

### Benefits:

- Maximizes solar heat collection
- Maximizes pool/spa owner convenience
- Automatic switch over from heating to cooling if desired
- Single model for most applications - pools, spas, hot tubs, and combinations
- Expandable for most system types
- 1 or 2 valves, pump, or valve and pump control
- Accurate single temperature setting
- Proven reliability and performance
- 10-year limited warranty
- Available with valve and actuator (See GoldLine Combo)



The GL-35 represents a continuing evolution of the advanced electronic technology pioneered by Goldline - the standard setter of the solar pool heating industry. The advanced lighting surge and static electricity protection incorporated in the GL-35 ensures the highest reliability available in the industry, just what you would expect from the recognized solar control technology leader.

### The advanced electronic control for solar pool & spa systems

The GL-35 differential temperature controller is designed to provide maximum operating efficiency and flexibility to effectively manage solar pool/spa heating systems. The standard GL-35 directs valve(s) to allow the water to flow through solar collectors depending upon whether the water can be warmed or cooled based upon need.

**AUTOMATIC HEATING:** If the collectors are warmer than the pool water by 4° F or more, and the pool is below the selected desired temperature, the valve(s) will rotate allowing heat collection. The heat collection will continue until the difference in temperature is only 1.5° F, at which point the control will turn the valve(s) to direct water to no longer flow through the collectors.

**AUTOMATIC COOLING:** (Field programmable option) If the collectors are cooler than the pool water by 6° F or less, and the pool is above the selected desired temperature, the valve(s) will rotate allowing cooling via the solar collectors. The heat dissipation will continue until the pool temperature has lowered to the set temperature or the difference in temperatures is only 3° F.

**SINGLE SETTING FOR DESIRED TEMPERATURE:** The GL-35's logic is set by a single dial adjustment with the desired pool/spa temperatures clearly indicated. The dial is calibrated with the temperatures from 70° F to a high of 104° for quick and easy user-friendly operation. The temperature set indicates the desired pool/spa temperature, and the GL-35 will automatically determine if the water should be solar heated or cooled, thus maximizing the system capabilities.

### Ease of installation, operation, and serviceability

Like all GoldLine controls, the GL-35 is designed to meet the need for easy installation, operation, and serviceability. The GL-35 features the same quality solid state construction that has made the GoldLine name synonymous with reliability

and performance.

The GL-35 offers advanced operating features to provide differential temperature control, pool/spa high limit, selectable recirculation freeze protection, and the GL-35-HV for controlling pumps up to 2 HP @ 240 VAC.

**TERMINAL STRIP CONNECTIONS** or incoming 120 VAC or 240 VAC power, 24 VAC output(s), and for sensor inputs. Terminal strips are also supplied for high voltage connections on the GL-35-HV output. All connections are out of sight, behind the inside cover plate, protecting them from unauthorized tampering.

**LED INDICATORS** show the status of the system operation. Three highly visible LED's show; 1) power to control, 2) power output directing valve(s) and/or pump to collect heat (heating), 3) power output directing valve(s) and/or pump to dissipate heat (cooling). Number 3 is a field selectable option.

**GL-35 OUTPUT** rating is the industry standard 24 VAC, 20 Watts, .85 Amps to valve. Optional second valve output, and 120-240 pump output available.

**RECIRCULATION FREEZE PROTECTION\*** turns the GL-35 output ON, directing warmer pool/spa water through collectors when near freezing temperatures are reached at the collector sensor. This is a field selectable option which requires the optional GLT to activate the pump.

**SYSTEM TEST SWITCH** manually switches the GL-35 to ON, AUTO, OFF. when the seitch is in the ON position, both the "Heating" and "Cooling" LED's will be illuminated. When the switch is in the OFF position, only the "Power" LED indicator will be illuminated.

**LOCKING WEATHERPROOF ENCLOSURE** of molded, almond color, noryl plastic ensures an attractive, long, safe operation in outdoor applications.

\*See installation instructions before using Recirculate Freeze.

## “GoldLine Combo”

The “Combo” package contains everything required to automatically control most solar pool heating systems. The “Combo” provides the best control, valve, actuator, and sensors available in the industry packaged together in one box. The “Combo” makes inventory control easier, ensures all parts arrive at job sit, and components remain protected in factory-fresh condition. The “GoldLine Combo” or “GLC” consists of:

- GL-35** Control with standard low voltage 24 VAC output
- INS** Isolation sensor
- DI** Drill-in sensor
- GVA-24V** Valve actuator, (GVA-24) and a choice of one: 1 1/2 x 2 “P”, OR 2 x 2 1/2 “P”, positive seal valve OR 2 x 2 1/2 “NP”, non-positive seal valve

### Model GL-35

The GL-35 is a standard 24 VAC single output for controlling one valve. Two sensors are required for operation. Freeze snap switch is also recommended if freeze recirculation protection is used.

### Model GL-35-PS

The GL-35-PS has all the features of the GL-35 and an additional output to operate a second 24 VAC valve utilizing the same single differential.

### GL-35-HV

The GL-35-HV has all the features of the GL-35 and a high voltage output for controlling pumps up to 2 HP at 240 VAC.

### Temperature Sensors

All Independent Energy temperature sensors are 10K thermistors which are accurate to +/- 1/2 degree F. The sensors are double-dip potted in silicone for maximum protection from moisture.

**INS:** Isolation sensor, .5” x .5” x 1.5” black aluminum block sensor usually connected to GL-35 “collector” terminals when plastic collectors are used.

**SB:** Bolt-on sensor for flat surfaces. The soft copper housing will conform to 1/2” or 1” pipe and is commonly used with copper collectors.

**DI:** Drill-in. Designed to mount directly into 5/16” drilled hole in PVC pipe. Stainless steel sensor comes with O-ring and hose clamp to make a quick water-tight seal.

**SC-1/4:** Brass screw-in sensor with 1/4 NPT pipe thread. Screws directly into drain plug on the strainer basket.

### Freeze Snap Switch

- GC-1:** Opens at 44° +/- 4° F, closes at 54° +/-5° F (premium)
- GC-2:** Opens at 44° +/- 4° F, closes at 54° +/-5° F (standard)

### Specifications

**POWER INPUT:** 105-130 or 190-250 VAC, 50 or 60 HZ, terminal block connectors.

**DIFFERENTIAL:** 4° F ON/1.5° OFF, heating; 6° F ON/3° F OFF, cooling\*.

**TEMPERATURE ADJUSTMENT:** 70° F to 104° F

**RECIRCULATION FREEZE\*:** 40° F ON/45° F OFF (GLT required)

**ENCLOSURE:** Raintight when mounted vertically, 5.5” x 8.25” x 3.75”

**VALVE OUTPUT:** Use with 24 VAC valves. All valves may not exceed 20 VA continuous, or 40 VA intermittent duty.

**ENVIRONMENT:** -40° to 150° storage, 32° to 113° F operational with direct sun exposure.

\*Field select enable or disable

### 10 Year Limited Warranty

Independent Energy, Inc., now offers a full 10-year limited warranty on all solar controls and accessories! This warranty will cover repair or replacement of the control at no cost for the first 24 months. For years 3 through 5, the repair/replacement fee will be a maximum of 25% of the current list price, and for years 6 through 10, the repair/replacement fee will be a maximum of 50% of the current list price. The best controls now have the best warranty. See the Independent Energy warranty statement for details.



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## GoldLine Solar Pool & Spa Heating/Cooling Control



### “GoldLine Combo”



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