

T260 Duplex Alternating Control Panel Information Sheet

Panel Basics

Service Safety: Only people trained in electrical safety and on Environment One equipment should work on these controls.

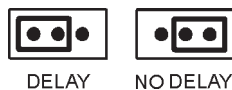
Anytime the panel or pump is serviced, the power must be turned off, including the power used on the dry contact (which is a separate power supply in many cases). Never make any changes on the alarm/alternating PC board unless the power is off. Failure to turn off power could cause personal harm, as well as possible damage to the equipment.

Panel Operation

At any given time, only one pump has full line voltage going to it; this is the lead pump. The lead pump operates off its own controls and remains the lead pump for a set amount of time (24 hours is the factory preset standard default). Per the factory default, the panel will switch the power from lead to lag pump every 24 hours. Pump 1 will be on, or lead, for 24 hours, then Pump 2 for 24 hours, then back to Pump 1 for 24 hours, and so on.

High-Level Alarm Operation

Both pumps have high-level alarm pressure switches; if either alarm switch closes, the circuit will go into alarm mode. During the alarm mode, the panel will apply power to both pumps and delay the alarm light and horn 3.5 minutes. This delay is to prevent nuisance alarms in the event of an unusually high flow. If the station is still in high-level alarm after the delay, the light and horn will activate. To silence the horn, push the button located at the lower left-hand corner outside the panel box. The alarm will clear once both alarm switches in the pumps opens (or clear). The delay on the alarm may be eliminated by moving the jumper on J2 to the right two pins.



Manual Run Operation

Two manual-run rocker switches are located on the PC board above the lower terminal blocks. The lead, or powered, pump will run while its rocker switch is depressed. The yellow LED's, located in the middle of the PC board, indicate which pump is powered.

Both Pump Operation – AUTO/BOTH Switch

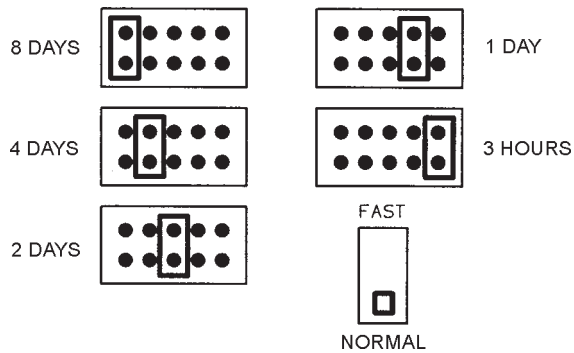
To run both pumps simultaneously, slide the AUTO/BOTH switch, located in the middle of the board, down; this will *energize both contactors* in the panel and supply power to *both pumps all the time*. The pumps will operate automatically and independently as the water level in the tank raises. You will see both yellow LED's are on, with the slide switch in this position. Either or both manual-run switches will run its corresponding pump. Slide the switch up to put the panel back to AUTO for normal operation.

This feature is also used when Pump 1 or Pump 2 is not in use. When the AUTO/BOTH switch is down in the BOTH position, contactors 1 and 2 will be energized. If either of the pump breakers is turned off, the other pump will remain energized until the switch is moved up to AUTO.

Changing Alternating Time NORMAL/TEST Switch and Alternator Cycle Time Jumper

Service Safety: Always turn all power off (including power to dry contact) before servicing or making any changes on the PC board.

Located on the top left-hand side of the PC board, is a series of pairs of pins (position J1 on the board). By selecting different pins with jumper block, the time the panel takes to alternate from one core to the next will change. The first two pins to the left are to be selected, using the jumper block, to have the panel alternate every 8 days, the next set in is 4 days, then 2 days, then 1 day and finally 3 hours. In Figure 1, the jumper is on the 3-hour setting. The factory sets the jumper block at the 1-day position, which is the second set of pins from the right, or the fourth set from the left.



To test the PC board to ensure the operation, move the jumper to the 3-hour position and slide the NORMAL/FAST switch to the FAST position. Turn the power on to the alarm PC board and both cores. The panel should energize Contactor 2 first, and in 3 to 4 minutes, it should switch to Contactor 1. The panel will switch between Contactor 1 and 2 every 3 to 4 minutes. When the test is complete, turn off all power, switch back to the NORMAL position and select the proper jumper position for the time you need to alternate between the two cores. Turn on the power.

System Status LED Operation

Six LED's are located on the control board. See Figure 1 for the location of each LED.

RED: Two red LED's are located in the center of the PC board. These lights indicate the alarm status of the station. Each pump has its own light.

GREEN: Two green LED's are located just above center on the PC board. They light when its pump is running.

YELLOW: Two yellow LED's are located just below center on the PC board. They indicate which pump is the lead, or powered, pump. The lag LED will be dimly lit (about 1/4 bright).

