



**“Weather Watcher” Four Station Mist Propagation Controller
Installation, Operation & Maintenance Manual**

DESCRIPTION:

The "Weather Watcher" sensor measures changes in light intensity and air temperature, and automatically adjusts the mist cycle rate accordingly. This controller provides a sequential cycle of 4 outputs to standard 24 VAC solenoid valves. Stations can be left unconnected if not required. Misting duration can be set individually for each station.

INSTALLATION:

1. Remove the electronics panel by squarely prising the green terminal plug to the left with a flat blade screwdriver. Remove the 4 front panel mounting screws. Remove the heavy green lightning protection earth wire from the back of the circuit board. This allows the electronics panel to be completely removed from the enclosure.
2. Secure the box mounting tags with the screws provided and secure the unit to wall, in a weather- and dust-protected location such as a shed, office or meter box.
3. Wire each solenoid valve back to the controller using a separate pair for each valve or a single common wire. Twist wires well so that loose wire strands will not cause shorts.

4. Mount the sensor inside the propagation area in a position where it will not be knocked and not get wet by the mist nozzles. The sensor should only ever receive diffused light. If at any time it is subject to direct sunlight a flat shelf should be secured above it to act as a diffuser. Painted glass is ideal for this purpose.
5. Run the figure-8 wire back to the unit and connect to "Sensor" positions on the terminal board, the wire with the red trace goes to the terminal labelled 'red'. The sensor will need to be calibrated before using the system. Wire joins should be avoided if possible. If joins are necessary it is very important that the cable joins are completely sealed from the atmosphere with Sealastic or equivalent.
6. Mount the transformer in a dry location near to a power outlet. Connect the output of the transformer to the top two terminal on the controller terminal strip marked 24VAC.

SENSOR CALIBRATION:

1. Set all switches to up position (Auto) and duration knobs to minimum, then turn on power. The sensor must be in its final location. Calibration can only be done when the unit is not outputting. If an output starts during the procedure, stop and continue when cycle is finished. A second person to call out the meter reading may be required. The calibration should be carried out on a very hot sunny day. If done in wintertime it should be done again in summer. No further adjustment of this is required from then on.
2. Slacken off grub screw on the sensor and push up the centre white rod about 30mm.
3. Set the "W.W." knob until meter reads full scale deflection (50uA).
4. Keeping hands away from white rod, lightly pull it down into grey body until meter reading just starts to drop. (See also Note below.)
5. Lightly tighten the grub screw to hold in this position.
6. The "W.W." knob, to the left of the meter, is now used to give your desired output rate: When meter reads full scale deflection (50uA) cycle rate is maximum (1 cycle about every 8 to 9 minutes). When meter reads half scale (25uA) cycle rate is doubled to 18 minutes, and so on. When meter reads zero, which it should at night, the cycle stops.

OPERATION:

1. Set individual knobs to your requirements. (See 'Panel Description' below.)
2. Observe misting for some hours and readjust knobs if necessary till misting is correct. We suggest making movements of the knob small and then observe the change for a few days as it easy to over compensate.
3. The 'cycle' is sequential, i.e. station 1 mists followed by 2, 3 and 4. The interval between mists is then determined by "W.W." knob setting plus light and heat conditions.
4. Mist only one area at a time or overload may occur, also water pressure may fall too low.

PANEL DESCRIPTION:

1. AREA CONTROLS (4 INDIVIDUAL AREAS):

- a) - Duration knob: for setting 'on' time for each area - 2 seconds to 45 seconds approx.
- b) - Override switch, 3 positions:
 - Up = 'auto' or normal, i.e. sensor controlled.
 - Centre= 'off', stops misting in this area.
 - Down = 'on', the override will mist this area until switched back to normal.
- c) – Blue indicator light, shows when this area is misting.

2. FUNCTION SWITCH (ALL AREAS/CYCLE): 3 POSITIONS:

- a) - Up = 'auto', (sensor controlled), normal position.
- b) - Centre= 'off' - disables misting when required, Equivalent to turning power off.
- c) - Down = 'repeat misting' or continuous repetition of programmed cycle.

3. OVERLOAD (ELECTRONIC FUSE):

- a) – Red 'Overload' indicator light, shows when short circuit occurs. Correct the fault then power the unit off and back on again or momentarily take the function switch to 'Off' then back to 'Auto'. All misting stops during an overload condition.

4. "W.W." SENSOR CONTROLS:

- a) - Meter, misting rate indicator.
- b) - "W.W." knob, for normal adjusting of ting rate.

5. TEST/AUTO SWITCH:

- a) – Up = 'Auto' normal position for misting.
- b) – Down = 'TEST' Sensor override simulates a hot bright sunny day.

SPECIFICATIONS:

Input voltage: 24VAC, 50Hz

Power consumption: 2 watts in standby and 10 watts with one station on

Dimensions: 18 x 27 x 12 cm

Materials: ABS/polycarbonate blend box, clear polycarbonate lid, aluminium panel
polycarbonate decal.

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