

AQUASMART 5 AV

Instruction Manual




DESCRIPTION

The AQUASMART 5 is a premium automatic solar controller with temperature adjustment, manual, standby and cooling mode features.

This unit is fitted with optional current detection on the PUMP power socket; so that the solar valve will only operate if the current load on the PUMP socket is within an operating range once it has been set.

INSTALLATION INSTRUCTIONS

 THIS APPLIANCE IS NOT INTENDED FOR USE BY YOUNG CHILDREN OR INFIRM PERSONS WITHOUT SUPERVISION. PLEASE ENSURE THAT YOUNG CHILDREN ARE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.

CONTROLLER MOUNTING

Find a suitable location to mount the control box. Ideally, as with all pool equipment, it should be installed out of direct weather and no closer than 3 metres from the water's edge and a minimum 600mm above ground. Fix the mounting bracket to a solid structure and slide the controller on, keeping in mind that the power cable is 1.8m long and should be plugged directly into a general power outlet, not into an extension lead.

PUMP CONNECTION

The 240V socket labelled PUMP is used for pump on detection or constant AUX power.

The maximum output load for the socket is 9.98 AMPS at 2395W.

VALVE CONNECTION

A valve can be used for selecting or bypassing the solar collector instead of using a solar pump. Connect the valve to the green socket marked VALVE. If wiring your own supplied valve then wire as follows [Red, Black then White] red and white are for direction control and black is the common. Ensure the switch on the valve actuator is in the ON position. Refer the valve instructions for mounting requirements, cam adjustments etc.

POOL SENSOR

The pool sensor must be fitted into the heating circuit, as close to the pool as practical, preferably in a position out of direct sunlight. It is recommended that a 14.5mm hole be drilled in

the side of the PVC pipe (not the top of the pipe where water will collect). This can be carried out using a Dontek PD01 grinding drill or a small pilot hole can be drilled with a 14.0mm drill-bit used spinning in a counter clockwise direction to minimize the chance of shattering pipe. Insert the grommet into the pipe and gently push in the sensor barb. Ideally ~30cm of the cable from the sensor should be tied to the shaded side of the pipe to prevent extreme ambient conditions leeching into the sensor via the copper in the cable. The blue sensor plug is to be fitted to the plug socket marked POOL.

ROOF SENSOR

The roof sensor must be fitted into a small piece of rubber collector material away from the main collector but on the same aspect, preferably no more than 50cm from the roof gutter (for ease of sensor replacement). If required, the roof sensor can be on a different roof as the solar collector as long as the alignment to the sun is similar to the solar collector. For encapsulated collector panels, use the manufacturer's instructions for roof sensor placement. The red sensor plug is to be fitted to the plug socket marked ROOF.

SENSOR NOTES: All excess cable must be removed; coils of cable are not permitted under any circumstances and **must not** be tied to 240V wiring. If the cable is to be extended with non-genuine cable a size of 14/020 should be used. **Any cable joins should be soldered.** Heat shrink is to be used over soldered joints to eliminate moisture ingress, and the cable end is to be refitted to the plug sockets. Once cables have been correctly fitted the unit can be then turned on.

OPERATING INSTRUCTIONS

LCD SCREEN

The LCD screen displays the pool and roof temperatures, solar temperature limit, pump on status, on/off/locked-out status and the time of day & date [clock].

LCD INDICATORS

There are arrow icons on the LCD screen that point to current mode text on the label.

MODE BUTTON

Pressing this button changes to the next mode of operation in the following order; Heating / Manual / Standby.

Once the mode button is no longer being pressed then the selected mode of operation is automatically saved.

Heating mode (Auto) is the normal operating mode for heating the pool.

Manual mode is for testing the valve operation on a cold or cloudy day. Once manual mode is selected the valve will turn. After manual mode time-outs, unit will return to the previous mode.

Standby mode of operation is for off-season maintenance or if pool heating is not required. This is a better option than turning off the controller as it will flush treated pool water through the solar system. The valve will turn for 3 minutes each day from when the Standby mode was selected or at 10am if the time-clock mode was selected.

****THE FACTORY DEFAULT FOR SOLAR MODE IS HEATING MODE**

↑ AND ↓ BUTTONS (TEMPERATURE SETTING)

Adjusting the temperature limit will allow the controller to heat the pool until the temperature limit + $\frac{1}{2}$ °C is achieved. Heating will then remain off until the pool temperature drops $\frac{1}{2}$ °C below the temperature limit setting. Due to rounding the actual heating hysteresis is $\pm\frac{1}{2}$ °C.