Troubleshooting

1. No lights illuminate on the control board after the single-pole breaker is turned on:

Verify that the voltage between the top of the single-pole control/alarm breaker and neutral terminal block is within 10 percent of 1-leg of power. Check the incoming power at the bottom of the breaker and neutral. If there is no or low power, check

between L1 and L2; there should be within 10 percent of voltage listed on the panel nameplate. If not, repair the incoming power source.

Turn off all breakers in the panel and at the power source; check all the connections for proper installation.

2. The red LED illuminates, but the pumps will not run:

Check the voltage coming into the motor contactors (all breakers need to be turned on; the contactors are located above the breakers) and test between terminals 1L1 and 5L3. The voltage should be within 10 percent of the voltage listed on the panel nameplate. If not, check the wiring and power in and out of the breakers.

Next, check the voltage on the powered contactor. Check the voltage between terminals 2T1 and 6T3. The voltage shown is the same as the reading taken from the top of the breakers. If the power is low, replace the contactor. If the contactor is not powered, check the voltage to the control board. Ensure the voltage is getting to the coil on the relays by checking terminals A1 and A2.

3. The voltage coming to the station is lower than the voltage listed on the panel nameplate; will it work?

The pump will run down to 10 percent less than the voltage listed on the pump and panel nameplates. During peak usage times, you may see the voltage will drop much lower, and then the pumps will not start reliably. The low voltage could also cause damage to the pump, panel and/or controls. It is recommended a transformer is installed to boost the voltage when the source is too low.

For further assistance, contact your local Environment One Service Center, or refer to the T260 Alternating Panel Service Information (E/One part no. PA1800P01).

