



ELECTRO MAGNETIC TEST, INC.

1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

OPERATIONAL DESCRIPTION



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Polaris Sol Functional Description

The Polaris Sol is an automated swimming pool/spa controller. The unit will turn on or off various pieces of equipment either at scheduled on/off times or manually through input from a wireless remote control unit or directly by accessing the main control panel of the unit located inside the sheet metal enclosure.

The equipment controlled by this unit will range from standard swimming pool equipment including pumps, underwater lighting, fiber optic light sources, air blowers, heaters, and automatic valve actuators to landscape lighting, exterior lighting, and virtually any accessory operating at 120 or 240 Volts. With the exception of booster pumps used to supply water to pressure side cleaners and to air blowers, Polaris Pool Systems, Inc., is not the manufacturer of any of these accessories that can be controlled by the Sol controller.

Automatic valve actuators are used to automatically divert water from one item to another. These devices are used primarily to divert pool suction and return to a spa when using a spa or to divert some water from returning to the pool in order to produce flow for a waterfall. The controller simply turns the valve actuator on and off and based on the design of the actuator, it will rotate the valve diverter in one direction or the other depending on whether it is "on" or "off".

The controller will turn on or off any of the equipment at times the user pre-sets as any digital timer would. For items such as pumps, lights, or air blowers, the signal to turn on simply closes a set of contacts on a relay and the high voltage equipment is turned on. When the signal from the controller tells the equipment to turn off, the contact on the relay is opened up and the equipment is turned off.

The heater is controlled by reading a temperature from a sensor located in the water stream and turning the heater on or off based on that temperature reading. None of the safety devices built into the heater are over-ridden or removed during the installation of our controller. The thermostat on the controller simply replaces the thermostat on the heater and the controller then tells the heater when to turn on or off.