


- 4 DIGIT BACKLIT LCD DISPLAY
- NEMA 4X ENCLOSURE
- EASY CONFIGURATION
- SIMPLEX / DUPLEX / TRIPLEX OPERATION
- PUMP ALTERNATION
- 10A FORM C RELAYS
-  US LISTED 51JB
- OPTIONAL DATA LOGGING FEATURE



GENERAL DESCRIPTION

The Model 3660 Pump Controller is designed to be a simple and robust pump controller in either a simplex, duplex, or triplex installation. The enclosure is wall mounted, but can be mounted to a vertical or a horizontal pipe with an optional bracket. The enclosure and the included strain reliefs are rated NEMA-4X. A separate hatch is used to access the wiring points, which are screw clamp terminals suitable for 22-14 AWG wire. The input signal wiring is separated from the power and control wiring by individual input ports and a physical barrier between the wiring points.

The circuitry is protected from transients by utilizing suppression devices and fused power lines. The standard input is a 4 to 20mA signal from a 2-wire level transmitter, which can be powered from the 24VDC output.

The hinged cover has a push button catch to facilitate access. The controls consist of a rotary switch to select the function to display, four pushbuttons used in editing values, and an 8 pole DIP switch that controls various operational features. Bright lamps indicate the control and operational error status.

The versatility of this controller is expanded by the ability to set the auxiliary relay (AUX) to operate in a variety of ways. Set control for a jockey pump, an alternating pump, a high / low alarm, or a level within limits indicator. Input failure detection triggers a system error for invalid input signal levels. A system error activates the error relay and deactivates the control relays, which disables pump operation, preventing the pumps from running dry.



ISO 9001

MODEL 3660 SPECIFICATIONS

Enclosure: Surface mounted molded polycarbonate type rated NEMA 4X. NEMA-4X strain reliefs included.

Display: High contrast four digit backlit LCD, 0.5 inch high, 7 segment numeric characters. Display legible in total darkness and direct sunlight. Design allows scaling as desired within character range of -1999 to 9999 counts.

Indicator Lamps:

Amber: PUMP A, PUMP B and AUX.; Red: Error.; Green: Edit Enabled (Setup Mode vs. Control mode).

Electrical Connections: screw clamp terminals 22-14AWG.

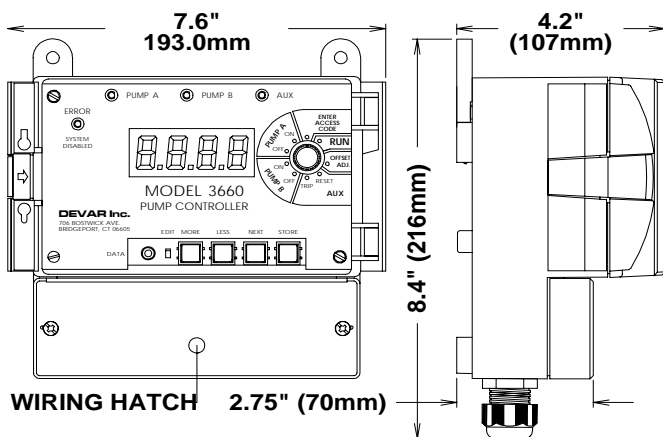
Pump A, B, and AUX Relay Contacts: SPDT (form C); 10 amps, 250VAC; 8 amps, 24VDC resistive; 1/3 HP, 120VAC; 1/2 HP, 240VAC

Error Relay Contacts: SPDT (form C); Max switched power: 30W DC, 60VA AC. Do not exceed 120VAC, 150VDC, or 1A.

Power:

Standard 115VAC at 50/60 Hz, 4VA
Option -230: switch selectable 115/230VAC
Protection: each line fused, with MOV suppressors across each phase
Option -DC: 9.5VDC to 30VDC, 2.5W (typical)
Protection: fused with zener diode transient suppression device

Cabling: (1) 16mm and (3) 20mm knockouts;
(1) 16mm strain relief accepts 5-10mm or 0.2-0.4" dia. cable;
(3) 20mm strain relief accepts 6-12mm or 0.24-0.47" dia.cable



Weight: 2.25 lbs

DEVAR Inc.

706 Bostwick Ave.,
Bridgeport, CT 06605-2396

Input: 4/20 mA standard; (0/20mA, 0/10V, 0/5V, 1/5V optional)

Input Impedance:

(Current Input) 20 ohm + 2 diode drops ~ 2V
(Voltage Input) 1 M Ohm

Loop Supply:

Regulated 24VDC with 300ohm inline impedance, (-) side grounded. Output current limited to 26mA.

Protection: 1/4A fuse, (2) transient suppression devices

AC Performance

Common Mode Rejection: Greater than 120 dB at 50/60 Hz
Normal Mode Rejection: Greater than 64 dB at 50/60 Hz
-3dB frequency: 6Hz

DC Performance

A/D converter: 16 bit resolution, self calibrating.
Basic Accuracy: $\pm 0.003\%$ of full scale input range
Reference Temperature Coefficient: ± 50 ppm per $^{\circ}\text{C}$

Setup Security: A four digit access code prevents unauthorized or accidental modification of the control points. Each configuration value (such as scaling, input failure detection, AUX control method) can be modified only after being enabled with a DIP switch.

Pump Control Points: Each channel has independently settable ON and OFF points (up to 100% deadband). Pump up or down control is determined by the relative values of the ON and OFF points. Pump alternation is enabled by flipping a switch.

AUX Control Points: independent TRIP and RESET points, (up to 100% deadband). Control action depends on AUX mode.

Aux Operation Modes:

- (Ctrl) Pump Control: won't alternate with A and B
- (Alt) Pump Control: Alternates with A and B
- (Alm) Alarm goes into alarm state on loss of power.
- (Insd) Inside: tripped when process within set points (for level within limits)
- (Out) Outside: tripped when process outside set points (for a high/low alarm)

User Configurable Operational Parameters:

- Control Points:
Pump A On / Off, Pump B On / Off, AUX Trip / Reset
- Offset Adjust: Adjust display for sensor position
- Setup:
Display Scaling: Max / Min/ Decimal Point
- Input Failure Detection: Min / Max(define valid input range) Select AUX Function
- Edit Access Code

Error Alarm: Triggered by failure of A/D converter, microprocessor, or rotary switch, or an invalid input level.

Operating Temperature: -20 to 70 $^{\circ}\text{C}$

WARRANTY: 2 YEARS, *Made in USA*

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