Figure 1 - PC Board Operation Diagram

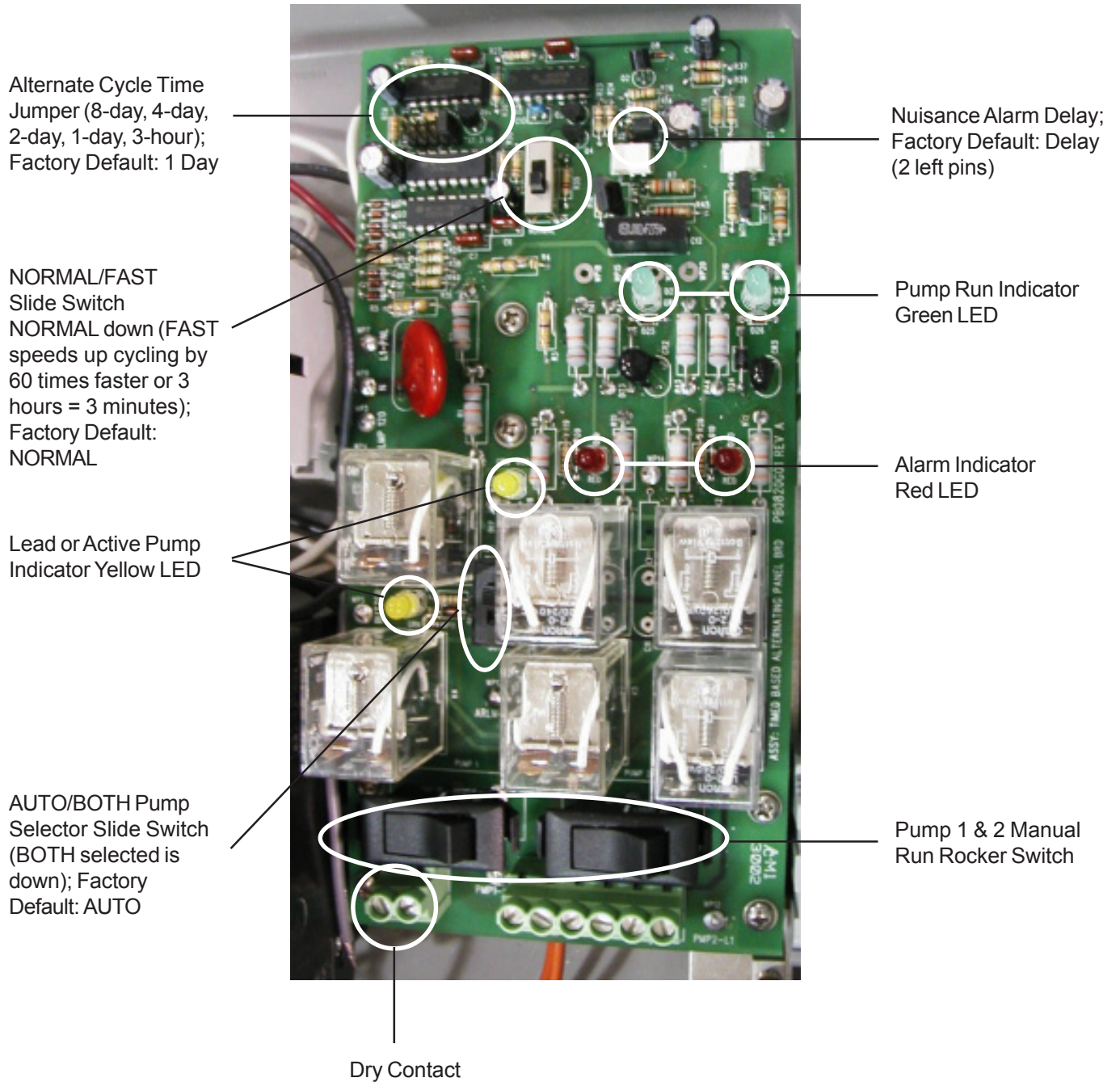
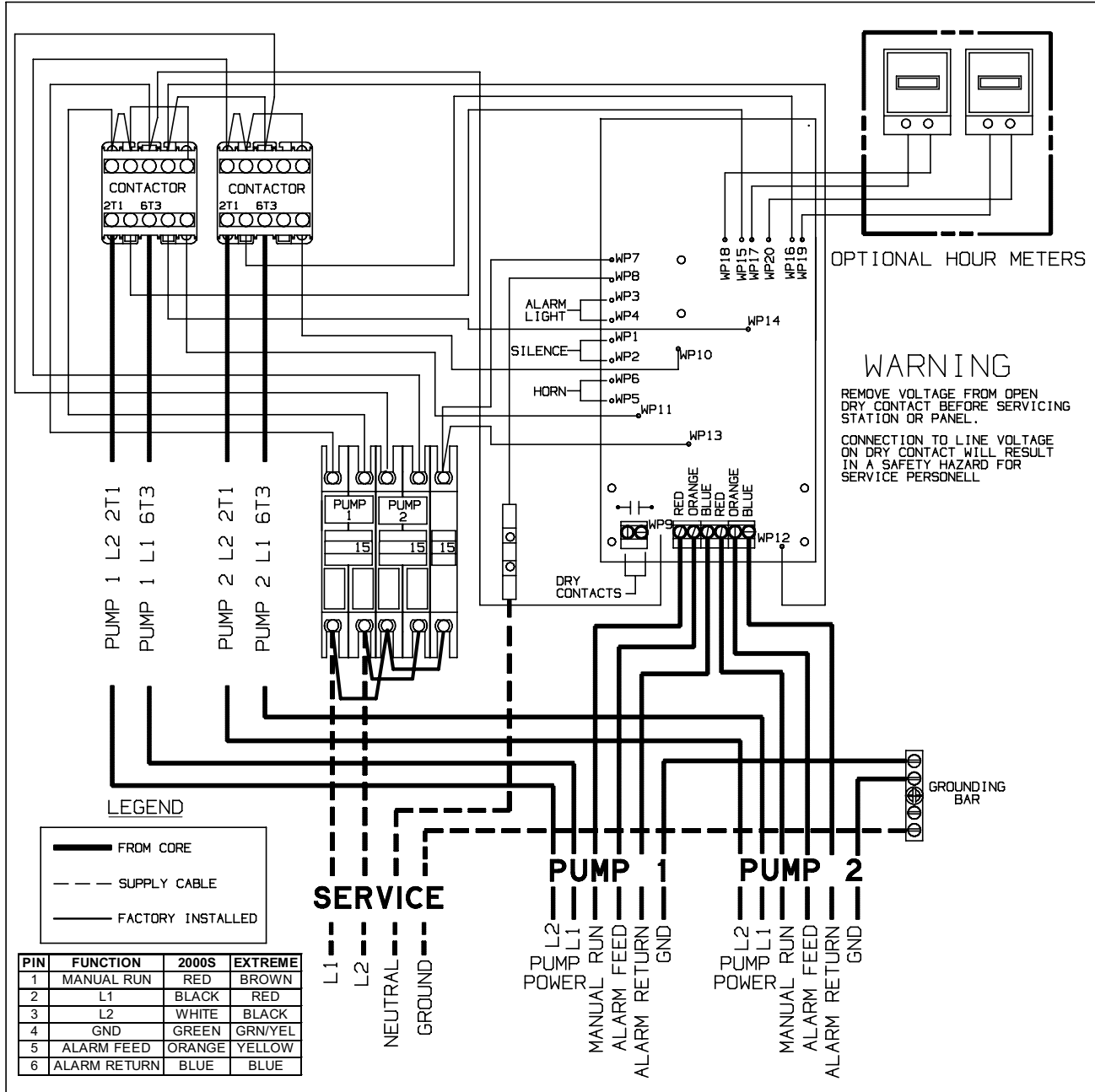


Figure 2 - PC Board Installation Wiring Diagram



A Precision Castparts Company

Environment One Corporation
 2773 Balltown Road
 Niskayuna, New York USA 12309-1090

Tel: (01) 518.346.6161
 Fax: 518.346.6188

www.eone.com

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