



# RainSensor User's Guide

## Introduction

Congratulations on your purchase of the Pope RainSensor. The RainSensor connects to the automatic controller or automatic tap timer connected to your automated watering system, to suspend watering in the event of rain. Designed for ease of installation, your sensor controlled irrigation system will be up and running in minutes.

Before attempting to install the RainSensor, please read through these instructions in their entirety. The RainSensor is designed to work with various makes and models of automatic controllers and automatic tap timers. You should also refer to the instructions provided with your controller or tap timer for specific information regarding the connection and use of a rain switch or sensor.

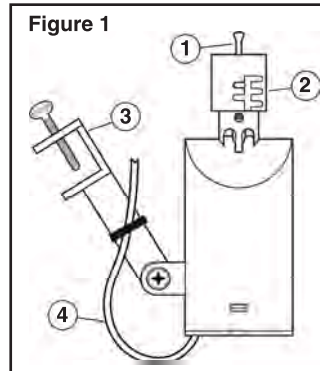
**Important: Please note the following information regarding the installation and use of the RainSensor with Automatic Controllers.**

- The RainSensor is designed to operate with 24V AC power only. Connecting the RainSensor to 120/240V AC power may result in severe equipment damage.
- Installation methods must comply with all applicable building codes. If you are unsure about proper wiring practices, have a qualified contractor perform the installation for you.

## RainSensor Components

1. Spindle – Press down to manually test the RainSensor operation.
2. Rainfall Adjustment Cap – Enables the RainSensor to be adjusted for detection of rainfall at various levels.
3. Universal Mounting Bracket with Quick-Clip - Allows simple installation on gutter, side of roof etc. Enables RainSensor to be mounted on an angled surface then easily adjusted to the vertical position.
4. 7 meters of outdoor-rated control wire.

**Important:** The RainSensor should never be submerged in water or installed inside a gutter or where flooding may occur.

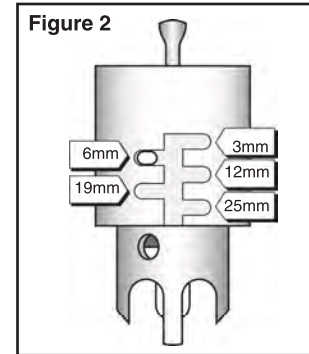


## Installation Instructions

### Rainfall Adjustment

Prior to installing the RainSensor, check the current setting on the Rainfall Adjustment Cap. The RainSensor can be adjusted to detect average rainfall amounts of 3mm, 6mm, 12mm, 19mm or 25mm before suspending watering. To adjust carefully rotate the Rainfall Adjustment Cap so the pins are positioned in the desired slots as shown in **Figure 2**. Be sure to align the slot and pin properly as this adjustment does not require excessive force.

**Note:** Avoid using the 3mm setting in high humidity conditions.

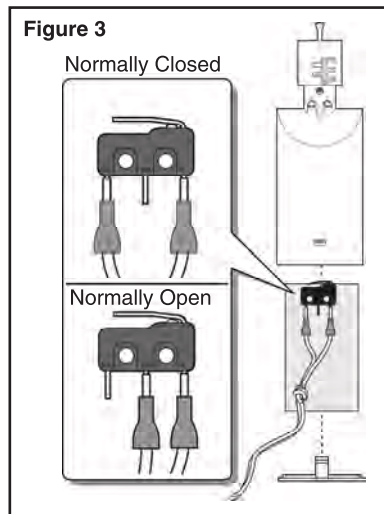


## Changing the RainSensor Configuration

The RainSensor is designed to work normally Open or Normally Closed sensor circuits. You will need to first verify which type of circuit your automatic controller or tap timer requires by referring to the user guide. The RainSensor is set for Normally Closed operation. If Normally Open operation is required i.e. for Pope ECx™ Controller and Digi Flow Tap Timer you will need to configure the RainSensor as follows.

1. **Refer to Figure 3.** Remove the bottom cover by gently pressing in the lower opposing tabs using a small flat-head screwdriver. Carefully slide the switch board assembly out.
2. Carefully pull the wire connector from the left tab of the switch and attach it to the centre tab. Leave the right wire connected.
3. Reassemble the RainSensor making sure the switch board is properly inserted and the strain-relief knot in the control wire is inside the housing.

