

Alex-Tronix Service Bulletin No. 14, Rev 0, as of 02-01-2006

Controllers: All Agricultural Filter Controllers.

Issue: Interfacing a programmable logic controller (PLC) to Alex-Tronix Filter Controllers.

Good Afternoon Folks:

It's been awhile since my last bulletin, so let's get updated. The last few years I have been receiving phone calls regarding the interface of any PLC to our filter controllers. Well..... They actually aren't designed to do that at this time, however it is possible to still control some features via a PLC unit. The idea presented here allows you to remotely start a back wash cycle and count the number of cycles the controller has completed.

What we can do is use dry contact relays as a buffer between our controller and your PLC. There are many types and sizes of PLC's on the market. Some complex, some easy. You must "program" a PLC to make it do what you want using various PLC specific languages. Some electricians have the knowledge to do this; that's who we'll target in this bulletin.

You will have to use two relays; one to *control* the filter controller, and the other to *monitor* the filter controller. The control relay coil needs to have the same voltage as the solenoids you have on your filter tanks. The monitor relay coil voltage needs to be compatible to the PLC you are using. Note that some PLC's have relays already built into them, and have the ability to be changed out (modules) to make things more compatible. You will need to pencil that all out before you get started.

18 AWG "thermostat" or "Control" wire is fine for driving external relays. There is no polarity to the P.D. Input terminals/pins on our filter controllers. Just wire the dry relay contacts to them, *in parallel* with the pressure differential gauge that comes pre-wire in our controllers. If you don't use a P.D. gauge, or don't want to, the PLC can start the controller on it's own at times you designate by the PLC.

Contact rating of the relays are in the milliamps, so on the control relay, a 250mA contact rating is more than ample. The same most likely applies to the monitoring relay as well; PLC's are usually low current.

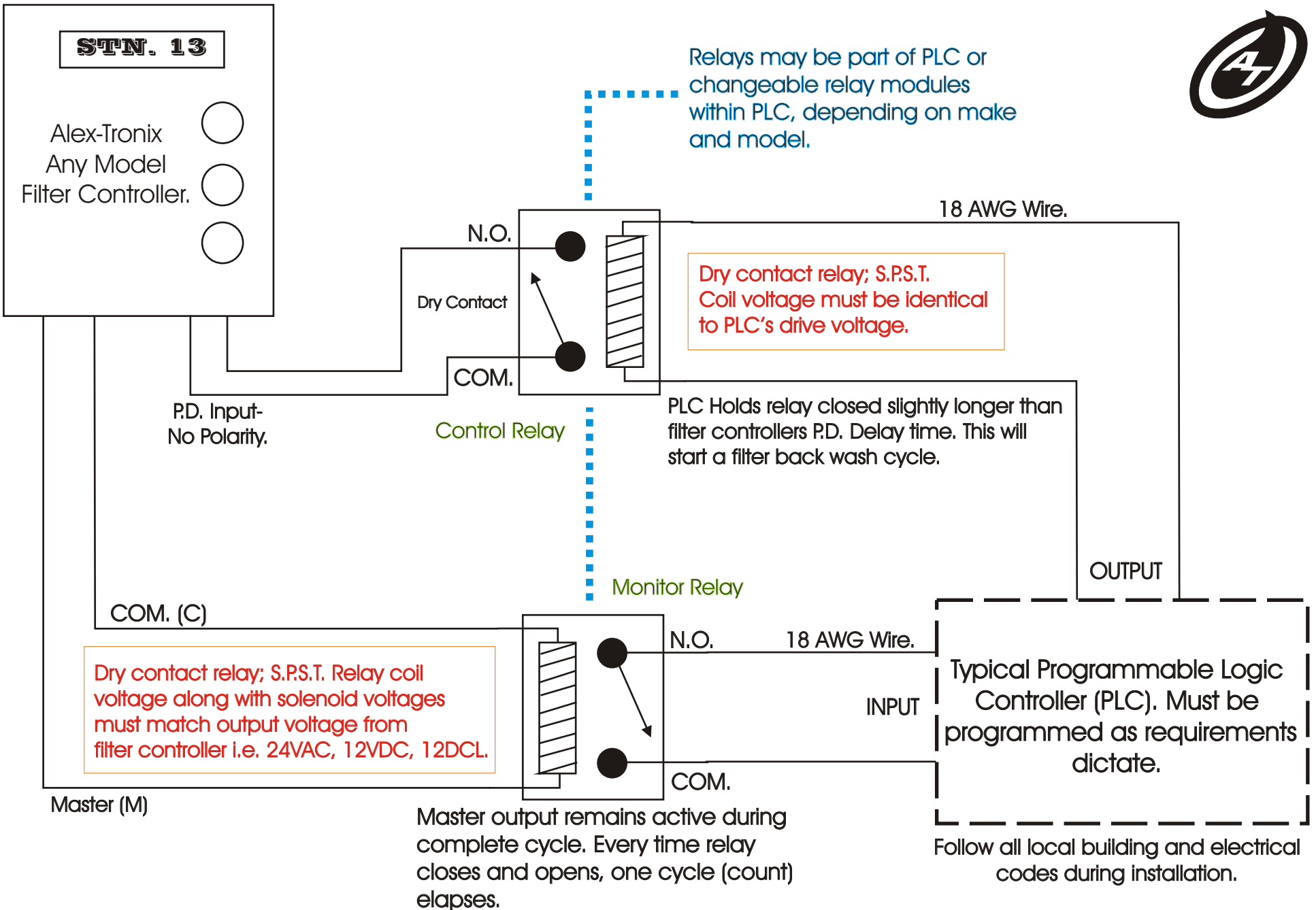
Connecting the monitoring relay to the filter controller is done by connecting the coil between the common and the master outputs of the filter controller. These wires will share terminals with the solenoids in the field. Note that if you use large relays on the controller, you may overload the filter controllers power supply which may pop the circuit breaker. REMEMBER-You have about 1.8Amps of capacity from the controller. CALCULATE ALL CURRENT DRAW AT WORST CASE CONDITIONS.

If your current calculations are high and it is absolutely impossible to reduce it, you can order a filter controller with a high powered transformer....and yes.... there is an additional cost to that. In most cases however, I don't think you will really need it.

Okay were ready... Take a look at the wiring diagram to get an idea of how to wire it up, and please!!!! Follow local building and electrical code ordinances. Overview your work and make sure your system is fire and electrically safe!

Questions??? Tech Support: Aram Tokatian 888-224-7630 or 559-276-2888 EXT 16.





Service Bulletin No. 14. Diagram of Alex-Tronix Filter Controller Interfacing to a universal P.L.C.
Alex-Tronix 4761 W. Jacquelyn Ave. Fresno, CA. 93722 559-276-2888 www.alex-tronix.com