

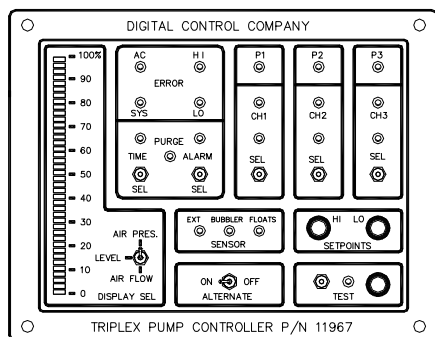


# Triplex Pump Controller II (TPC2)

## Model Number: 11967 (U.L. Listed)

(For Bubbler Systems, External Transducers, and Backup Float Switches)

Manufacturer of High Performance Instrumentation and Control Systems



### Description:

The Triplex Pump Controller II (TPC2) model 11967 is a control and display unit which automatically controls up to three single speed pumps and a bubbler type level measurement system. It is designed to be the heart of a triplex pump control system for lift stations, water tanks, and other fluid pumping applications. The TPC2 provides built-in pump alternation, pump start time delay, high and low level alarms. It can use any 4-20 mA level transmitter as well as backup float switches in addition to having up to two internal pressure transducers for level and pressure measurement. The controller automatically detects and uses the sensor type which is present and working. The TPC2 can be ordered with an optional bubbler system that can either be mounted onto a separate flat plate or installed inside a "U-Chassis" along with the TPC2 controller. The TPC2 also includes an RS-232 serial communications interface designed to support SCADA systems using a variety of Modbus based communication devices giving the unit remote data acquisition, monitoring, and control capability.

### Applications:

- Wastewater Pump Station Level Control
- Water and Wastewater Plant Level Control
- Storm Water Level Control
- Liquid Level Control for Tanks
- Landfill Leachate Level Monitoring and Control
- Holding Pond Level Control
- Most Liquid Level Control Applications

### Features:

- Controls up to 3 pumps with built-in alternation and time delay between pump starts.
- Accepts 2 types of sensors including any 4-20 mA level transmitter and float switches.
- Built-in bubbler level measurement control system with internal pressure transducers (optional) that operates up to 2 air compressors.
- Automatic purging to keep bubbler line clear.
- Manual bubbler line purge request input.
- Automatic air tank water drain valve control.
- Automatically selects a backup sensor in the event the primary sensor fails.
- On, Off, High, and Low setpoints adjustable from front panel or remotely via serial port.
- 40 segment bargraph displays level, setpoints, air tank pressure, and air flow rate through the bubbler line.
- External digital level display available.
- Pumps, air compressors, sensors, and alarms status indicators on front panel.
- Front panel test knob for simulated level input testing.
- 4-20 mA signal output proportional to level.
- RS-232 serial port for SCADA communications support.
- Uses non-volatile memory allowing system to retain program software and setpoints during power loss.
- Various specific gravities available to accurately measure most liquids.
- Proven software that allows for easy setup and reliability.
- Custom software available from factory.

### Specifications:

#### Input Power:

- Controller - 12 VAC  $\pm 10\%$ , 3 A max.
- Bubbler System - 115VAC  $\pm 10\%$ , 2 A min. (varies with air compressor size)

#### Operating Temperature Range:

- $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$ )

#### Accuracy:

- $\pm 1.0\%$  of full scale over temp range

#### Display Resolution: 2.5%

#### Ranges:

- 0 to 20 ft. standard (other ranges available)

#### Inputs (Non-isolated):

- 3 - Pump disables
- 5 - Float switches
- 1 - 4-20 mA level sensor

#### Relay Outputs:

- Pump 1, 2, and 3 - SPST Form A - 15 A at 125 VAC
- High and Low Alarm - SPDT Form C - 10 A at 125 VAC

#### Discrete Outputs:

- Air Pump and System Error - Open Drain FET, Non-isolated

#### 4-20 mA Current Loop Output:

- Non-isolated transmitter
- Total compliance of 12 VDC

#### Transient Protection:

- Metal Oxide Varistor

#### Interconnect:

- Pluggable terminal blocks (screw type)
- Relays - quick connect terminals (#250 tab)
- DE-9 Connector for RS-232 Bus

#### Communications Protocol:

- Modbus ASCII

#### External Dimensions:

- Controller - 6.10"H x 7.70"W x 3.70"D
- Air Tank - 18.60"H x 4.00"W/D
- Bubbler Flat Plate - 10.90"H x 9.25"W x 4.0"D
- "U-Chassis" - 12.85"H x 11.0"W x 5.625"D

#### UL File Number:

- E201217



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