Figure 3

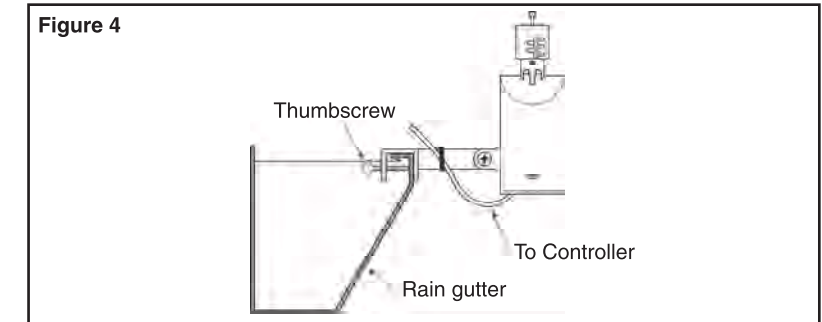


## Mounting the Rain Sensor

Select a mounting site for the RainSensor as close to the controller or tap timer as possible. The location should be away from sprinkler spray and roof run-off, exposed to unobstructed rainfall and have similar sun exposure as the landscape being watered. If the 7m of control wire supplied is not long enough, it can be extended up to 30m using 18 AWG outdoor rated wire.

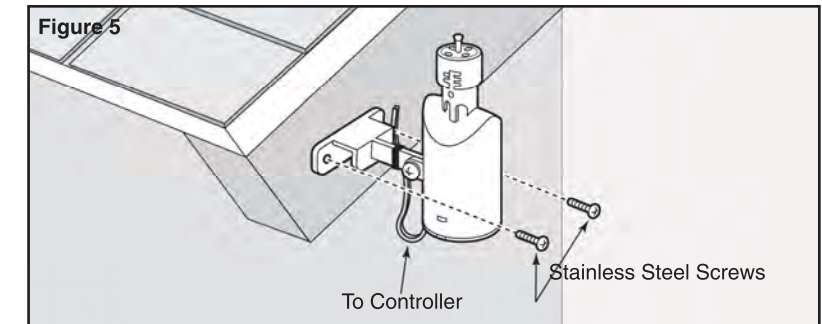
A gutter is an ideal location for the RainSensor. Simply position the bracket with the thumbscrew under the gutter lip and tighten to secure (do not over tighten). **See Figure 4 below.**

Figure 4



The RainSensor can also be mounted on any suitable solid structure such as the side of the roof, a shed or fence using the two stainless steel screws supplied. **See figure 5 below.**

Figure 5



Once securely fastened, adjust the RainSensor on the mounting bracket as needed to align the RainSensor housing vertically.

## Routing the RainSensor Control Wire

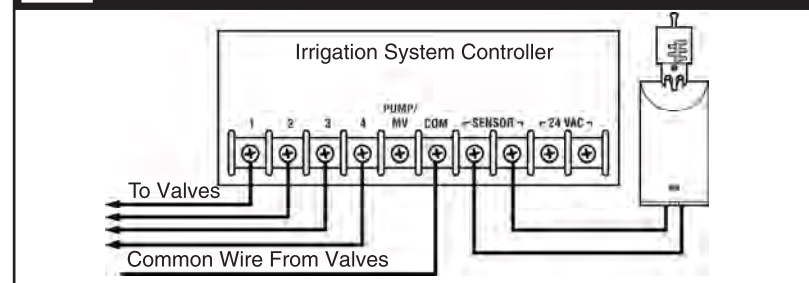
Route the RainSensor control wire back to the controller or tap timer. Avoid running the wire over sharp edges where cutting or abrasion of the wire insulation may occur. For best results, hide the wire where possible by tucking it into brickwork and under eaves. If running the wire through your garden use conduit to bury the wire underground.

## Connecting the RainSensor to your Automatic Controller

**Caution: Do not attach the RainSensor control wire directly to 120/240V AC power as this may result in irreversible damage.** Disconnect power to the controller.

Follow the applicable instructions provided in steps A or B or C.

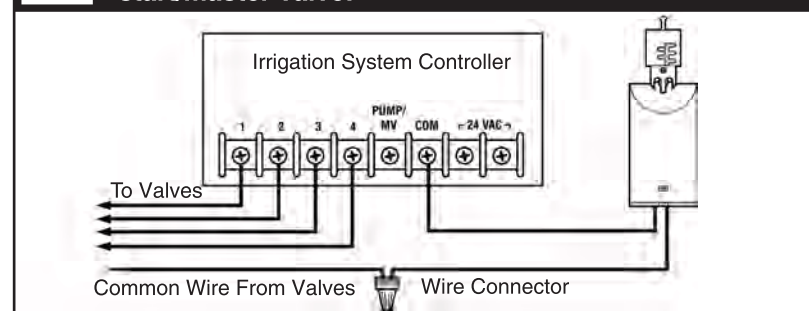
### A Controller with sensor terminals with or without pump start/master valve:



Find the controller sensor terminals (generally marked “SENSOR”, “SEN” or “S”) and attach the RainSensor control wires directly to these terminals in any order.

