



AMCOL Corporation

Electronic Timing Controller for 3049B Systems

PS04.3049-ETC.PB (R5), 5/2/25, AA-0025, Approved for Use, Page 1 of 4



A Quick Solution to Control Automatic Butt Discard Lubrication Systems

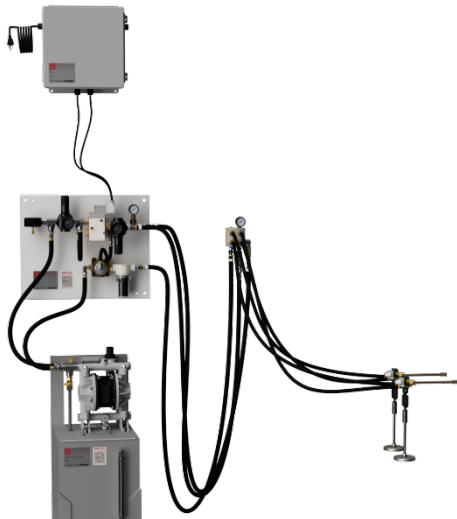


Figure 1

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 the machine to **easily control a 3049B Spray System with only 1 machine output or control signal source.**

The first output actuates the Liquid Valve (LTV). This valve opens the safety switch on the valve pack and piston on the 204 spray nozzle, allowing liquid to flow through the valve pack and allowing liquid and air to flow through 204 nozzle to the spray tips. The second output actuates the Blow Out Valve (ATV) that allows air to flow through the 204 nozzle to the spray tips to blow out excess liquid from the nozzle.

The 3049-ETC gives operators 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 additional 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, reprogramming the press PLC is no longer required to operate a 3049B Spray System. The ETC also only requires a control signal from the 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 spray cycle. Additional screens allow operators to increase or decrease each event time in 250ms (0.25s) increments and increase or decrease the number of inputs required for a cycle.

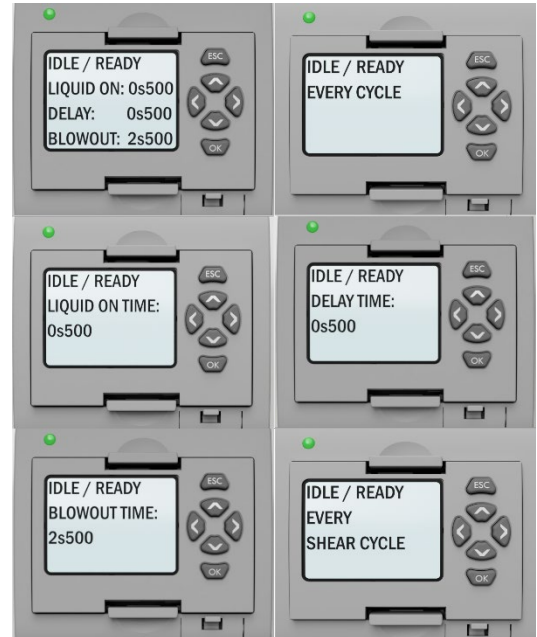


Figure 3

The 3049-ETC Electronic Timing Controller includes:

- Preprogrammed PLC.
- 6' grounded power cord with plug.
- Open cord grip to insert the control signal cable.
- NEMA 12/13 sealed steel electrical enclosure.
- Lighted coil caps for the poppet valves.

Installing the 3049-ETC

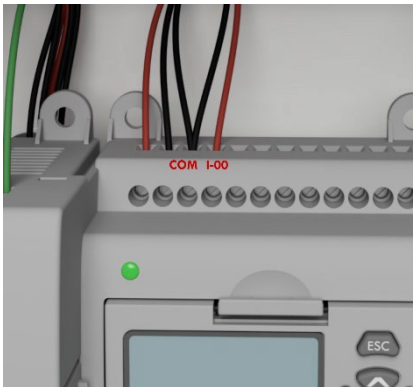


Figure 4

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 the AMCOL 3049B Spray System. Output cables from the 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 the control signal cable through the available cord grip. Connect the positive lead (+24VDC or 120VAC) to the controller at input I-00. Connect the negative lead (-24VDC or Neutral for AC) to controller at the COM port. See Figure 4 and schematics for details.
3. Connect the prewired caps to the poppet valves. The leftmost cable should connect to the Blow Out Valve (ATV), and the rightmost cable should connect to the Liquid Valve (LTV).
4. Plug in power cord.

You are ready to operate.

Operating the 3049-ETC



3049-ETCs have two operating modes:

1. **Automatic** — The ETC will automatically operate per the settings when the control signal is detected 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. This is the default operating mode.
2. **Manual** — The ETC 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 setting can be increased using the up arrow (^) or decreased using the down arrow (v) (See Figure 6). Time settings are increased and 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 the system never runs dry. Installation is simple—connect the cord grip and the prewired cable from the ETC to the existing low-level switch on the reservoir. This option requires that the reservoir is equipped with a low-level switch.

