



AMCOL Corporation

Electronic Timing Controller for 3049B Systems

PS04.3049-ETC.PB (R4), 4/11/22, AA-0025, Approved for Use, Page 1 of 4

A Quick Solution to Control Automatic Butt Discard Lubrication Systems

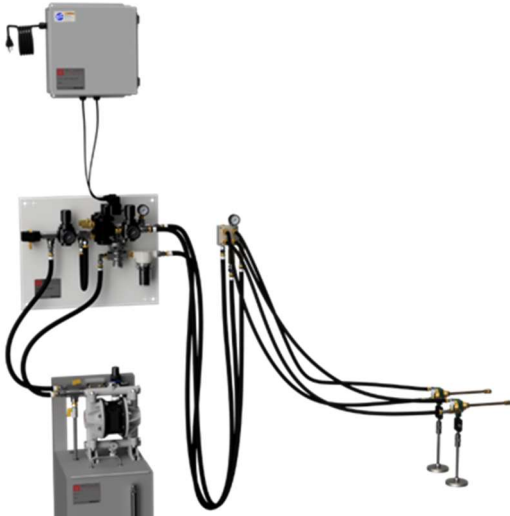


Figure 1

AMCOL 3049B Spray Systems come standard with dual poppet valves that control the air and liquid flow of the system (system shown in Figure 1). These valves must open and close at precise times in order for the system to operate correctly and effectively.

In many situations, the electronic control of 3049B systems comes from the machine or PLC. Programming a PLC and installing additional wiring for the two valves is not always easy or practical. **AMCOL has created a quick and simple solution to allow a single PLC or machine output to control two valves with no additional wiring or programming.**

Introducing the 3049-ETC Electronic Timing Controller

The 3049-ETC is a self-contained PLC that is preprogrammed to interface directly with your machine to **easily control a 3049B Spray System with only 1 machine output or control signal source.**

The first output actuates the Spray Valve (back valve). This valve opens the safety switch on the valve pack and piston on the 202 spray nozzle, allowing liquid to flow through the valve pack and allowing liquid and air to flow through 202 nozzle to the spray tips. The second output actuates the Blow Out Valve (front valve) that allows air to flow through the 202 nozzle to the spray tips to blow out excess liquid from the nozzle.

The 3049-ETC gives you the ability to quickly and accurately increase or decrease settings in the operating cycle of a 3049B Spray System (Figure 2) at the push of a button without the need for PLC programming.



Figure 2

More About the 3049-ETC

The 3049-ETC is designed to quickly and easily allow a single 110VAC or 24VDC machine or PLC output to operate the dual valve controls of a 3049B Spray System. Using this controller, you will no longer need to reprogram or modify your current PLC programming to operate a 3049B Spray System. The ETC also only requires one wiring connection—the control signal from your PLC or machine that tells the ETC when to operate the 3049B.

A clear viewing screen shows the spray cycle settings. Figure 3 shows the first main settings screen (top left) with the minimum possible settings. This is the default screen and shows current cycle settings. The second main settings screen (top right) displays the current number of inputs required for one cycle. Additional screens allow the operator to increase or decrease each event time in 250ms (0.25s) increments and increase or decrease the number of inputs required for a cycle.

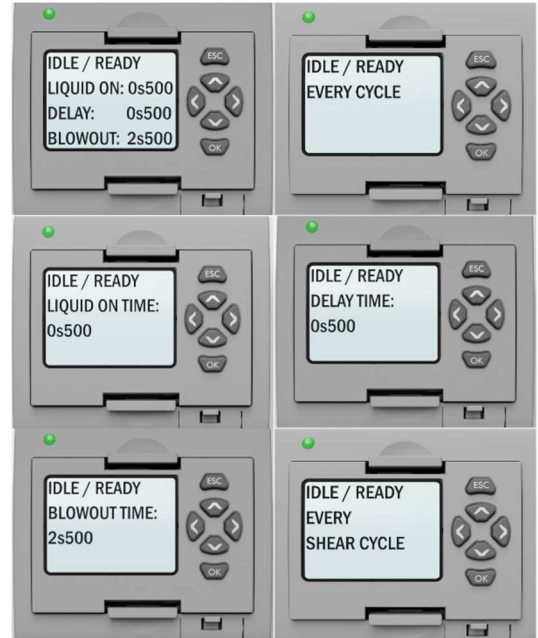


Figure 3

The 3049-ETC Electronic Timing Controller includes:

- Preprogrammed PLC.
- 6' grounded power cord with plug.
- Open cable gland to insert your existing control output and make connection.
- NEMA 12/13 sealed steel electrical enclosure.
- Lighted coil caps for the poppet valves.