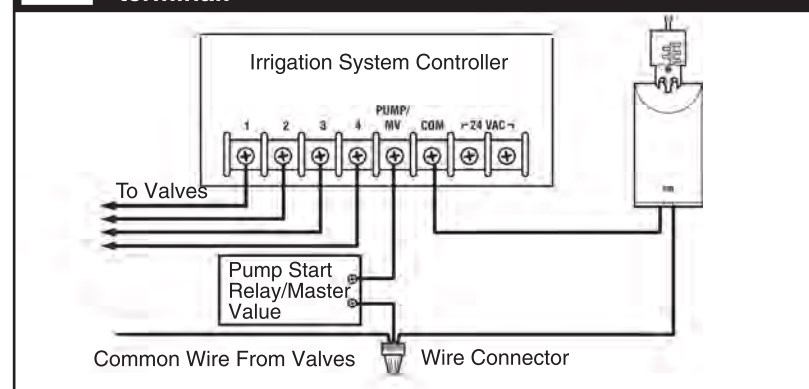
**Note:** There may be a jumper tab or wire between the sensor terminals that must be removed and/or a sensor control bypass switch that must be activated.

### B Controller with no sensor terminals and no pump start/master valve:



Remove the valve common wire(s) from the valve common terminal and join to either RainSensor control wire using the supplied wire connector. Attach the remaining RainSensor control wire to the valve common terminal.

### C Controller with pump start/master valve and no sensor terminal:

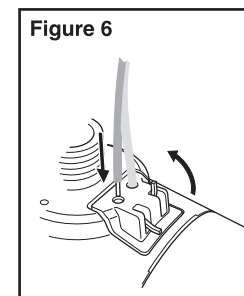


Disconnect all common wires from the common terminal(s) and join them to either RainSensor control wire using the wire connector supplied. Be sure to include the common wire from the pump start relay or master valve in this connection. Connect the remaining RainSensor control wire to the common valve terminal.

### Connecting the RainSensor to your Automatic Tap Timer

The Pope RainSensor is designed for use with a 2 port rain sensor compatible tap timer such as the Pope Digi Flow Automatic Tap Timer. To connect, insert the RainSensor control wires into the two ports on the underside of the tap timer. When the wires are inserted, flick the switches up to lock the wires firmly in place. **See Figure 6.**

**Note:** The wires can be placed in either port.



The RainSensor can also be used with other brands of tap timers that use a plug socket to connect the RainSensor. You will need to source a compatible 2 wire plug or jack available from electronics stores. Connect the RainSensor control wires to the plug or jack as per instructions and then connect plug into tap timer. You should refer to the tap timer manual for more details.

### Operation

#### Testing the Installation

To test the RainSensor operation, turn on a watering program in your automatic controller or automatic tap timer which is visible from the RainSensor location.

**Note:** The manual program of some controllers and tap timers bypasses the RainSensor, do not use this function to test the RainSensor.

With the system on and water flowing, manually activate the RainSensor by pressing and holding the spindle at the top of the unit. Watering should cut off within a short time. If watering does not shut off re-check the wiring connections at the automatic controller or tap timer. If the automatic controller has a sensor control or bypass switch, make sure the switch is set to the position that enables the sensor circuit to be active.

#### Normal Operation

When the RainSensor activates due to sufficient rainfall, the watering system will remain inactive until the hygroscopic discs inside the sensor have dried out. This dry out rate will be about the same as your soils drying rate and allow for watering activation once the soil is dry enough to be watered again. After the RainSensor “dries out” the automatic controller or tap timer will resume its normal watering schedule.

### Bypassing the RainSensor

The RainSensor can be temporarily bypassed using one of the following methods

- Use the automatic controller’s sensor bypass switch (if equipped).
- Install an optional bypass switch to your automatic controller.
- Temporarily disconnect the RainSensor from the automatic controller or tap timer.
- Using manual override on the auto controller or tap timer may override the RainSensor on certain models

**Note:** Always disconnect power to the automatic controller before performing any wiring tasks.

### Specifications

**Mounting:** Quick-Clip bracket or screws (2 provided)

**Control Wire:** 7m outdoor-rated, 2 wire cable, UL approved

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

**Rating:** 3 amp, 24V AC, NO/NC

**Operating Temperature Range:** -10°C to 60°C

**Hardware:** Stainless Steel

**Housing:** UV-resistant engineered polymer

### GUARANTEE

**You must keep your receipt as proof of purchase for return of the product under the terms of this guarantee.**

Your Pope product is guaranteed to be free from defects in materials or workmanship for a period of 12 months from the date of purchase provided the product has been used in accordance with the manufacturer’s recommendations.

If the product becomes defective within the warranty period we guarantee to either replace or repair the product at our option, provided that:

- The product is returned to the place of purchase with evidence of purchase i.e. the receipt
- The product is used for general household use only
- Repairs, alterations or modifications have not been attempted to the product
- The failure is not as a result of normal wear and tear

Failures due to obvious abuse or due to usage not in accordance with instructions and recommendations contained in this manual are not covered by the product guarantee.

In the interest of better quality we are constantly updating our product. Consequently the picture on the packaging and in this Instruction sheet may differ from the model enclosed.



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Made in China to Pope's Specifications