

welldana[®]



pool spa sauna wellness

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Installation & operating Instructions Welldana[®] Solar Control Type 74-015042



Output: 230 & 24 vac.

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Congratulations on your new Welldana® Solar Control.

Please read these instructions carefully before installing and operating the unit.

Standards

The product complies with current rules and standards on safety.

It has been tested against the following standards.

EN 55014-1:2000/A1:2001/A2:2002 (EMC)

EN 55014-2:1997/A1:2001

EN 55013:2001/A1:2003

EN 55020:2002/A1:2003

The product is **CE** marked.

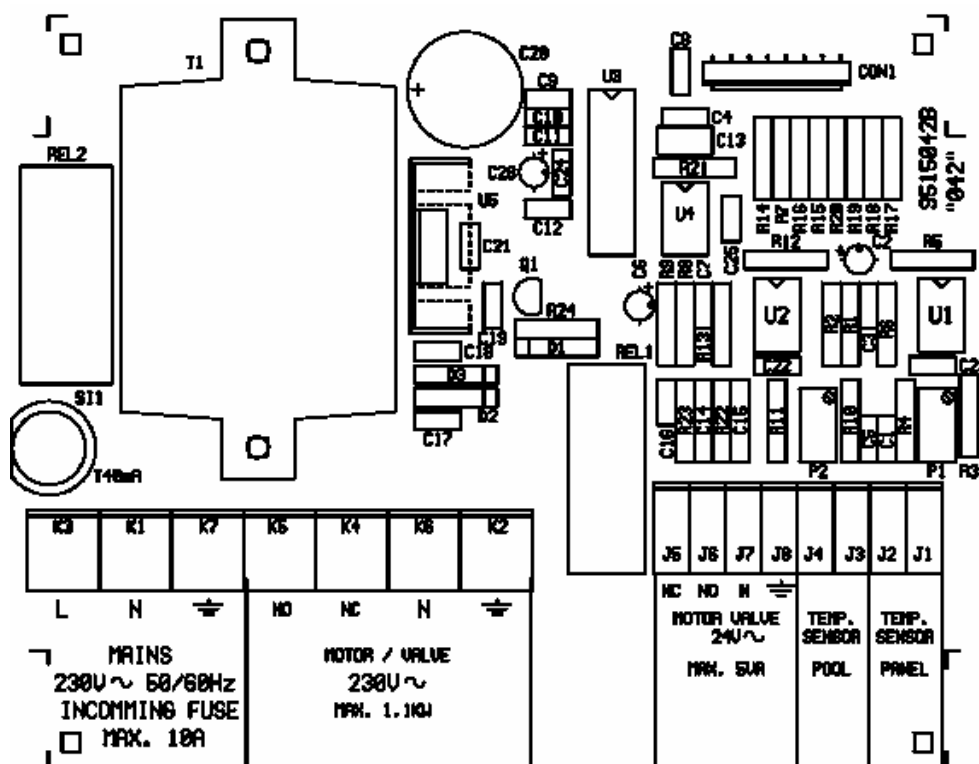
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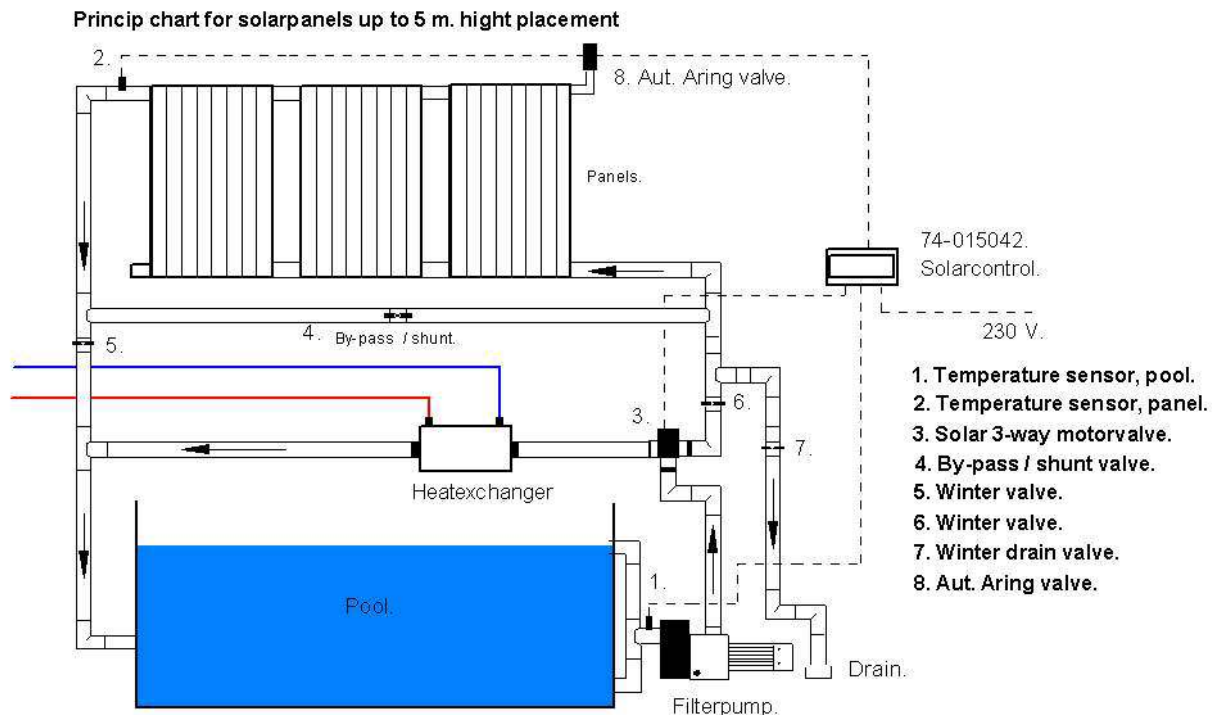
1. Technical data