The ability to solar heat the pool will depend on weather conditions.

** The factory default for SOL. LIMIT is 30°C

ENTER BUTTON

Pressing the ENTER button will turn on the LCD backlight, pressing the ENTER button while the backlight is lit will enter the SETTINGS MENU;

The following will be displayed; 1) EXIT

The menu system can be navigated using the ↑ or ↓ buttons, all selectable and changeable values will flash on the LCD screen. Press the ENTER button to accept the currently displayed [flashing] item.

All menu items are shown below;

- 1) EXIT
- 2) CLOCK
- 3) SYSTEM

1) EXIT

Press ENTER on this menu to return to automatic operation.

2) CLOCK

When selecting the clock you will have to set the time of day. Set hours then minutes.

3) SYSTEM

System sub-menu;

- EXIT
- COOLING
- LCD TIME
- HOURS

EXIT - Press ENTER on this menu to return to automatic operation.

COOLING - is for situations where the pool water overheats *beyond* the set temperature limit due to direct heating from the sun. ****NOTE that heating & cooling is only allowed during the allowable time if solar run hours have been selected.**

LCD TIME - Adjust the number of seconds the backlight remains on after the time a button was pressed. [Select NONE for always on.]

HOURS -for hours of solar operation [24hr Clock] First selecting the start time in hour intervals [6:00 - 12:00] Then the end time [12:00 - 21:00] ****Factory default for installer setup is run from 12:00-12:00 [24hrs].**

INSTALLER SETUP:

TO ACCESS MENU PRESS ENTER AND SCROLL DOWN TO SYSTEM AND PRESS THE MODE

BUTTON WARNING PROFESSIONAL ONLY SETTINGS!!

RESTORE DEFAULTS – Restore back to factory defaults.
PUMP/FLOW DETECTION Ensure the filtration pump is operating [and at the required speed for variable speed pumps] via the controller's AUX socket and is primed, then select SET AUTO or SET MAN.

SET AUTO - the unit will display the pump's load value for 5 seconds then automatically sets the threshold levels and returns to automatic operation. If the current draw of the filtration pump drops below the selected threshold levels then the solar pump is forced to switch off.

SET MAN. - the unit will display the pump's load value for 5 seconds, take note of this value. When the LCD screen displays RUN=>xxx it indicates the minimum load required to allow solar to run, set this value 10% lower than the displayed LOAD value. If OFF is selected the unit will operate as a standalone solar controller and return to automatic operation.

RUN – When the roof temperature rises to pool + RUN then the solar will start.

END – When the roof drops below pool + END then the solar will stop.

PIPE PROTECT – For use when solar collectors are flooded, flat and will require a wetted roof sensor for this mode.

CAL – Calibrate the Pool sensor.

NOTES:

1. If any of the menu items are left unattended for 3 minutes the menu will time out and automatically save all settings and return to automatic operation.
2. If a sensor fault is detected the controller will display which sensor and what the fault is.
3. Should power be interrupted for any reason, the controller will resume normal operation when power is restored. All information will have been kept for up to 10 days.
4. If the controller has stopped the pump and is displaying a higher temperature than expected it may be caused by the filter pump which is failing to prime. Check the pump and if necessary prime the pump as per the manufacturers' instructions then reset the controller by turning it off/on.
5. Maximum combined rated output load for the 240V socket[s] is 9.98 Amps / 2395 Watts.
6. Degree of protection against moisture: IP33.
7. Store pool chemicals at least 3 metres safely away from all pool equipment.

WARRANTY

- This range of product is covered by a limited 3 year warranty against component failure or faulty workmanship from the date of installation.
- Faulty units should be returned in the first instance to the dealer from which the unit was purchased. [Return to Base]
- Damage to the unit due to misuse, power surges, and corrosion from pool chemical fumes, lightning strikes or installation that is not in accordance with the manufacturer's instruction may void the warranty.
- Warranty does not include on-site labour or travel costs to or from installation site.

If the power cord is damaged, do not use the controller; return the unit to the supplier for repair.

CUSTOMER RECORD [To be retained by the customer]

DEALER/INSTALLER NAME

SERIAL NUMBER

DATE INSTALLED

For service assistance visit www.dontek.com.au

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