

VPAC LSC

LIFT STATION CONTROLLERS



OVERVIEW

PRIMEX® has been providing pump control solutions for nearly a century. Thousands of municipalities rely on our solutions to improve their water and wastewater services. We've taken this experience and packaged it into our **LSC - Lift Station Controllers**. Cost-effective standard products that feature:

- No programming required
- Configurable for 1, 2 or 3 pump circuits - constant or variable speed
- Intuitive and easy-to-read Graphical User Interface
- User adjustable security, operational and alarm settings
- Open-architecture with Modbus connectivity
- Data Logging, Flows, Levels, Starts, Runs and Alarms
- Available with icontrol® cloud-based SCADA and compatible with standard alarm dialers, traditional telemetry and SCADA systems

TYPICAL OPERATOR SCREENS



Wet Well Trend Screen



Current Alarm Screen

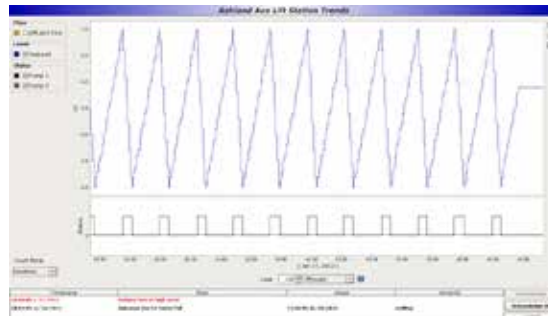


Pump Status Screen



Pump HOA and Runtimes

icontrol® cloud-based SCADA



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FEATURES AND FUNCTIONS

Pump Circuits

- 1, 2 or 3 Pumps
- Constant or Variable Speed

Level Sensing Input

- 4-20mA from transducer with float-based backup (sold separately)

Security Settings

- View
- Operator
- Supervisor

Standard User Adjustable Settings

- High and Low Level Alarms
- Pump Control (Hand-Off-Auto)
- Pump Alternation
 - Auto or Fixed
 - Timed or Cyclical
- Lead and Lag Pumps - Start and Stop Levels
- Wet Well Level Scaling
- VFD Speed (%)
- Alarm Delay Timers

Standard Alarm Points (time and date stamped)

- High Level Alarm - Transducer
- Low Level Alarm - Transducer
- Seal Failure
- Overtemp and Overload
- VFD Fault (if applicable)
- Pump Fail (call no run)
- Backup Active
- High Level and Low Level Alarm from Float
- Control Power Failures
- Generator Running
- Phase Failure
- Station Intrusion
- Current (if applicable)

Standard Status Indication and Data

- Pump Status (per pump)
 - Off, Call, Running, Call Fail to Run
 - Hand-Off-Auto Status
 - Seal Failure
 - Over Temp
 - Run Times and Starts
 - Today
 - Yesterday
 - Current Month
 - Previous Month
 - Cumulative Total
 - Wet Well Level - Current and Trend
 - Data Logging to a removable data card (optional)
 - Pulse Flow Input

Optional Expanded Analog I/O

- VFD Command Speed (%)
- VFD Fault Monitoring
- Current Monitoring (requires optional accessories)
- Discharge Monitoring (requires optional accessories)

Remote Alarming

- Compatible with most Alarm Dialers

Telemetry/SCADA (optional)

- icontrol® web-based SCADA
- Compatible with traditional telemetry and SCADA systems via MODBUS RTU

CONTROLLER SPECIFICATIONS

- Power Requirements: 12-24 VDC
- Display Options: 3.5" Daylight Readable Transflex Touchscreen
 - 4" LCD TFT Color, High Resolution Touchscreen (700 nit)
 - 6" LCD TFT Color, High Resolution Touchscreen (450 nit)
- Built-in I/O: 24 Discrete Inputs, 16 Discrete Outputs, 2 Analog Inputs
- Optional I/O: 8 Analog Inputs, 4 Analog Outputs
- Micro SD Data Storage Capability for Data Logging (2GB to 64GB)
- Communication Ports: 2 Serial RS-232/RS-485, Ethernet (option/controller specific)
- Communication Protocols: MODBUS RTU, TCP/IP
- Environmental Rating: NEMA and UL Type 1, 3R, 4, 4x, 12, 12k, 13
- Dimensions: 3.75" x 3.75" x 2.5" and 5.7" x 7.3" x 2.8"
- Operating Temperature: 0° to 60° C

DISCRETE INPUTS		DISCRETE OUTPUTS (continued)	
DI 1	Pump 1 Running	DO 4	Pump 2 Call
DI 2	Pump 1 HOA In Auto	DO 5	Pump 2 Failure
DI 3	Pump 1 Seal Failure	DO 6	Pump 2 Fault Reset
DI 4	Pump 1 Overtemp	DO 7	Pump 3 Call
DI 5	Pump 1 Overload/VFD Fault	DO 8	Pump 3 Failure
DI 6	Pump 2 Running	DO 9	Pump 3 Fault Reset
DI 7	Pump 2 HOA In Auto	DO 10	Common Alarm ²
DI 8	Pump 2 Seal Failure	DO 11	Alarm Horn
DI 9	Pump 2 Overtemp	DO 12	Alarm Horn Silence
DI 10	Pump 2 Overload/VFD Faut	DO 13	Backup Reset
DI 11	Pump 3 Running	DO 14	High Level Alarm
DI 12	Pump 3 HOA In Auto	DO 15	Low Level Alarm
DI 13	Pump 3 Seal Failure	DO 16	Spare
DI 14	Pump 3 Overtemp	ANALOG INPUTS and OUTPUTS	
DI 15	Pump 3 Overload/VFD Fault	AI 1	Wet Well Level
DI 16	Backup Active	AI 2	Station Flow
DI 17	High Level Float	SS1/AI 1	Pump 1 VFD Speed (%)
DI 18	Low Level Float	SS1/AI 2	Pump 2 VFD Speed (%)
DI 19	Control Power Failure	SS1/AI 3	Pump 3 VFD Speed (%)
DI 20	Generator Running	SS1/AI 4	Station Temp
DI 21	Phase Failure	SS1/AI 5	Pump 1 Current
DI 22	Station Intrusion	SS1/AI 6	Pump 2 Current
DI 23	Selectable ¹	SS1/AI 7	Pump 3 Current
DI 24	Temp Alarm High/Low	SS1/AI 8	Discharge Pressure
DISCRETE OUTPUTS		SS1/AO 1	Pump 1 VFD Speed Cmd
DO 1	Pump 1 Call	SS1/AO 2	Pump 2 VFD Speed Cmd
DO 2	Pump 1 Failure	SS1/AO 3	Pump 3 VFD Speed Cmd
DO 3	Pump 1 Fault Reset	SS1/AO 4	Spare

¹ - Selectable for Dry Flood Alarm, Rain Total Pulse, Flow Total Pulse

² - Common Alarm output will activate for any alarm based on the controller configuration



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