There are four available control packages.

1. 3049-ETC-24 – Your control output is 24VDC.
2. 3049-ETC-110 – Your control output is 110VAC.
3. 3049-ETC-24-LLI – Your control output is 24VDC, system has optional low level light.
4. 3049-ETC-110-LLI – Your control output is 110VAC, system has optional low level light.

Connecting the 3049-ETC to Your Machine

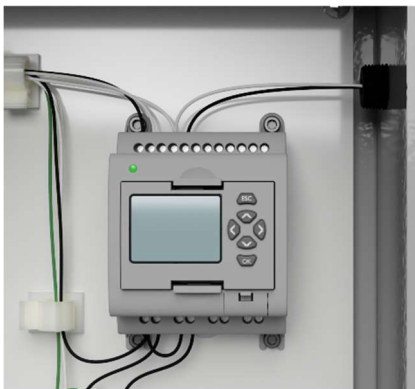


Figure 4

Integrating the 3049-ETC is simple:

1. Mount the control box in a position where it is easy to access, protected from damage, and a short distance from your AMCOL 3049B Spray System. Output wires from this controller to the spray system are standard at 6'. In order to extend these wires, they should be properly connected to a junction box and extended using conduit.
2. Insert your machine output through the available cable gland and connect to the controller at input 00 as shown in Figure 4.

3. Connect the prewired caps with lights to the poppet valves. The leftmost cable should connect to the Air Timing Valve (ATV), and the rightmost cable should connect to the Liquid Timing Valve (LTV).
4. Plug in power cord.

You are ready to operate.

Operating the 3049-ETC



Figure 5

3049-ETCs have two operating modes:

1. **Automatic** — This will operate when your machine output power is on. It is designed to automatically turn on per the settings and begin the spray cycle when the set number of machine outputs have been detected. This allows for spraying every press cycle, every other cycle, and so on. Automatic mode is the standard mode of operation for 3049-ETCs.
2. **Manual** — This will turn the spray system on for one full cycle and will only operate when the left arrow (<) is pressed (See Figure 5). Manual mode should be used for setup, testing, and troubleshooting.

Settings can be modified by pressing the right arrow (>) to move to the desired timing screen. The individual timing can be increased using the up arrow (^) or decreased using the down arrow (v) (See Figure 6). Time settings can be increased or decreased in 250ms (0.25s) increments. The number of inputs between spray cycles (Figure 7) can be increased or decreased the same way. Settings cannot be decreased below their minimum value. Minimum values for each time can be seen in Figure 2 above. See the AMCOL 3049B Operator's Manual to understand the recommended settings and when to modify them.



