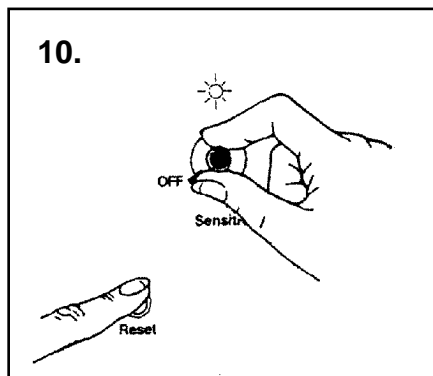
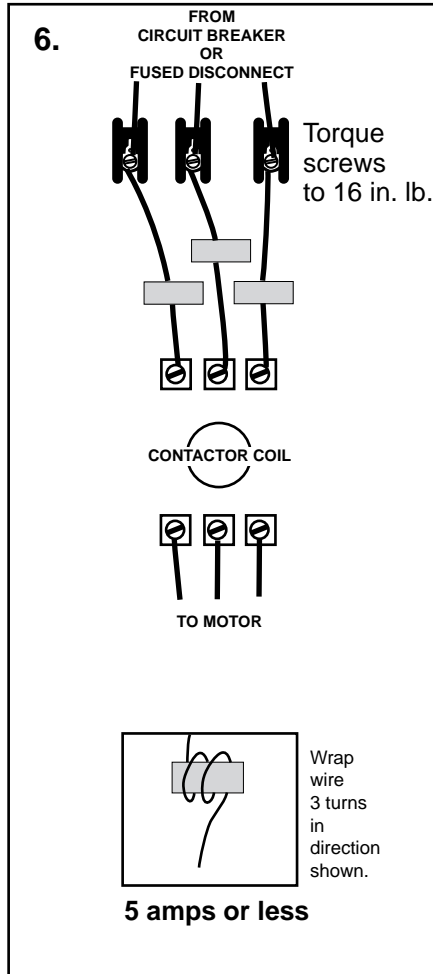


## MODEL 3PH-ALL



1. Turn power OFF.
2. Connect yellow wire in upper left corner to terminal screw that identifies your voltage.
3. Connect power from fused disconnect to L1, L2, and L3.

Use HIGH HORSEPOWER wiring diagram (see inside flap) for wire size larger than #10.

4. Turn power ON. Phase light should be off. If phase light is lit, turn power OFF, reverse connections at L1 and L2, and test again.
5. Turn power OFF.
6. Connect L1, L2, and L3 to magnetic contactor.

Pass each wire FROM TOP DOWN through the sensor below its terminal. Do not crisscross the wires.

For motors drawing less than 5 amps, loop each wire three times around sensor and do all three sensors identically.

### 7. IF YOU ARE ADDING THE COYOTE TO AN EXISTING SYSTEM:

Find any one wire that provides power to the coil and cut that wire in two; then put one end under one of the Coyote's control screws and the other end under the other control screw.  
FOR OTHER INSTALLATIONS open the flap.

8. If you want to activate an alarm, see diagram inside flap.
9. Turn **SENSITIVITY knob to OFF.**
10. Run pump at MAXIMUM FLOW (lowest pressure) depress RESET button and HOLD IT IN CONTINUOUSLY while turning SENSITIVITY knob clockwise until light above it is on steadily. **KEEP RESET BUTTON DEPRESSED for one full second while light is lit. Overload light will blink once to indicate it has memorized normal running current. Properly tuned knob will be a bit on either side of high noon. If pump runs backward on start-up, reverse M1 and M2 at bottom of contactor, not at Coyote.**

*NOTE: Now programmed, knob controls underload (run dry) only. Turning sensitivity knob clockwise past where light is brightest makes Coyote more sensitive to underload, counter-clockwise less so. Overload uses current in memory.*

11. **Wait and verify that pump shuts off when it breaks suction.**
12. **Set run-dry timer.**

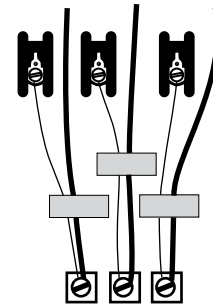
## TYPICAL INSTALLATION HIGH HORSEPOWER

1. THE WIRES THAT CARRY THE MOTOR LOAD PASS THROUGH THE SENSORS BUT DO NOT ATTACH TO L1, L2, AND L3.

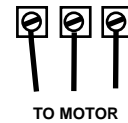
2. A SECOND SET OF SMALLER WIRES IS USED TO POWER COYOTE.

IT IS CRITICAL THAT EACH LARGE AND SMALL WIRE BE PAIRED CONTINUOUSLY AND THAT THE SMALL WIRE ATTACH TO THE TERMINAL SCREW DIRECTLY ABOVE THE SENSOR THROUGH WHICH THEY PASS. DO NOT CRISSCROSS THE WIRES.

