ProTalk® FLO Pump Controller

The ProTalk FLO combines the features of pump control and tank level monitoring, with our reliable alarm reporting technology.

Designed to be reliable, affordable, and easy to install, the ProTalk FLO uses cellular and/or two-way radio communication to manage your pumps.

Monitor fluid levels in a tank, control pumps, create alarm conditions and operate pumps remotely.

Personnel can call or text in at any time to get the current status, make programming changes or execute a command.

An internal rechargable gel-cell battery is available to provide continuous operation in the event of power loss.

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Telephone: (800) 268-2646 www.barnett-engg.com

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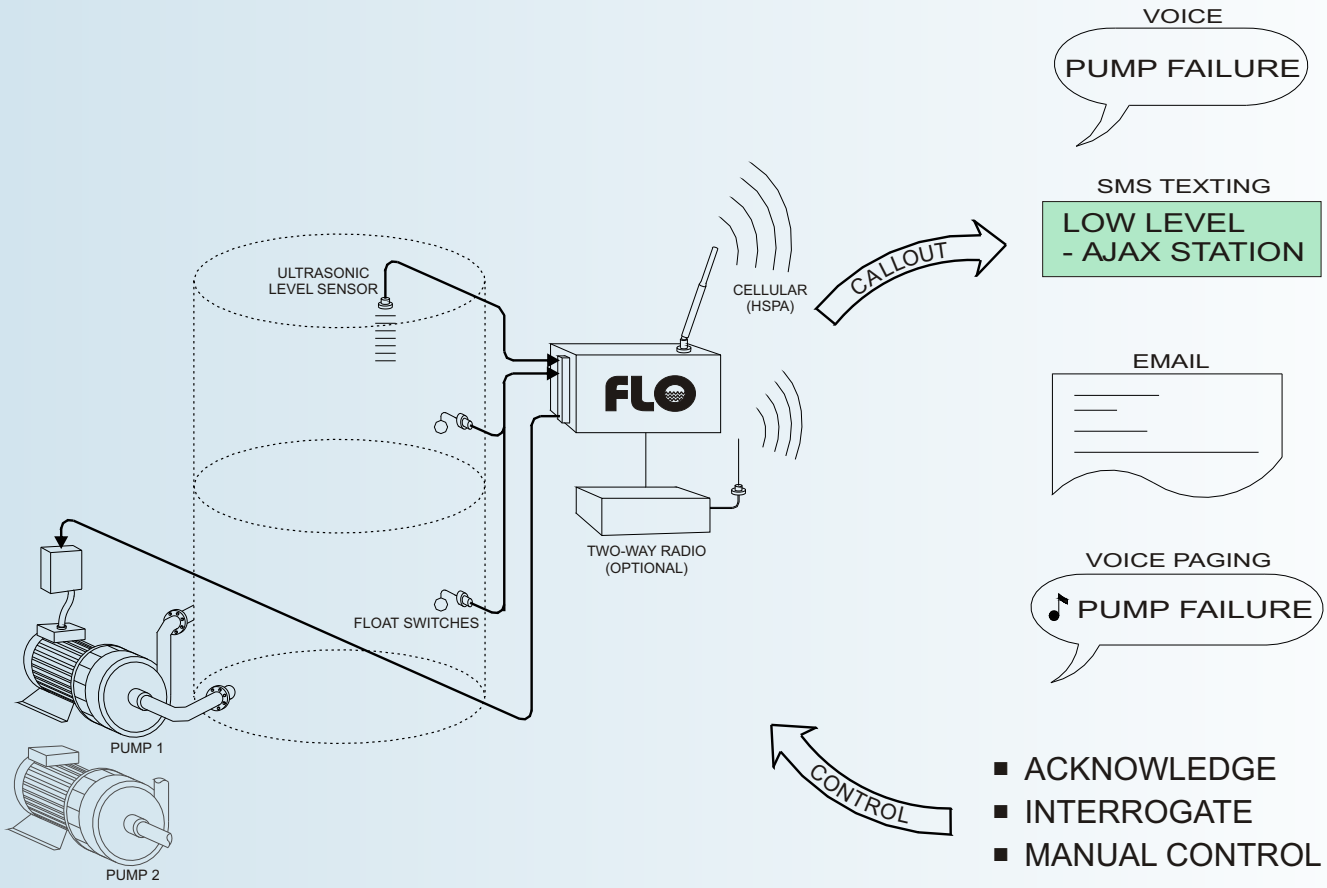

Key Features

- Tank levels can be monitored using an analog level transducer or up to five float switches with positions for Low Alarm level, High Alarm level, as well as Lead Pump On, Lag Pump on and All Pumps Off positions
- Fill or drain applications with provisions for single pump or dual pump with fixed or alternating lead pump selection
- Alarm notification of pump failures, tank level alarms, float switch failures, or user defined alarms including intrusion
- Data logging of pump starts and stops, tank level changes and all alarm conditions
- Daily health reports include current state and accumulated run times
- Integrated HSPA cellular module for alarm reporting callouts, SMS text messaging and Email reporting
- Two-way radio interface for alarm announcements on private radio systems or PA systems
- Intrinsically Safe rating for Class 1, Division 2 locations
- -30°C to +60°C temperature range