Voltage	230 V (L-N)
Amperage	1 A
Frequency	50-60 Hz
Enclosure	IP X5
Dimensions	H 115 mm – W 155 mm – D 80 mm
Output	24 vac. NC – NO – N. for motor valve 6–4–11. Old motor valve 2-6-3.) Max 5 VA. 230 vac. NC – NO – N. for 230 v motor valve. Max 10 A. And / or 230 vac. NO – N. for 230 v solar pump motor. Max. 10 A.
Temperature sensor	Type 34-015209; KTY; 1.54 kohm at 25°C; 1% deviation; (2-off.) PG7 thread.

Fig. 1. Printed circuit board.



2. Installation diagram for solar panel and control unit



1. The pool temperature sensor should be installed on the suction side of the filter pump or immediately after the filter pump. The sensor must be protected against direct sunlight and draughts/air streams from pump(s) which may adversely affect the ability of the sensor to measure actual pool temperature. Insulate the sensor if necessary.
2. The solar panel temperature sensor must be installed on the solar panel outlet, preferably on the rear of the panel in order to prevent sunlight from adversely affecting the ability of the sensor to measure actual panel temperature. Insulate the sensor if necessary. If it is necessary to extend the sensor cable, a 2 x 1.5 mm² cable must be used as minimum.
3. Solar 3-way motorvalve (type 74-120463) must be installed as illustrated. The valve is T-shaped. Water from the filter pump must be led in from below. Water to the solar panel should be led out to the right while water to the pool is led out to the left. If necessary, the solar panel and pool outlets may be exchanged. The limit switch function of the control unit can also be exchanged by exchanging the wires from NO and NC. The outlets can thus be used as required. See fig. 2.
4. Note! To allow the measurement of panel temperature, a small flow will be maintained even when the valve has shut off the water supply to the solar panel. Such temperature data is required by the controls.
5. A shunt/bypass valve must be installed if the flow (in m³) through the filter pump is greater than the total capacity of the solar panel. The shunt/bypass valve can also be used to trim the system depending on season.
6. The valve no. 7 must be opened when shutting down the system for the winter. Valve no. 5 & 6 must be closed. If the panels are inclined, the air-release valve (type 74-100103) allows the water contained in them to be drained.

3. Installing the control unit

- The control unit must be installed in an easily accessible dry location.
- The control unit should be connected parallel to the pool filter pump (230 V).
- Control output: 24 vac. NC – NO – N. To motor-driven valve. Max. 5 VA.
- Control output: 230 vac. NC – NO – N. To 230 v motor.driven valve. Max 10A.
- Control output: 230 vac. NO – N. To 230 v solar pump. Max. 10A.
- Sensor cables must not be positioned alongside 230/400 V cables as the resulting induction will cause deviation in sensor ohm values.

4. Operating the control unit

The lefthand circular-arrow button is used to toggle the display between pool and panel temperatures and the temperature setpoint. The LED indicates which temperature is currently shown.

The temperature setpoint is the required temperature in the pool. It is the only temperature that can be changed using the arrow up or arrow down buttons.

The right-hand circular-arrow button is used to switch between closed, open and automatic. The LED indicates which of the three functions the controls are using.

- **Closed.** The motor-driven valve closes the water supply to the solar panel. (A small flow will, however, be maintained for measurement purposes.)
- **Open.** The motor-driven valve opens the water supply to the solar panel.
- **Automatic.** The motor-driven valve opens or closes the water supply to the solar panel depending on the temperature difference between panel and pool. The water supply is only opened when panel temperature is 4-5°C higher than pool temperature.

5. Setting the temperature

The required pool temperature is set in the following way.

Press the lefthand circular-arrow button until the Set LED lights up. Adjust the temperature setting using the arrow-up or arrow-down buttons.

6. Normal operation

During normal operation the Auto and Pool LEDs should be lit. Pool temperature will then be shown on the display and the controls will automatically open and close the water supply to the solar panel. Panel temperature must be at least 4-5°C higher than pool temperature before the controls activate the motor-driven valve, thus opening the water supply to the panel. The controls close the water supply again when panel temperature has dropped to approx. 2°C above pool temperature.

The air-release valve vents the solar panel.

7. Please note

If the motor-driven valve has not been used for some time, the valve handle should be rotated manually a few times to loosen the valve from the seals.

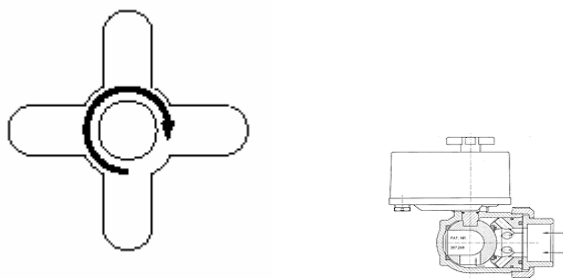


Fig. 2.

