



Chase Controls Corp.

Manufactured By IDX Inc.

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El Dorado, AR 71730
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Product Data Sheet

Duplex Pump Pak

Features:

- HOA (Hand-Off-Automatic) Buttons control pump mode and indication
- Pump Run/Fail Indicators illuminates “Green” when the pump is running and illuminates “Red” when pump fails.
- Seal Fail Indicators illuminates “Yellow” if pump seal fail sensor is activated
- High Temperature Indicators illuminates “Red” and fails pump if pump High Temperature is activated.
- Red Alarm Beacon
- Alarm Horn provides audio warning of alarm condition (83—85 decibel)
- Alarm Test/Silence Button allow horn and light to be tested and horn to be silenced in alarm condition
- IEC Motor Contactors w/ Overload Relay
- Panel Disconnect Switch
- Large Panel Connection / Power Terminal Blocks
- Ground Lugs
- Enclosure 16 X 14 X 8 inches, NEMA 4X



Optional Features:

- “SumpMate” level transducer provides continuous level monitoring. Float inputs can be used as float backup mode.
- 4” Monochrome or 6” Color Touch Display provides a means of adjusting pump activation level set points, if “SumpMate” level transducer is used. This option also provides graphical level and float monitoring, pump cycles (starts) and elapse time (runtime) for each pump, and allows the seal fail alarm to be configured as a warning or pump fail condition.
- SCADA Option—Allows the Pump-Pak to communicate, Alarm, Status, Level, and Activation Level Set Point information via the industry standard Modbus protocol, to a SCADA Supervisory Control and Data Acquisition system.

The Chase Controls “Pump-Pak” single phase capacitor (Start/Run) duplex control panel is designed to control two 208, or 240 VAC single phase pumps in water and wastewater applications up to 10HP. The “Pump-Pak” features a simple touch pad on the inner door for controlling, and monitoring pump operation. An optional Graphical Touch Display is available for programming, status, level and float operation monitoring. The standard “Pump-Pak” operates with for wet well level switches, Pump Lead Start, Pump Lag Start, Pump Stop, and High Level Alarm.

The optional “SumpMate” level sensor is a pressure transducer that senses the liquid level in the wet well and sends an 4-20ma analog signal to the “Pump-Pak”. Pump activation level set points can be adjusted by using the Graphical Touch Display.



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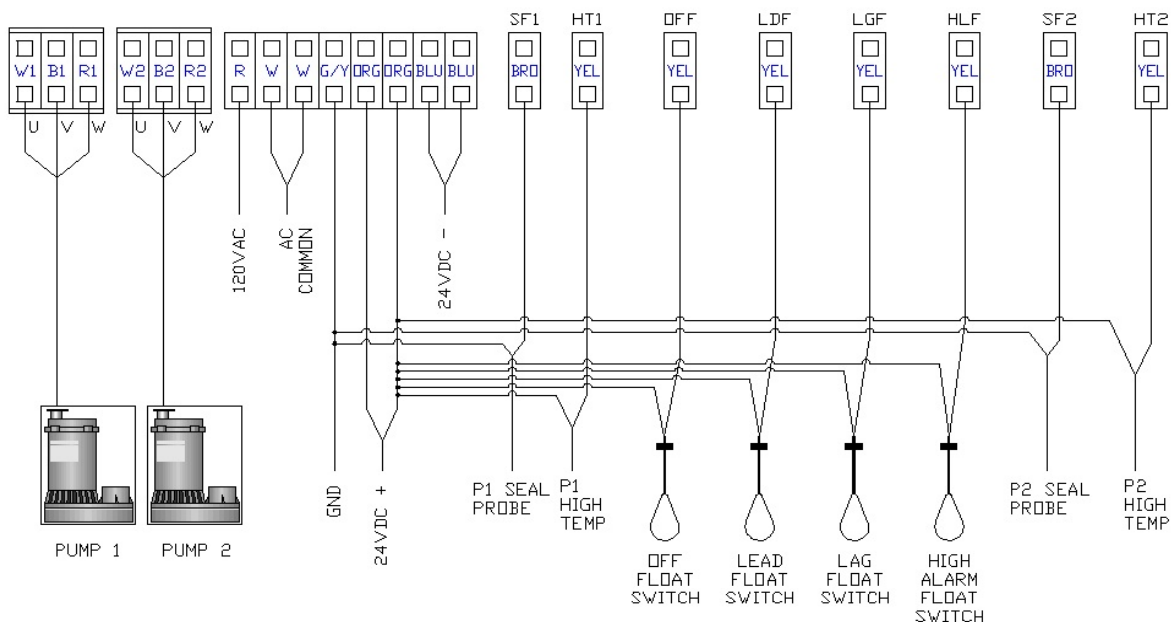


