DeZURIK ECB-CP
PUMP & CONTROL VALVE INTERFACE FOR SOLENOID CONTROLLED VALVES

Design & Construction
The DeZURIK ECB-CP Pump & Control Valve Interface for Solenoid Controlled Valves is designed to provide control between the pump and pump control valve to minimize pressure surges in the system when the pump starts and stops. The pre-programmed controller properly sequences and controls the pump and pump control valve start-up and shut-down procedure, thereby protecting the pumping system from damage due to mechanical, hydraulic or power failure. The pre-programmed controller is designed to be used with all DeZURIK pump control valves, and is suitable for booster pump and deep well applications.

Local Control Buttons
Local control buttons are mounted on the door of the electrical control box interface: LOR (Local-Off-Remote) switch for remote or local operation; pump start & pump stop buttons; and an emergency stop button. Normal pump start-up can be initiated by turning the LOR switch to “Local” and pressing the “Start Pump” button, or by a remote contact closure when the LOR switch is in the “Remote” position. Normal pump shutdown can be initiated by pressing the Pump Stop button when in “Local” mode, or by remotely breaking the contacts with the LOR switch in the “Remote” position. The Emergency Stop button can be activated at any time to initiate an emergency pump shut-down sequence.

Visual Indication of System Status
Throughout all modes of operation, the controller provides visual indication of system status. The colored lights indicate normal operation and alarm conditions of the pump and control valve. Pump run/off, pressure switch and valve open/closed status are displayed with colored indicator lights. The Time for System to Build Pressure and the Time for Valve to Open are displayed as time in seconds, while the emergency and normal solenoid status indicates if the solenoid valves are energized or de-energized.
Likewise, the valve can be set to open in a configurable amount of time after the normal solenoid pilot valve is energized. If the valve does not open within the set time, the pump is shut off and a failure message indicates that “Valve Did Not Open On Start-Up.”

The Power Failure Delay Timer controls the delay time for automatic pump re-start following a power failure. The pump cannot be restarted until the timer expires.

**Automatic Pump Shutdown in Emergency Situations**

If the pump or valve should malfunction any time during the pumping operation, the ECB-CP Interface will automatically shut down the pump. If this happens, the “Pressure” indicator light will turn white, the pump will turn off and all solenoid valves are de-energized. The valve closes and one of five pre-programmed Alarm Condition messages is displayed.

**Five Pre-Programmed Alarm Conditions**

If power, pump or valve failure occur, the controller will display the appropriate alarm flag:

1. Failure Mode 1 = Insufficient Pump Pressure
2. Failure Mode 2 = Valve Did Not Open on Start-Up
3. Failure Mode 3 = Loss of Pressure to Pressure Switch
4. Failure Mode 4 = Valve Closed Without Command (Illustrated below)
5. Failure Mode 5 = Power Failure Delay

**Configurable Timers Control Sequence Time**

The ECB-CP Interface includes three sequence timers: Build Pressure Timer, Valve Open Timer and Power Failure Delay Timer. After the pump has been started, the system has the configurable amount of time to build pressure. If the system does not build sufficient pressure in the allotted time, the ECB-CP Interface will display a failure message and shut down the pump to prevent system damage.
**Minimum Field Wiring Required**

The ECB-CP Pump & Control Valve Interface is manufactured to insure a minimum amount of field wiring. Easy-to-access terminal block includes connections for solenoid valve controls, valve limit switch, pump starter relay, remote automatic contact and pressure switch.

**Heavy-Duty Enclosure**

The controller is housed in a NEMA 4X rated, molded fiberglass polyester enclosure with enhanced UV inhibitors to protect it from ultraviolet (UV) light. The enclosure features a polycarbonate window, gasketed door, continuous stainless steel hinge, stainless steel twist/latch door fasteners with lockable door hasps. Stainless steel mounting brackets and hardware are provided for mounting to the rear of the enclosure.

**Ordering**

To order, enter code ACC*ECB-CP as a separate line item on the order.
**Dimensions**

**ECB-CP Enclosure**

**Physical Dimensions**

![Dimensions Diagram](image)

**Mounting Dimensions:**

1. NEMA 4X Enclosure
2. ECB-CP Controller
3. Power Supply 24VDC @ 40Watts
4. 5A Circuit Breaker
5. 5A Fuse Protection
6. (3) Mechanical Relay
7. Din Rail
8. Wiring Ducting
9. 3-Position Switch
10. Start Pump Switch – Green
11. Stop Pump Switch – Red
12. Emergency Stop Button - Red

**Components**

![Components Diagram](image)

**Sales and Service**

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: www.dezurik.com  E-Mail: info@dezurik.com

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