

Automatic Pump Station Level Controller with Non-Contacting Sensor

Model PSL

Pump Station Level Controller

6 Control Relays
Programmable Pump Alternation
RS232 Output and PC Software
Logs Relay Run Times
Isolated 4-20mA Output
Large 4-digit Display



Pump Station Level Control, Monitoring and Reporting

Ideal for Level Control

Designed for pump stations, wet wells and tank level control – the new Greyline PSL Pump Station Level Controller has six independently programmable control relays for pump or valve control, level alarms, autodialers, temperature or fault alarms.

No contact, No maintenance

Mount the non-contacting, ultrasonic sensor in the tank or wet well and install the watertight electronics in the control room or any location within 500 ft / 150 m. Use the simple, built-in keypad to set up measurement range, relay set points and pump alternation sequence. Or use Greyline's free "PSL Remote" Windows software to calibrate from your PC by RS232 connection, or through modems over a regular phone line.

Automatic Reporting System

Relay/Pump run time data is stored automatically by the instrument. Retrieve reports directly through the PSL display, or through its RS232 output. Greyline's "PSL Remote" Windows software program displays a pump run-time graph and can output data to other programs.

RELIABLE MEASUREMENT AND CONTROL

PSL - for Pump Stations and Tank Level Control



- ✓ **Non-Contacting Ultrasonic Sensor**
- ✓ **6 Control Relays with Programmable Pump Alternation**
- ✓ **RS232 output and PC software for dial-up monitoring and password-protected calibration**
- ✓ **Automatically logs and reports Relay run times for pump performance evaluation**
- ✓ **Isolated 4-20mA Output**
- ✓ **Built-in 3 button Keypad for manual calibration**

Easy to Install and Calibrate

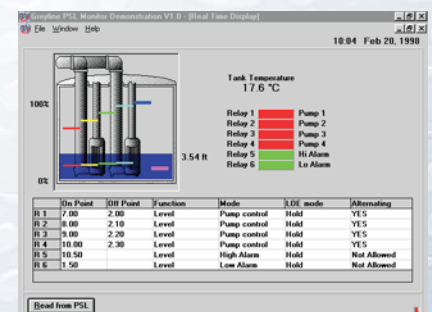
The PSL Pump Station Level Controller is designed for Pump Station and Tank Level Control applications. Mount the non-contacting ultrasonic sensor above the well or at the top of a tank. (Intrinsically safe sensors are available for hazardous rated applications.) Use the built-in 3 button keypad to calibrate measurement span and relay set-points, or use "PSL Remote" Windows software to calibrate from your PC computer by cable or modem connection.

Easy to Monitor and Maintain

Operators can monitor pump station or tank level directly on the large 4-digit display, or on a PC. Because the ultrasonic sensor does not contact the liquid, no maintenance is required. Use the isolated 4-20mA output to connect to PLC's or recorders. Assign control relays for ON/OFF pump control, Hi or Lo level alarms, autodialer activation, air temperature alarm or sensor echo loss alarm.

Includes RS232 output and "PSL Remote" software

Connect a PC directly to the RS232 output, or by dial-up connection with modems over telephone lines. "PSL Remote" runs on any PC with Windows 95+ or NT. Calibration changes are password-protected. The PSL can be a *virtual instrument* — operators can adjust calibration, relay functions and set points, view relay states and download a relay run time report for analysis and troubleshooting, all from their PC. Calibrations can be saved to disk and downloaded to one or several PSL Pump Station Level Controllers.



Relay Run Time Reports

Monitor PSL's Relay run time reports to plan pump maintenance and reduce downtime due to pump failures. Display run times directly on the PSL digital display, or download to your PC with "PSL Remote" software. Reports can be exported in comma-delimited files to spreadsheet or database programs, or directly to Microsoft Excel by DDE.

Use Relay run time data to identify "lazy" pumps and plan your pump maintenance schedule. Save Pump Run Time reports to disk for comparisons over time.

Specifications - PSL Pump Station Level Controller

General Specifications: Greyline PSL Pump Station Level Controller

Accuracy:	±0.25% of Range or 2 mm (0.08") whichever is greater
Electronics Enclosure:	Watertight, dust tight NEMA4X (IP 66) polycarbonate with a clear, shatter-proof face
Operating Temperature:	Electronics: -5 to 140°F (-20 to 60°C)
Power Input:	100-130VAC 50-60Hz, 7.5 Watts max.
Surge Protection:	Sensor, 4-20mA and AC power
Outputs:	Isolated 4-20mA (1000 ohm), RS232 (cable and null-modem connector included)
Control Relays:	6 form 'C' dry contact Relays rated 5 amp SPDT; programmable level alarm and/or pump control modes, pump alternation/sequencing, failsafe/echo-loss, air temperature alarm
Displays:	Level - large, 4-digit LCD; Menu/Reports/Status - 16-digit alphanumeric
Calibration:	Level or Range mode in selectable units
Programming:	Built-in, 3-button keypad, password-protected; or via RS232
PC Software:	'PSL Remote' for Windows - save calibrations to disk, Relay run-time reports, real-time monitoring with direct RS232 connection or through modems

