

Troubleshooting

Signal Indicator (Installation Validation™)

The Signal Indicator provides instant signal strength feedback for the installer. The indicator always shows the strength of the last signal received. In order to clear this signal, simply press the Smart Bypass button once; pressing the button again will exit the bypass mode.

Improving Reception

The Wireless RainSensor operates under Part 15 of the FCC rules. This means that it has to comply with certain standards and is only allowed to transmit up to a certain power level. In rating transmitters of any form, typically a Line-of-Sight (LOS) value is used in order to show the relative effectiveness of a transmitter and allow a transmitter and receiver to be compared to one another using a fair (apples to apples) method. The Wireless RainSensor operates up to 300' (91.4m) LOS - meaning in an open field, with no obstructions, the Sensor/Transmitter and Receiver pair will successfully communicate up to 300' (91.4m) apart.

However, in almost all installations, there are obstacles between the Sensor/Transmitter and Receiver such as walls, floors, etc. The obstacles will all affect the transmitted signal and typically reduce the radiated power that will be read by the receiver. Different objects such as walls and floors affect the transmitted signal differently depending on the material composition, geometry, and thickness. Typically, most residential and light commercial construction materials do not reduce the effective transmitted signal enough to pose problems under normal installation conditions. However there are some installations with very thick, dense walls, or that involve large amounts of radio frequency interference (electrical switching rooms etc.) where the effective range of the Wireless RainSensor may be greatly reduced.

Some helpful tips on mounting the Sensor/Transmitter and Receiver for the best Radio Frequency (RF) performance:

- Always try to keep the antennas straight and fully extended (straight up on the Receiver and straight down on the Sensor/Transmitter).
- Try to maintain a parallel orientation of one antenna to the other. Avoid installing either unit where the antennas are in close proximity to large metal objects.
- Attempt to mount the units as close together as possible to reduce the potential for interference or signal reduction. If the signal strength is not good in one location, try another location - even as little as a few feet of movement can change from a weak spot to a strong spot. Interior locations where cell phones or cordless phones have trouble with reception may indicate areas with poor RF signal transmission.
- If possible avoid an installation where the Sensor/Transmitter is located exactly above the Receiver. Move the Sensor/Transmitter slightly offset to one side. When the RF signal is passing through walls, keep in mind that it has less thickness to penetrate when it passes straight through the wall. In other words, passing diagonally through a wall increases its effective thickness. Because every installation is different, the ONLY guaranteed method to verify an installation is to physically TRY IT!

Specifications:

Model Numbers: RS1000 - Wireless RainSensor
RFS1000 - Wireless RainSensor + Freeze

Receiver Mounting Options: Stainless steel screws and/or double-sided foam tape.

Sensor/Transmitter Mounting Options: Quick-Clip™ rain gutter bracket, roof eaves/fascia mounting bracket with stainless steel screws and conduit adapter for conduit mount.

Sensor/Transmitter Range: Up to 300' (91.4m) LOS (line-of-sight).

Sensor Type: Industry-standard hygroscopic disc stack with adjustable rainfall sensitivity.

Transmitter Battery Type: (2) 3V cells - CR2032 (or equivalent).

Average Battery Life: Five years

Operating Temperature Range: -20°F to 120°F (-29°C to 49°C)

Receiver Power Input: 22–28 VAC/VDC, 100mA (from existing controller/timer with Class 2, UL-approved transformer).

Relay Contacts Output: Normally Open (NO) and Normally Closed (NC) 3A at 24 VAC.

Receiver Controls: Sensor Status Indicator, Signal Indicator, Smart Bypass Switch, Power Indicator with low battery/poor communication warning.

Electromagnetic Compatibility

Domestic: This device complies with FCC rules Part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference that may be received, including interference that may cause undesirable operation.

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a FCC Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna, relocate the remote control receiver with respect to the radio/TV antenna or plug the irrigation controller into a different outlet so that the irrigation controller and radio/TV are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

International: This is a CISPR 22 Class B product.

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951-785-3623 or 800-634-8873**