



**New!
Improved!**

MODEL 2411 DUPLEX PUMP CONTROLLER

.... *A reliable, versatile unit designed for duplex control and alternation for basins, wetwells, tanks, etc...*

FEATURES

- Extremely accurate, repeatable and easy to use.
- Each output may be individually programmed for PUMP UP or PUMP DOWN operation.
- Digital indication of process variable and setpoints in desired engineering units.
- Setpoints are adjusted from front of instrument via 25-turn potentiometers.
- LED output status indicators.
- Standard and optional time delays are available to override system surging during operation and startup.

DESCRIPTION

The Essex Engineering Model 2411 Duplex Pump Controller is designed specifically for controlling the filling and emptying of tanks, vats or basins by means of two pumps. It accepts standard input signal levels of 1-5 VDC, 4-20 mADC and special ranges from a continuous level or pressure transmitter.

The incoming analog process signal is displayed on the front of the instrument via a 3-1/2 digit LED readout. This same display is also used to set the various turn-on and turn-off points for the control and alarm functions.

Two control outputs are available to activate remote relays. Each has an independent turn-on/turn-off setting of 0 to 100% of full scale. An indicator lamp is illuminated when its output is energized. Turn-on and turn-off points are set by means of their associated 25-turn potentiometers on the face of the instrument. A control knob is used to select each point to be calibrated and a red bar lights adjacent to the potentiometer being calibrated. The lead unit is indicated via green LED's which are adjacent to the #1-Alternate-#2 selector switch. The switch provides for manual override of the alternation cycle.

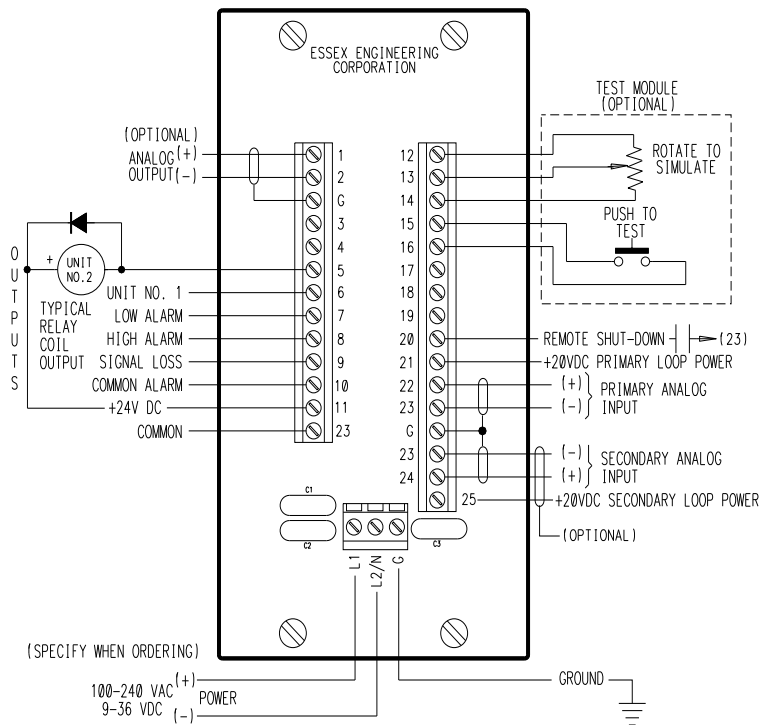


Fill/empty action is field selectable for each control point via the setpoints. Three alarms, each of which has an LED indicator, are provided. These are high and low level, with a signal loss causing the red signal loss LED to flash when activated. The 2411 Controller may be field programmed, via internal DIP switches, to deenergize the control outputs when any alarm condition occurs. An external input signal is also available to deactivate the control and/or alarms when activated.

Standard with the unit is a time delay of approximately 6 seconds per step to inhibit control and alarm action on power up. This allows system parameters to stabilize before the controller initiates a response and stagger starts multiple devices if required. An optional time delay board is available to provide additional timing functions.

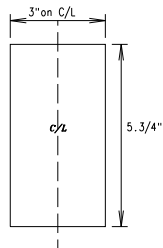
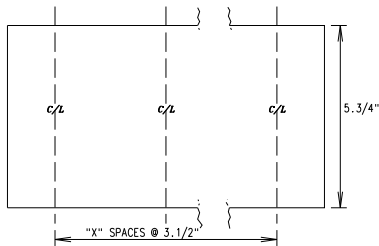
Also available, as an option, is a second sensor input. Upon failure of the primary sensor, the unit will automatically switch to the secondary sensor, light the signal loss LED and provide an alarm output.

ELECTRICAL CONNECTIONS

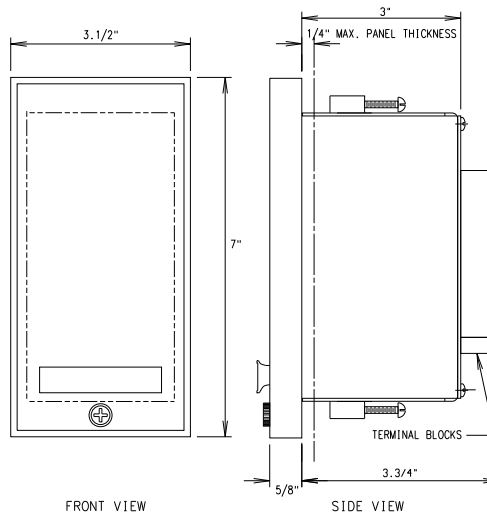


(SPECIFY WHEN ORDERING)

100-240 VAC (+)
9-36 VDC (-)



CUTOUT DIMENSIONS



FRONT VIEW

SIDE VIEW

OVERALL DIMENSIONS

MODEL 2411 SPECIFICATIONS

AMBIENT OPERATING TEMPERATURE RANGE
0 to 40 °C

POWER INPUT

100-240 VAC - 15W max.
9-30 VDC - 20W max.

ANALOG INPUTS

4-20 mA DC @ 250Ω impedance
1-5 VDC @ 100KΩ impedance
Factory specials

ANALOG OUTPUTS

Standard has NONE.
Optional: Isolated 4-20mA DC @ 0-800Ω Load

CONTROL INPUTS

Contact closure or NPN transistor; 10 mA DC max. @ 24 VDC

CONTROL OUTPUTS

NPN solid state output; 50 VDC @ 60 mA DC max. per point;
2 outputs for unit operation; 3 outputs for alarm indication;
1 output for common alarm indication.

INDICATORS

3-1/2 digit, 0.56" LED type display
Control Output - amber LED
Alarm Output - red LED
Signal Loss - flashing red LED
Power - Flashing green LED @ power up/steady after power up

REPEATABILITY & ACCURACY

0.2% of span, ± 1 of least significant digit

TIME DELAYS

Standard: 6 second stepping time delay during power up. Total of 12 second time delay to sequentially activate outputs when unit is initially powered to stagger start devices (stagger start can be bypassed via selector switch).

Optional: 0.2 to 60 second, or special range, field adjustable time delay for ON and ALARM timing of each point.

REPRESENTED BY



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