Figure 6



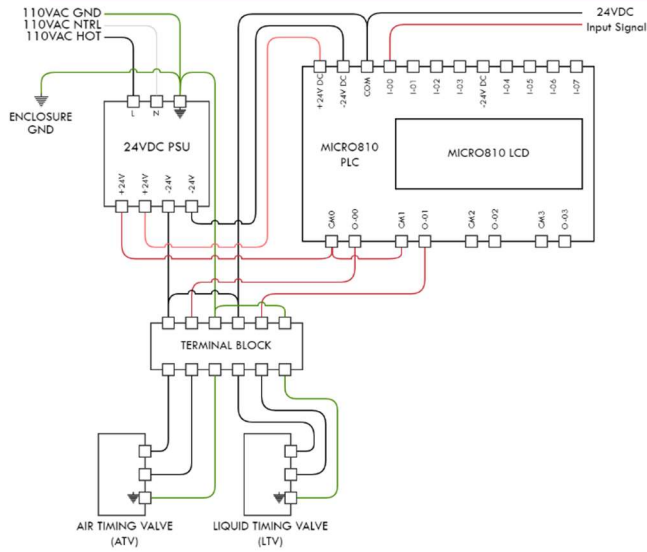
Figure 7



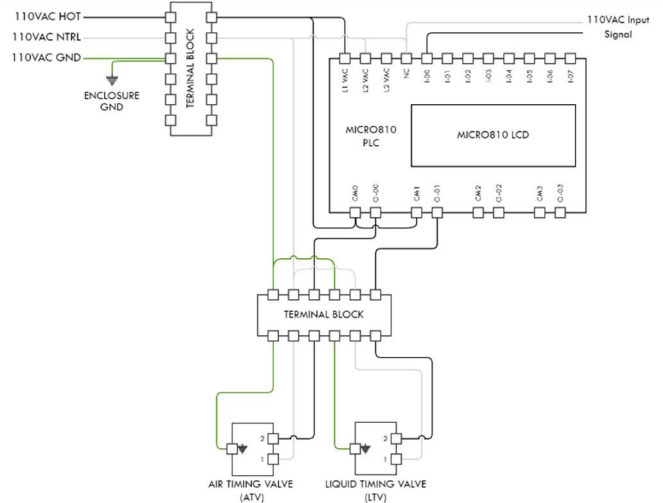
Figure 8

As an optional addition, 3049-ETCs can be ordered with a low level indicator light that interfaces with the 10 or 30 gallon reservoir of the 3049B Spray System. This indicator light will flash when the reservoir is low, ensuring your system never runs dry. Installation is simple—connect the cable gland and the prewired cable from the ETC to your existing low level switch on the reservoir. This option requires that your reservoir is equipped with a low level switch.

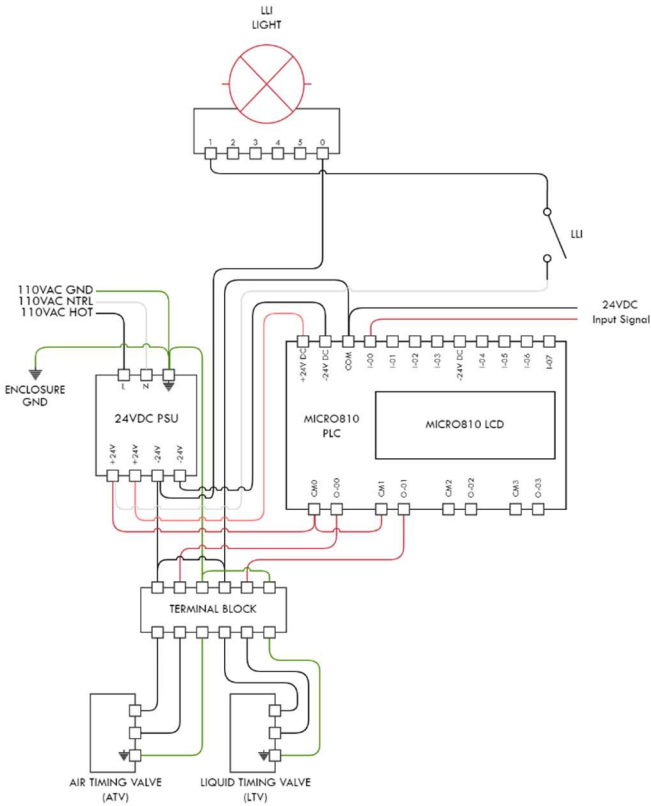
3049-ETC Schematics



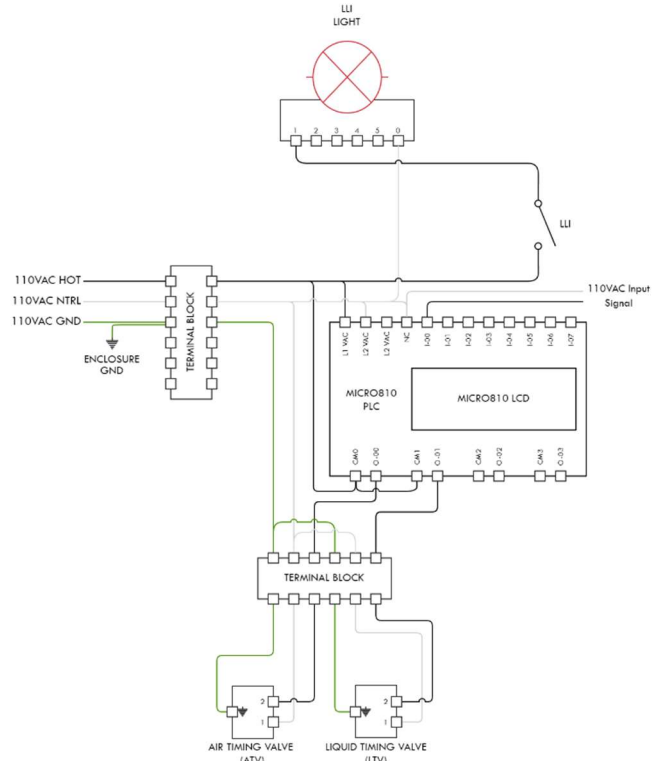
3049-ETC-24



3049-ETC-110



3049-ETC-24-LLI



3049-ETC-110-LLI