The PSM-660 Pump Station Monitor offers the quickest, easiest and most accurate method to control and/or monitor flow through your sewage lift station. The system accepts a wide variety of input types including floats, contact closures, current sensors, conductivity probes or 4-20 mA. level signal.

Use the PSM-660 to update an existing pump station, provide for a new installation or to temporarily monitor a pump station for performance and liquid volume throughput. Simply enter the wet well dimensions (round or rectangular) and the pump(s) start/stop elevations with an optional intermediate elevation for inflow rate. The PSM-660 will do all the volume calculations and pump control (if desired) accurately, reliably, automatically.

Proportional analog flow rate and level signals (4-20 mA.) and RS-232 outputs are available for remote indicating, recording and process control. All circuits are protected in a NEMA 4X (IP65) fiberglass enclosure with a clear polycarbonate hinged cover for wall mounting or optional panel mounting.

**Applications**

Use the PSM-660 for:

---

**DATA LOGGING Sophisticated, Powerful**

The PSM-660 automatically logs daily pump and flow data with auto wrap around. It records the date, daily average GPM pump rate, total number of pump cycles, total pumping run time and total pumped for the past 200 days.

A detailed data logging of each pump cycle records the date, pump cycle number, start and run time of pump cycle, average Inflow GPM rate and GPM pump rate along with total pumped.

A time stamped EVENT list is included to record actions the monitor has made such as HI/LOW alarm, when programmed, signal or power loss etc.

Data may be downloaded to a PC through the RS-232 output using any standard communication software package, such as HYPER-TERMINAL.

**Standard Features**

* High Accuracy, no sensor calibration required
* Easy to use, fully programmable, no moving parts
* Monitors Inflow and Outflow rates and Total Pumped
* Alarms on HIGH and/or LOW level
* Warns on high Inflow rate, low pumping rate (due to clogged pipe or warn impeller)
* Alpha Numeric indicator with LED Backlighting displaying: Inflow GPM rate, Pumping GPM rate, Number of pump cycles for day, Total pumped for each cycle, Total pumped for day, Accumulative volume total to date, Pump Start and Run Time, Pump Hour Meters, Level in wet well (4-20mA input only) and more

* Accepts float inputs, relay closure inputs, current sensor inputs, conductivity inputs, 4-20 mA inputs from bubblers, pressure sensor, ultrasonic sensors etc.
* Two (2) scalable, independent 4-20 mA outputs proportional to pump rate, inflow rate and/or level.
* Sequence / Alternate / Rotate up to 4 pumps
* Manually operate pumps from keypad
* RS-232 output providing summary reports
* Pump Hour meters
* Logs each pump cycle with Total gallons pumped, Pump rate, Inflow rate, Pump start time and run time
* Logs each days total pump cycles, average pump rate, total run time and total gallons pumped for the past 200 days
* Download data directly to a PC

---

The accuracy and simplicity of the PSM-660 monitor makes it an ideal choice for billing purposes.
HOW IT WORKS

Accurate, Versatile

The PSM-660 Flow/Pump Monitor is a microprocessor based system that uses operator entered dimensions of the wet well and pump ON/OFF elevation points to calculate a volume pumped from the wet well. With the addition of an intermediate float or elevation point, the flow monitor will calculate the inflow GPM rate using its accurate time base prior to the start of the pump cycle. The inflow value is then applied to the volume pumped in calculating the total volume throughput for the pump cycle.

The final accuracy of the PSM-660 is equal to a precise ‘draw down’ test performed on each pump cycle. The monitor may also be programmed to compensate for displaced liquid volume caused by piping and other hardware in the wet well.

The PSM-660 will monitor up to 7 float/contact closures (LOW, PUMP OFF, INFLOW START, LEAD ON, LAG 1, LAG 2, HIGH/LAG 3) or a continuous 4-20 mA input for complete control of up to 4 pumps. Two programmable 4-20 mA output signals and HIGH/LOW alarm outputs are also included.

INSTALLATION

Simple, Easy

The PSM-660 Monitor is easy to install. When monitoring volume throughput only, simply connect the monitor to an auxiliary control contact for the LEAD pump (or use our optional current sensor). For complete control of up to 4 pumps with HIGH/LOW alarm connect to each pumps input and install or use a spare float level switch for the inflow calculation (opt.). Using the 4-20 mA input is even easier.

The operator then enters the wet well dimensions, pump ON/OFF and INFLOW START elevations, sets the pump sequence order and alternate type (NONE, LEAD/LAG or ROTATE) via the front panel keypad. The PSM-660 will do the rest ... automatically.

PSM-660 Specifications

Specifications and design subject to change without notice.
Made in USA, Bulletin # 98-660-13-11

Electronics

Power Requirements: 120/220 VAC, ±15%, 50/60 Hz
12-24 VDC @ 15W max.
Temperature: 30°F to 120°F (-5°F with opt. heater)
Display: 2 line x 20 character, Alphanumeric, LCD with LED Backlighting
Totalizer: 8 digit accumulative with programmable multiplier of x1, x10, x100, x1000
200 daily 8 digit totalizers
Outputs: Two (2) 4-20 mA. isolated into 1000 ohms, RS-232 terminal and RJ11 modular jack, five (5) relays SPDT 5A/250 VAC contacts
Inputs: Optically Coupled Floats, Contact Closures, Current Sensors, Conductivity Probe
4-20 mA. (24 volt available for loop powered sensor)
Flow Range: 0 - 100,000 GPM
Display Resolution: 0.01 GPM, 0.01 inches
Accuracy: ±1.0 second run time, ±0.1% calculation error
Memory: Flash and nonvolatile RAM
Data Log: 200 Day Summary: Date, total pump cycles, total pump(s) run time, total gallons pumped
Pump Cycle: Cycle Number, Start/Run time of pump cycle, Inflow rate GPM, average pump rate GPM, Total pumped for cycle
Event List: time stamped events

Enclosure

Material: Fiberglass, clear hinged Polycarbonate cover
Rating: NEMA 4X, IP65, Dust-Tight, watertight, Corrosion Resistant, CSA, UL listed
Dimensions: 7.2"x11.8"x6.8"
Mounting: 4.92"x12.3", Stainless Steel mounting feet

Options

Heater/Thermostat, Floats, Current Sensors, Panel Mounting

Warranty: the PSM-660 system is pre tested and inspected before shipping. Warranty is against defects in parts and workmanship for a period of one (1) year from ship date.

Control Electronics, Inc.
P.O. Box 330, Brandamore, PA 19316
(610) 942-3190 Fax: (610) 942-3672
www.controlelectronics.com
Designing/Manufacturing Since 1980

Represented By: