

Changing easy-Drive™ Electric Actuator On/Off Input Configuration from Single Dry Contact Control to Dual Dry Contact Control

Supplement to Fisher® L2e Electric Level Controller Instruction Manual (D103531X012)

This supplement contains information for converting the easy-Drive Electric Actuator from Single Dry Contact Control Mode to Dual Dry Contact Control Mode.

The Dual Dry Contact Control Mode of operation has proven to be a superior and reliable method of operation with the easy-Drive actuator. This method provides a more stable switch actuation by reducing, or eliminating, the switch bounce that may be associated with the Single Dry Contact Control Mode.

Refer to the appropriate easy-Drive Electric Actuator instruction manual for cautions, warnings, and instructions on removing the easy-Drive actuator cover.

- Fisher D3 Control Valve with easy-Drive Electric Actuator (D103460X012)
- Fisher D4 Control Valve with easy-Drive Electric Actuator (D103597X012)

Note

This procedure is for easy-Drive Electric Actuators configured for ON/OFF INPUT only.

L2e Switch Wiring Conversion

1. Ensure easy-Drive actuator power is turned off and remove cover.
2. Observe easy-Drive actuator electrical connector to determine Dry Contact Control Mode.
3. If easy-Drive actuator is wired as shown in figure 1, the actuator is already configured as Dual Dry Contact Control Mode and no further action is required. Replace easy-Drive actuator cover and apply power to put system in service.
4. If easy-Drive actuator is wired as shown in figure 2, the actuator is configured as Single Dry Contact Control Mode. Proceed with the following instructions to reconfigure to Dual Dry Contact Control Mode.
5. Loosen binding screw #2 on easy-Drive actuator electrical connector (see figure 2) and remove wire.
6. Install red wire from L2e in easy-Drive actuator electrical connector location #2 (marked as "OPEN" or "N.O.") and tighten binding screw (see figure 1).
7. Loosen binding screw #3 in easy-Drive actuator electrical connector, install blue wire from L2e, and tighten binding screw (see figure 1).



8. The L2e wires should now be connected as shown in figure 1:
 - a. Brown to position #1 (COMM)
 - b. Red to position #2 (OPEN or N.O.)
 - c. Blue to position #3 (CLOSE or N.C.)
9. The wiring is now configured as Dual Dry Contact Mode. Proceed to next section for easy-Drive electric actuator software configuration.

Figure 1. Dual Dry Contact Control

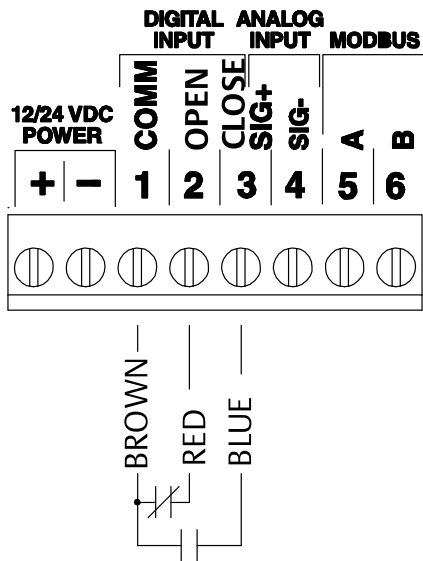
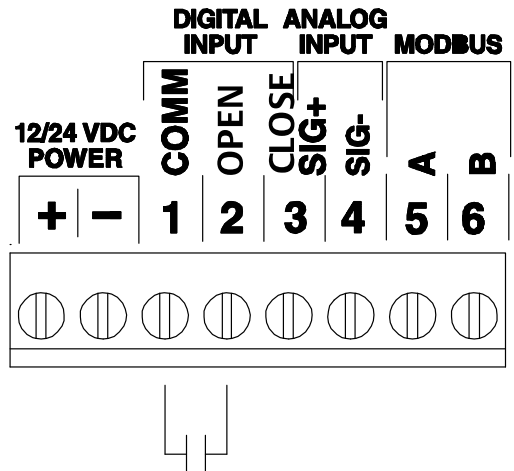


Figure 2. Single Dry Contact Control



Changing the Inputs Settings from Single Dry Contact to Dual Dry Contacts

Note

All configuration within the valve is done by setting values in Modbus registers. This can be done using any Modbus master (flow computer, PLC, PC). Configuration software, providing a visual interface to the registers, is available through your Emerson Process Management sales office or Local Business Partner or at www.Fisher.com.

Refer to the “Changing the Inputs from Default Settings” in the D3 or D4 Control Valve with easy-Drive Electric Actuator instruction manual for instructions on how to connect to and communicate with the easy-Drive Electric Actuator.

L2e Single Dry Contract Control to Dual Dry Contact Control

Once communications have been established with the easy-Drive actuator, change register 40043 to configure the inputs to Dual Dry Contacts as follows:

- Modbus
Set register 40043 (Analog I/P mode) to 0 (L2e Dual Dry Contact)
- Configuration Software

Use radio button to select L2e Dual Dry Contact local digital control when Control Source is set to Local. Click “update” to accept the change.

Configuration is complete. Replace cover and put system in service.

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