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Specifications

Physical	10” wide x 5.6” high x 3” deep Steel, powder coated matte black Mounting ears for panel installation
Environment	-30°C to + 60°C, 95% humidity, non-condensing
Connectors	Plug-in screw terminal block unless noted
Power	+9 to +30 VDC, negative ground, 1.0A Max. Internally fused at 1.85A Optional internal battery backup with built-in charger Charger operates with input voltages between +8 and +30 VDC 1.4 Ahr 12 volt battery
Alarm Inputs (10)	All inputs will withstand up to +30 VDC Inputs 1 to 6: Analog voltage mode: Impedance: 210k ohm Range: 0 to +5 or 0 to +30 VDC Digital mode: Internal 4.7k ohm pull-up resistor to +5 VDC Operates with ground closure Low state threshold of +2 VDC Inputs 7 to 10: Analog voltage mode: Impedance: 75k ohm Range: 0 to +5 or 0 to +30 VDC Analog current mode: Impedance: 100 ohm between pins, 75k ohm to ground Range: 4 to 20 mA Digital Mode: Internal 4.7k ohm pull-up resistor to +5 VDC Operates with ground closure, low state threshold of +2 VDC
Relay Outputs (4)	2 contact terminals per relay, programmable as normally open or normally closed Contact rating: 2A/30 VDC Dual coil latching relays - no continuous power required
Cellphone	SMA female antenna connector HSPA cellphone
Radio Port	TX audio: 600 ohms, single ended, capacitor coupled Adjustable between 0 dBm and -20 dBm RX audio 600 ohms, single ended, capacitor coupled Adjustable between 0 dBm and -20 dBm
Program Ports	Telset: RJ11 connector, internal telset bias from the primary power supply Operates with standard touch-tone telephones RS232: DB9 male connector, DTE USB: USB type B connector
Power Switch	Momentary pushbutton

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Programmable Features - General

Voice Messages	Site Name, Alarm Name and Relay Name user recorded, non-volatile. Can be recorded directly into the Flo unit.
Alarm Inputs	Inputs are programmable as analog or digital types: Independent on and off debounce intervals Momentary or latching alarm operation Digital Normally open or normally closed Can programmed to operate as: Discrete contact, Watchdog, Interval, Totalizer, Accumulator or Intrusion Analog Range: 0-5 VDC, 0-30 VDC or 4-20 mA (current inputs are 7 to 10 only) Maximum and minimum setpoints with adjustable hysteresis Scaling in engineering units Can be spoken with units such as percent, Volts, liters per second, etc.
Alarm Announcement	Selects whether all alarms or only new (unacknowledged) alarms are spoken.
Telephone Numbers	4 Directories, each with as many as 20 numbers.
Shifts	Up to 4 shifts can be used with automatic clock settings or manual DTMF code changes.
Interval Timer	Single or two stage timer controlling the interval between the last callout from a directory and when the callout starts over at the beginning of the directory.
Acknowledge Code	Stops the alarm reporting cycle when received. 1 to 7 digits.
Interrogate Code	Forces annunciation of all active alarms. 1 to 7 digits.
Access Code	Restricts remote access to only authorized users, 3 levels of security are available.
Relay Outputs	Normally open or normally closed. On/off, timed or Special function - alarm present or acknowledge receipt.
Relay Voices	Selects whether the state of enabled relays is spoken or not.
Reports	*Status Reports* containing the current system status including pump timers can be sent once a day, several times a day or on specific days. This report can be sent by voice, email, text or any combination of these. *Alarm Notifications* can be sent by email, text or both for alarm callouts, alarms cleared or alarms acknowledged. *Activity Summary Reports* containing the Event Log can be emailed on the day or days specified.
Radio Port	TX and RX level settings, PTT warmup interval, COS operation.
Email Settings	Carrier presets or custom SMPT server and APN SMPT server settings.
Update Firmware	Firmware upgrades and option activation can be done using this utility. Upgrade files are sent to the unit and the internal flash memory is updated. Options in the unit can be activated with the supplied option code.
Text Names	The site, alarms and relays can be assigned a text name of up to 16 characters in length. These names are used for identification in text messages and email. Other then their appearance in text based messages, the names have no affect on the operation of the unit or the spoken voices.

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Programmable Features - Specific to Pump Control

Tank Operation	Configure to drain or fill a tank Level measurement using analog sensor, float switches, or both
Analog Level Sensor	Range: 0-5VDC, 0-30VDC, or 4-20mA Various units available when reporting including meters, feet, gallons, and percent Setpoints for All Off, Lead Pump, and Lag Pump trip levels Additional setpoints for Low Alarm and High Alarm levels
Float Switch	Configure for normally open or normally closed state Inputs for All Off, Lead Pump, and Lag Pump levels Additional float switch inputs available for High and Low level alarms Stuck float switch detection
Pump Control	Configure for dual or single pump operation Configure for single Run output or dual Start/Stop outputs Dual pump operation alternates between pumps or maintains a fixed lead pump
Pump Monitoring	Monitors a run status for each pump and restarts or fails a pump that does not return a running state within a programmable time (optional) Monitors for an overload condition on each pump and shutsdown a failed pump. The overload condition can be sensed using an analog or digital signal and can be used to monitor for high current, high temperature, or leak detection (optional) Analog Overload range: 0-5VDC, 0-30VDC, 4-20mA One combined or two separate inputs are available for an HOA switch. This switch is needed to reset an overloaded pump and can also be used for manual operation.
Pump Operation	Programmable time intervals for startup and shutdown sequences include the minimum delay before starting a second pump, the minimum delay before stopping the second pump and the minimum delay before restarting a pump that has been stopped. Maximum runtime interval can create an alarm when a pump has been running longer that the specified time or can swap pump operation. Can use text messaging or DTMF to manually start or stop a pump remotely.
Available reports	Current tank level Current run state of each pump, or the alarm condition that has stopped it. The number of times each pump has been started in its lifetime, The current running time of each pump, The accumulated run time for this day for each pump The accumulated run time for the life of each pump

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