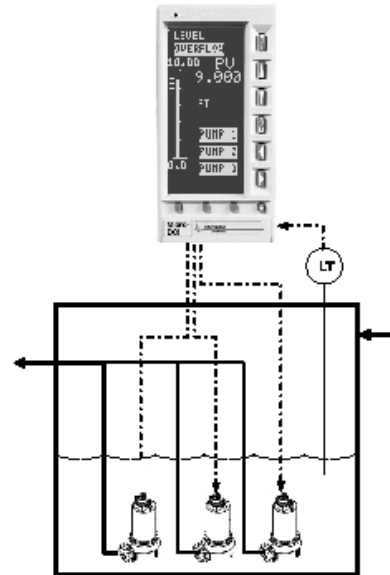


## WaterPAK Series PumpPAK Pump Controller

- **Pre-configured, no programming required**
- **Integral, highly visible display**
- **Control up to 3 constant or 2 variable speed pumps**
- **Lead/Lag program prevents uneven equipment wear**
- **Pump runtime hours and cycle displays**
- **I/O Status displays facilitate maintenance**
- **Application-specific installation & operation instructions**



### SYSTEM DESCRIPTION

PumpPAK is suitable for many applications including waste water lift stations, pressurizing water lines, wetwell or other tank levels, pressure in a tank, tower or master header, or anywhere multiple pumps are used to control a level or pressure.

PumpPAK is a pre-engineered, pre-programmed controller designed for applications where multiple pumps are required to control level or pressure. Each PumpPAK controller supports up to three constant speed pumps or two variable speed pumps based on level or pressure.

Preconfigured setup screens eliminate the need for programming and provide easy entry and customization of parameters specific to the application such as input ranges, pump start and stop limits, engineering units and alarm limits.

Independent start and stop points for are provided for each pump. Pumps are started in the sequence designated by the control program based on the incoming level or pressure signal and are alternated to provide even run times and prevent uneven wear on equipment.

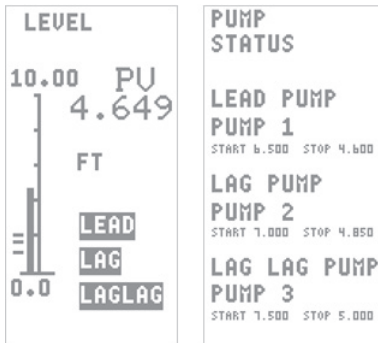
Indication of level or pressure, control output, individual pump run status, and pump start/stop points is provided on the integral display.

Alarms are provided for low, high, and high-high pressure or high, high-high and level overflow conditions. Pump run times and cycles are accumulated and indicated on the operator displays.

To facilitate maintenance, Indication of analog input and output milliamp values and digital I/O open or closed status is provided as part of the standard operating displays.

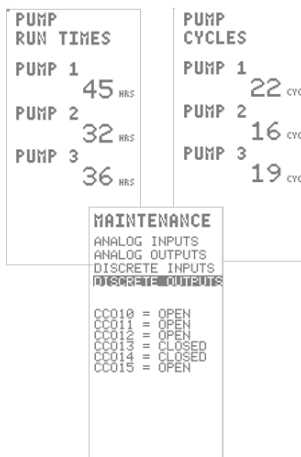
The PumpPAK control station combines advanced multiloop control with powerful sequence control capability. It has a high-visibility, dot-matrix display with clear, informative screens for ease of operation. The basic device includes the CPU, power supply, terminations, and operator display. The power supply is 110/220Vac or 24Vdc. Serial communications are included as standard for connection to an HMI or SCADA system.

The PumpPAK control station is pre-engineered and preconfigured for up to three pumps. The user selects the desired strategy and enters basic setup information from the front panel. Operating displays provide process indication and pump run status with lead/lag and start/stop limit indication. If only two pumps are used in the station, the third pump indication does not appear on the screens.



PumpPAK uses a LEAD/LAG control scheme to ensure even pump run times. The LEAD pump starts and run first. If one pump is insufficient and the level continues to rise, the second or LAG pump will be started at the user-defined limit. If the LEAD and LAG pump together are not sufficient, the controller starts the second LAG pump. A 10-second delay is programmed between the trip point and sending the start command to allow for surface ripples or waves. Pump alternation occurs when all pumps are off.

Maintenance displays provide indication of run time and on/off cycles for each pump. An I/O status display shows the electrical value and status of analog and digital inputs and outputs for troubleshooting purposes.