FROM  
CIRCUIT BREAKER  
OR  
FUDED DISCONNECT

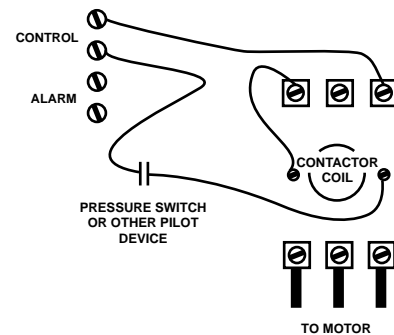


CONTACTOR COIL

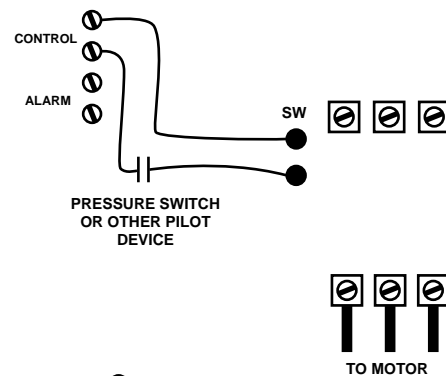


TO MOTOR

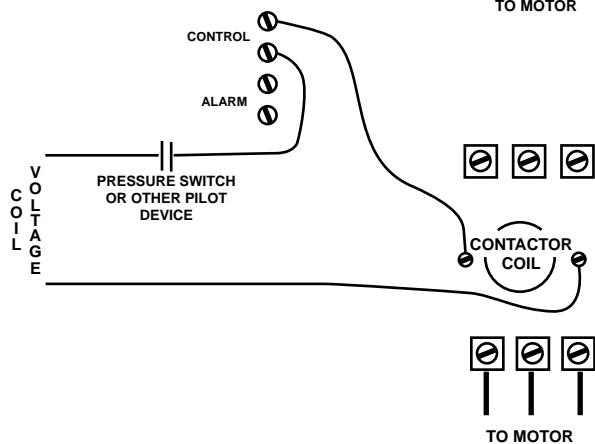
IF THE COIL VOLTAGE IS THE SAME AS THE LINE VOLTAGE AND THE CONNECTIONS TO THE COIL ARE EXTERNAL, WIRE THE COIL LIKE THIS:





IF THE VOLTAGE TO THE COIL IS INTERNAL (FURNAS STARTER FOR EXAMPLE) WIRE THE COIL LIKE THIS:



IF THE COIL VOLTAGE IS DIFFERENT FROM THE LINE VOLTAGE WIRE THE COIL LIKE THIS:



## JUMPERS

Along the bottom edge are five jumpers marked **J1 J2 J3 J4 J5**. Just above each one is a pair of holes attached together by a trace.  Cutting that trace with a razor blade or pocket knife  sends Coyote a message. To verify that the trace has been cut, resistance between the two holes will be 22,000 ohms cut, 0 ohms uncut.

**Cut J1** and Coyote will wait five minutes when the pump starts up before shutting down on running dry (underload). Generally used on self priming centrifugals pulling from a pond through an empty suction line.

**Cut J2** and the overload trip value changes from 120% to 200% After cutting this jumper be sure to reprogram Coyote (see instruction # 10) to store this new value.

**Cut J3** and the alarm contact will not close on running dry (underload) only. All other faults still activate the alarm contact.

**Cut J4** and Coyote will ignore underload and overload faults for fifteen seconds when the pump starts. This may be needed if you are using a soft start.

**Cut J5** and the tolerance for a voltage fault increases from 10% to 15% of normal.

| Symptom                      | Possible Cause  |
|------------------------------|---|
| Phase light                  | One leg of three-phase missing.<br>Two phases reversed on line side of Coyote.  |
| Voltage light                | Voltage too high or too low.<br>Voltage selector in upper left corner is set to wrong voltage   |
| Overload light               | Excess current draw.<br>Broken wire to motor.<br>Waterlogged tank.  |
| Underload light              | Pump ran out of fluid.<br>Pump gas locked or air locked.  |
| No lights but pump won't run | Power is off.<br>Pressure switch or other pilot device contacts are open.   |
| Coyote won't program         | Pump running backwards.<br>Taking knob from OFF position before pushing RESET.<br>Taking too long to tune in light--more than 6 seconds |

## Helpful Information

When first powering up Coyote at breaker or disconnect, there is a delay of 4 to 10 seconds before Coyote turns on the pump.

It is normal for the sensitivity light to go out as the water level in the well is drawn down or the pressure fluctuates because these changes affect the current drawn by the motor. Do not readjust the knob; keep it tuned for maximum flow (lowest pressure).

If Coyote shuts down the pump due to phase or voltage, it auto-matically restarts one minute after proper power is restored.

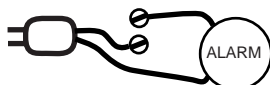
If Coyote shuts down the pump due to overload, it will try twice to restart at one minute intervals. If the overcurrent persists, the overload light changes from on-steady to blinking and no further restarts are attempted so as not to burn out a motor winding.

If Coyote shuts down the pump due to underload (lack of fluid), it restarts after waiting the interval set by the timer knob. This device does not provide running overcurrent protection in accordance with the National Electrical Code.

### ALARM

Normally open dry contact closes to activate alarm on any fault condition.

Torque screws to 9 in.lb.



**To be installed and serviced by electrician or pump specialist only. Ground properly for safety.**

**COYOTE MANUFACTURING INC.**  
Broomfield, Colorado  
800-468-1177