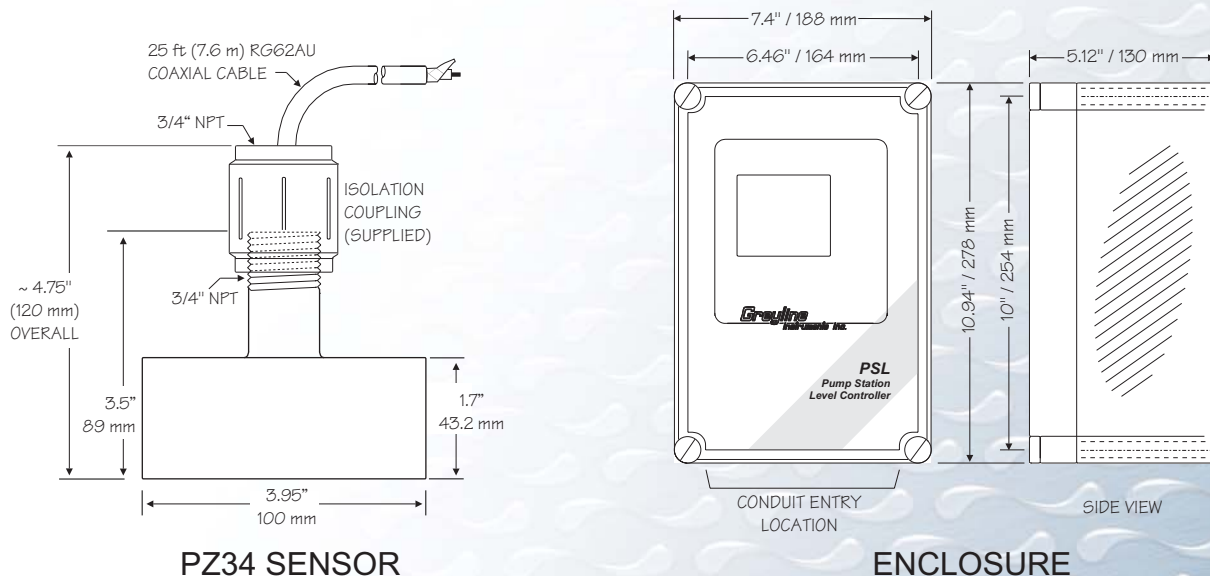
PZ34 Sensor:

Maximum Range:	32 ft (10 m) - optional sensors for longer ranges
Deadband (blinking):	Programmable, minimum 16" (406.4 mm)
Beam Angle:	8°, Locate 1 ft (300 mm) from tank sidewall for every 10 ft (3 m) depth
Operating Frequency:	46 kHz
Exposed Materials:	PVC
Operating Temperature:	-40 to 150°F (-40 to 65°C)
Operating Pressure:	0-20 psi (0-1.35 bar)
Sensor Cable:	RG62AU coaxial, 25 ft (7.6 m) standard length - see Options

Options:

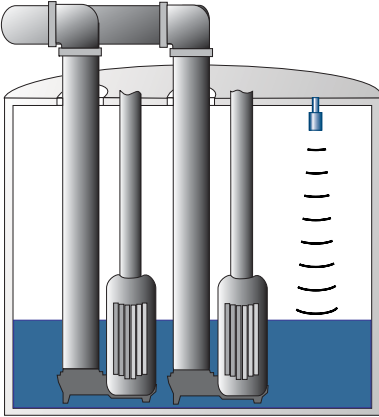
Sensors:	Long range models / all Teflon construction / Intrinsically safe / Flange mount
Sensor Cable:	50 ft (15 m) or 100 ft (30 m) RG62AU coaxial continuous from Sensor, or splice up to 500 ft (150 m)
Sensor Cable Junction Box:	watertight NEMA4 steel with terminal connection strip
Power Input:	200-260VAC 50/60Hz, 12VDC or 24VDC
Enclosure Heater:	Thermostatically controlled - recommended for temperatures below 32°F (0°C)
Enclosure Panel Mount:	Flange and bracket assembly mounts PSL enclosure in panel face
Hazardous Locations:	Optional Intrinsic Safety Barrier for Sensor mounting in hazardous areas. Optional NEMA7 explosion proof enclosure for electronics mounting in hazardous locations.

Dimensions



PSL Pump Station Level Controller

Control and Sequence up to 6 Pumps and Level Alarms



- ✓ **Sewage Lift Stations**
- ✓ **Water Storage Tanks**
- ✓ **Level-based Process Control**

Ideal for Water, Wastewater and Process Automation

The PSL Pump Station Level Controller is designed for the harsh operating conditions in wet well or tank level control applications. The non-contacting ultrasonic Sensor mounts at the top of a wet well or tank, and the electronics enclosure within 500 ft. (150 m) of the Sensor.

Reliable, Accurate, Simple Calibration:

- Non-Contacting, no-maintenance ultrasonic Sensor
- 0.25% Accuracy with automatic temperature compensation
- Easy calibration for Simplex pump stations, duplex, triplex, quadruplex or more...
- Built-in, 3-button keypad and "PSL Remote" PC software for easy Calibration
- Independently programmable Pump Up and Pump Down modes
- Confirm and test calibration before start-up by simulation in PC software *and* by simulation mode on the PSL controller
- Isolated 4-20mA output for connection to Variable Speed Drives, PLC's or Recorders

Relay Run Time Reporting System

Use the PSL Pump Station Level Controller for pump or level control and for automatic pump alternation/sequencing. The Greyline PSL provides an easy, new way to manage pump maintenance. View "Run Time" reports directly on the PSL digital display, or on your Windows PC with "PSL Remote" software (FREE with each PSL). Identify relative efficiencies of your pumps and declining pump performance *before* pump failures occur.