Duplex Pump Pak

Float Control Specifications:

- Pump-Pak Control Circuit Board provides pump control and alternation. Control Inputs 24VDC, 24-120 VAC, Control Outputs Dry Contact SPST Relay 5 Amp.
- Pump Run/Fail Indicators illuminates “Green” when the pump is running and illuminates “Red” when pump fails.
- Seal Fail Indicators illuminates “Yellow” if pump seal fail sensor is activated
- High Temperature Indicators illuminates “Red” and fails pump if pump High Temperature is activated.
- Red Alarm Beacon provides 360 degree visual check of alarm condition.
- Alarm Horn provides audio warning of alarm condition (83—85 decibel)
- Alarm Test/Silence Button allow horn and light to be tested and horn to be silenced in alarm condition. Alarm automatically resets once alarm condition is cleared.
- 5 Amp Control Circuit Fuse
- 24VDC Internal Control Circuit Power Supply
- IEC Motor Contactors w/ Overload Relay control pumps by switching pump electrical lines
- Supply Power Panel Disconnect Switch
- Stainless Steel Internal Isolation Panel
- HOA Push Button Switches for manual pump control.
- Large Panel Connection / Power Terminal Blocks
- Float Switch and Control Signal Terminal Blocks
- Improper Float Sequence Logic included to prevent overflow incase of float failure.
- Ground Lugs
- Enclosure 16 X 14 X 8 inches, NEMA 4X, (Ultraviolet stabilized thermoplastic with removable mounting flanges)

Terminal Wiring Information





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Duplex System Operations

Chase Controls Pump-Pak panels are designed to operate with three or four floats for pump sequencing. The standard float functions are common pump off, lead pump start, lag pump start (three floats), and alarm (four floats).

Float Operation: As the liquid level rises pass the off float and tips it to the ON (Closed) position, the panel will remain inactive. As the liquid level tips the lead float, the lead pump will start. If the liquid level continues to rise and tips the lag float, the lag pump will start. Both Pumps will remain ON until the liquid level drops below the off float, and all floats are in the OFF (Open) position. When both pumps have stopped running, the control board alternator will switch the lead pump and lag pump operating functions in the next sequence.

If a pump fails to start the alternator will also switch the lead and lag pump operating functions. And a pump fail alarm is activated.

If the liquid rises and tips the alarm float to the ON (Closed) position the high level alarm is activated.

Alarm Indicator and Horn:

When an alarm condition occurs, a red light and a horn will be activated. If the test/reset/silence button is pressed, the horn will be silenced. When the alarm condition is cleared, the alarm system is reset. The alarm system can be tested by pressing the test/reset/silence button during normal, non-alarm operation.

HOA Switch:

A hand-off-automatic switch is provided for each pump. In the hand mode, the pump will turn ON unless other safety features are employed. In the automatic mode, the pump will turn ON from commands by the float switches.

Pump Run Lights:

Each pump has a run light. The run light will be ON in either the hand or automatic mode when the pump is called to run, and the motor contactor has engaged.

Control / Alarm Light:

The alarm light will illuminate when an alarm condition exist, such as a high alarm float is tipped, a pump has failed to start, or a pump thermal sensor has opened.

Motor Protective Switch:

A motor protective switch is supplied for each pump to provide an adjustable overload, branch circuit protection and disconnect. The overload must be set in the field. To set the overload, dial the amp scale to the pump's full load amp rating (FLA). If the FLA's are unknown, use a calibrated amp meter to measure the pump amperage draw under loaded conditions. An auxiliary contact is wired in series with the magnetic contactor coil so that on an overload trip, the motor protective switch must be reset.

Seal Failure Circuit and Indicator Light:

The seal fail circuit has resistance sensitivity and will sense the presence of water in the pump seal chamber. Upon installation, turn the sensitivity dial on the seal fail module to the point where the light turns ON, then dial back slowly until the light turns OFF. If water enters the seal chamber at this point, the seal fail circuit will sense the change in resistance. After a short time delay, the indicator light will turn ON. When the condition is cleared, the seal fail circuit will de-energize and the indicator light will turn OFF.

Thermal Cutout:

The thermal cutout is wired in series with the magnetic contactor coil. If the pump's thermal switch opens on high temperature, the contactor will turn off and stop the pump. A pump fail alarm is activated, which will also activate the alarm light and horn. When the thermal switch cools and closes, the pump will remain in a fail state until the pumps HOA switch, OFF position is selected, which will clear the pump fail, and allow the magnetic contactor to turn on if the pump is called to run.