PumpPAK controllers are customized to each installation using just a few simple setup screens. Control strategy (level or pressure) and pump type, input range and engineering units, pump start and stop levels, and alarm limits are entered from the front display menus using the built-in keypad. Engineering units are selectable in feet or meters, psi or kPA. A new tagname can also be easily assigned by the user.

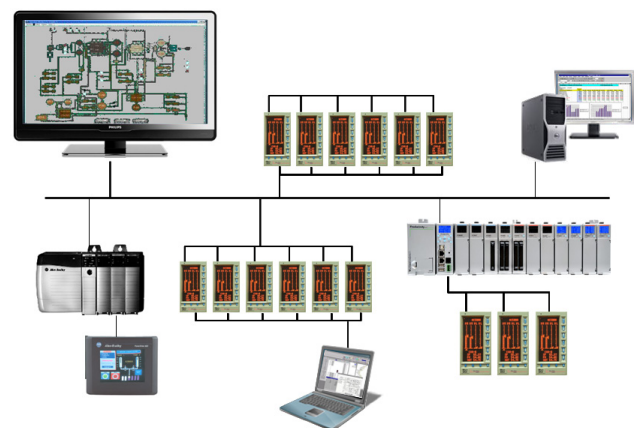


### PumpPAK OPTIONS

**Custom Application Engineering** - if the standard PumpPAK configuration doesn't meet your application needs or plant design, MicroMod can develop a cost-effective solution to improve your operating efficiency and optimize your energy consumption.

### Plantwide System

All the WaterPAK products can be integrated into a plantwide, Ethernet-based system with advanced operator stations, alarm/event logging and reporting. MicroMod provides the security of local dedicated control and operation together with the advantages of a PC-based control system, so you always have a window on the process.



**SPECIFICATIONS**

**INPUTS AND OUTPUTS**

**Analog Inputs (1) - Level or Pressure**

Signal Range: 0-20mA or 4-20ma, linear or square root  
 Resolution: 12 bit  
 Input Impedance: 1 megohm minimum for voltage inputs; value of ranging resistor for current signals.  
 Measurement Accuracy: +/-0.1% of span

**Analog Outputs (2)**

Pump Speed Control (variable speed pumps only) or Retransmission (constant speed pumps only)  
 Signal Range: 0 - 21.84 mA dc (4 - 20 mA dc typically)  
 Load Resistance: 0-750 ohms  
 Accuracy: +/- 0.2% of span

**Digital Inputs (3)**

Pump #1, #2 and #3 run status (limit 2 pumps with variable speed)  
 Pump #1, #2 and #3 seal status  
 Type: Internally powered discrete input with 4 volts @ 2 mA dc maximum  
 Permissible Contact Resistance: 100 ohm maximum

**Digital Outputs (6)**

Alarms 1, 2, 3 and 4  
 Pump #1, #2 and #3 Start/Stop (limit 2 with variable speed pumps)  
 Type: Unpowered discrete solid state output  
 Configuration: Single pole single throw, N.O., or N.C. referenced to power common.  
 Voltage: 30 V dc max.  
 Current: 50 mA dc max.

**OPERATING CHARACTERISTICS**

Power Requirements:  
 120 VAC +/- 10%, 50/60 Hz  
 220/240 VAC +/- 10%, 50/60 Hz  
 24 - 28 VDC  
 Power Consumption:  
 AC Operation: 36 W max  
 Available Power Output for Transmitters:  
 24-26V dc, 80 mA, short circuit protected  
 Output Ripple: 200 mV p-p maximum

**ENVIRONMENTAL CHARACTERISTICS**

Ambient Temperature Limits: 4 to 52°C (+40 to 125°F)  
 Relative Humidity Limits: 10 to 90% maximum  
 Temp. Effect on Accuracy: +/-0.28% per 28° (50°F) from reference temp. of 25°C (77°F)  
 Enclosure Classification: NEMA type 1/IEC 529 Type IP20

**PHYSICAL CHARACTERISTICS**

Dimensions:  
 2 27/32"W x 5 21/32"H x 12 26/32"L  
 (72 mm W x 144 mm H x 305 mm L)  
 Panel Cutout: 2 11/16"W x 5 7/16"H  
 (68 mm W x 138 mm H)  
 Weight: 5 lbs. (approximate)

**ORDERING INFORMATION**

PumpPAK is a licensed package. The following end-user information must be supplied with each package ordered:

End-user company name and complete address

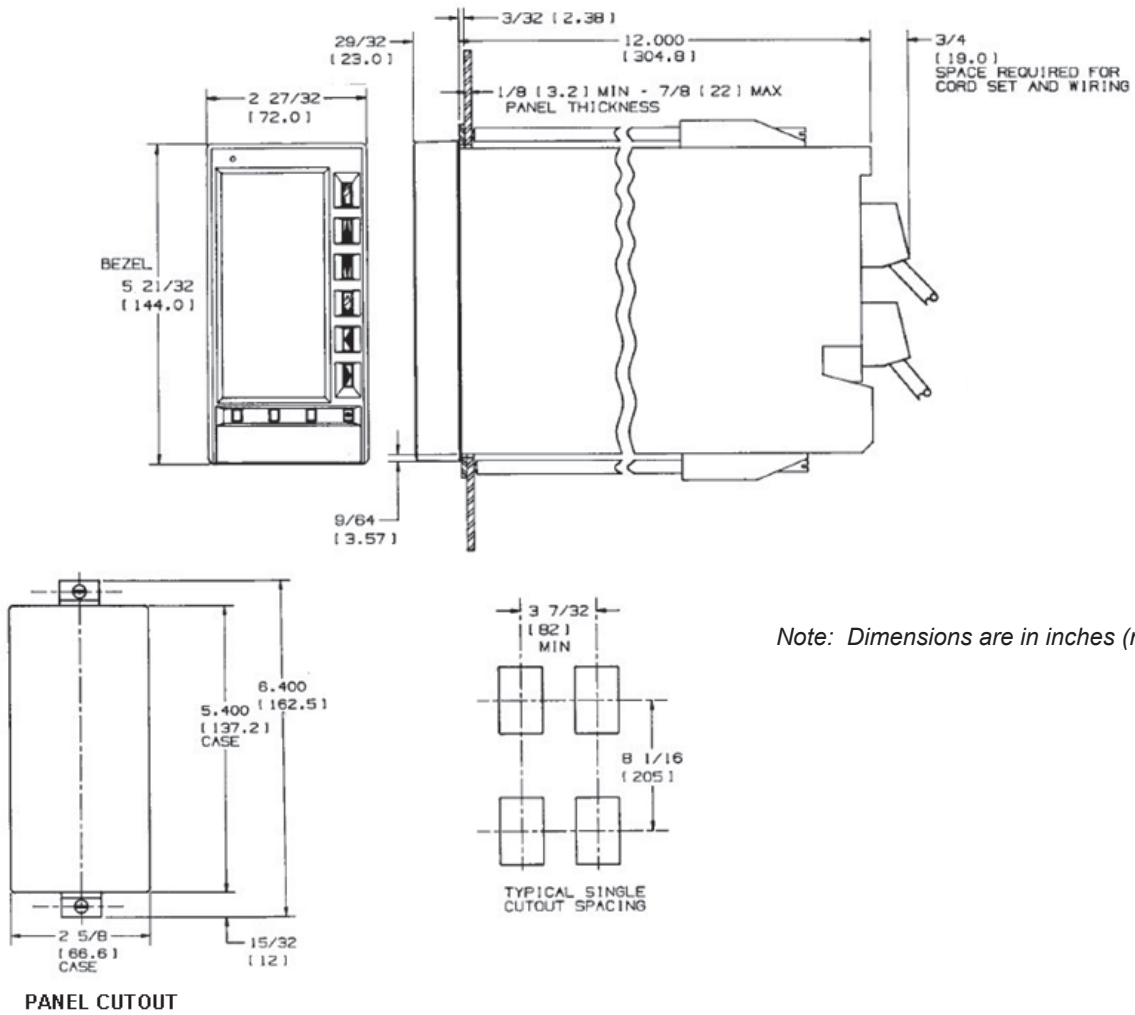
Contact Name

Telephone and fax numbers

Email address

	PUMP	___	___	___	B
	01 - 04	05	06	07	08
<b>PumpPAK</b> Pump Controller	PUMP				
<b>Functionality</b> Level or Pressure control		1			
<b>Power</b> 120-220Vac 24Vdc			1 2		
<b>Communication Option</b> Standard serial communications				0	
<b>Operator Language</b> English Spanish					E S
<b>Design Level</b> Design Level					B

**MOUNTING DIMENSIONS**



*Note: Dimensions are in inches (mm)*

**The Company's policy is one of continuous product improvement and the right is reserved to modify the information contained herein without notice.**

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