Wired To The ID Box. The ID Box May Become Dangerous If You Connect It To A Live Circuit. Never Connect Main Power To Any Of The Room Alert Sensors Unless Specifically Instructed To Do So Using The AVTECH Software 5V Power Adapter. If Required, An AVTECH Software 5V Power Adapter Will Be Included With That Sensor. DO NOT Use Switch Sensors In 'Explosive' Environments Unless Approved For Those Environments.