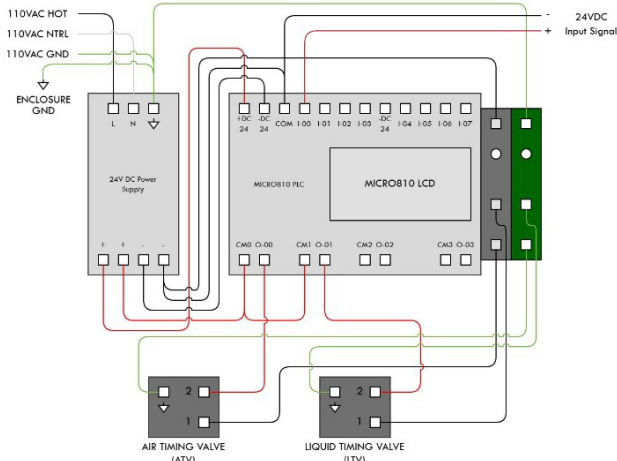
How to Order

3049-ETC-W-X-Y

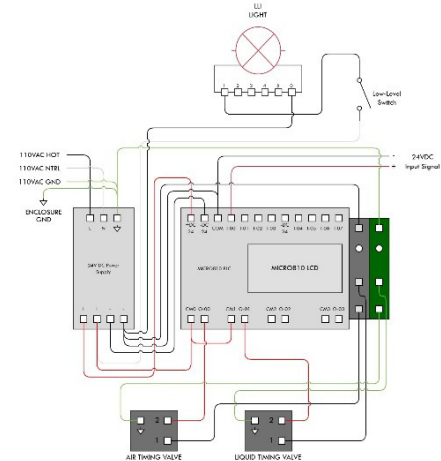
W	X	Y
Control Voltage	Low Level Indicator	Valve Type
24	—	—
110	LLI	SMC
24VDC Control Voltage	LLI Not Included	Norgren (systems purchased before April 2024)
110VAC Control Voltage	LLI Included	SMC (current)

Contact your AMCOL sales representative or scan the QR code for more information about AMCOL 3049B spray equipment.

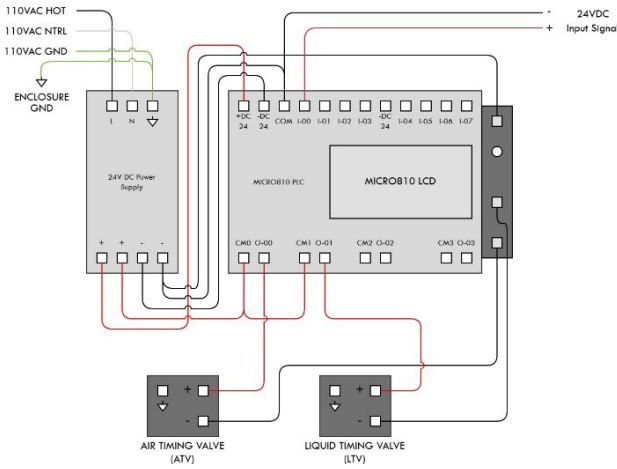
3049-ETC Schematics



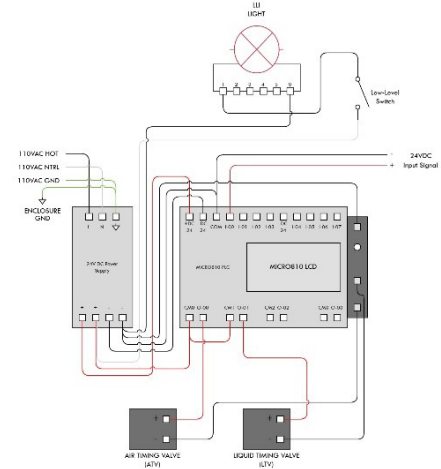
3049-ETC-24



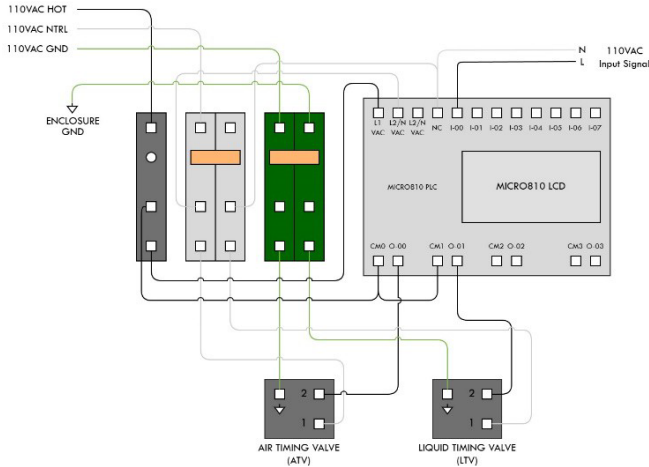
3049-ETC-24-LLI



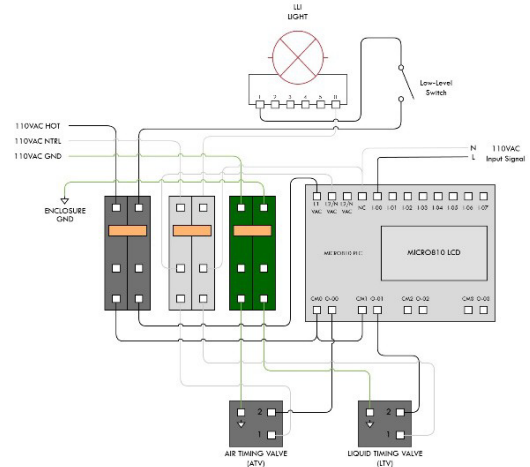
3049-ETC-24-SMC



3049-ETC-24-LLI-SMC



3049-ETC-110, 3049-ETC-110-SMC



3049-ETC-110-LLI, 3049-ETC-110-LLI-SMC