

Installation and Calibration Instructions For Profibus Controller DPC 100 with DCR Series Actuators.

It is assumed that the Profibus network is implemented where these actuators will operate.

Profibus networks are configured using standardized software tools such as **COM Profibus** from Profibus Organization or Siemens Company. Refer to the documentation provided with the Profibus Master software selected for details on configuring your network. Appendix 2 details the configurable parameters within the actuator, which can be modified using the Profibus setup tools. Each device in a Profibus system requires a xxx.**GSD** file for configuration. The xxx.**GSD** file provides the **COM Profibus** software with the **I/O** structure and configurable parameters used with each installed product. A customized xxx.**GSD** file is available for each model of actuator preset at the factory to the determined values.

1. Remove the actuator's cover and locate the Profibus Controller board.
2. Connect the specified power voltage to the Controller's terminal block. The branch circuit protection must not exceed 20 A. See Fig.1.

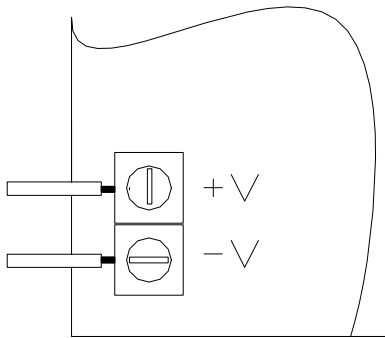


Fig.1 D.C. Power Connections.

3. Connect the Profibus cable to the terminal strip on the controller board. If the cable continues from the actuator, bring both the incoming and outgoing cables to the terminal strip on the controller board. If the cable ends at this actuator, install the termination jumpers on the connector. See Fig.2.

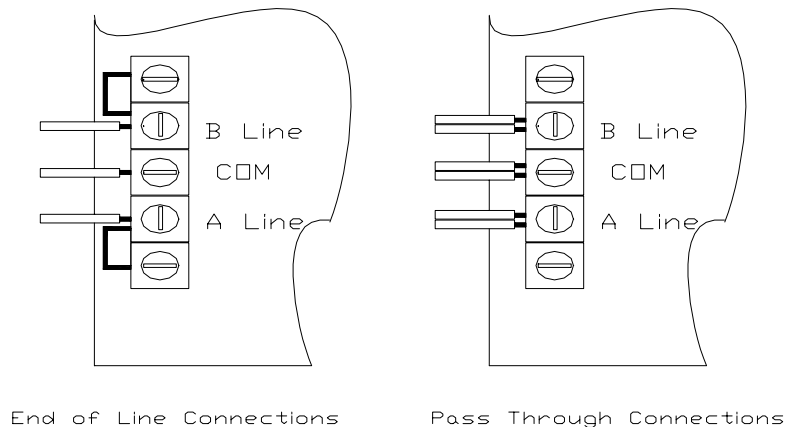


Fig.2. Profibus Connections.

- Set the actuator's address from 1 to 127 using the address switches on the controller. See Fig. 3.

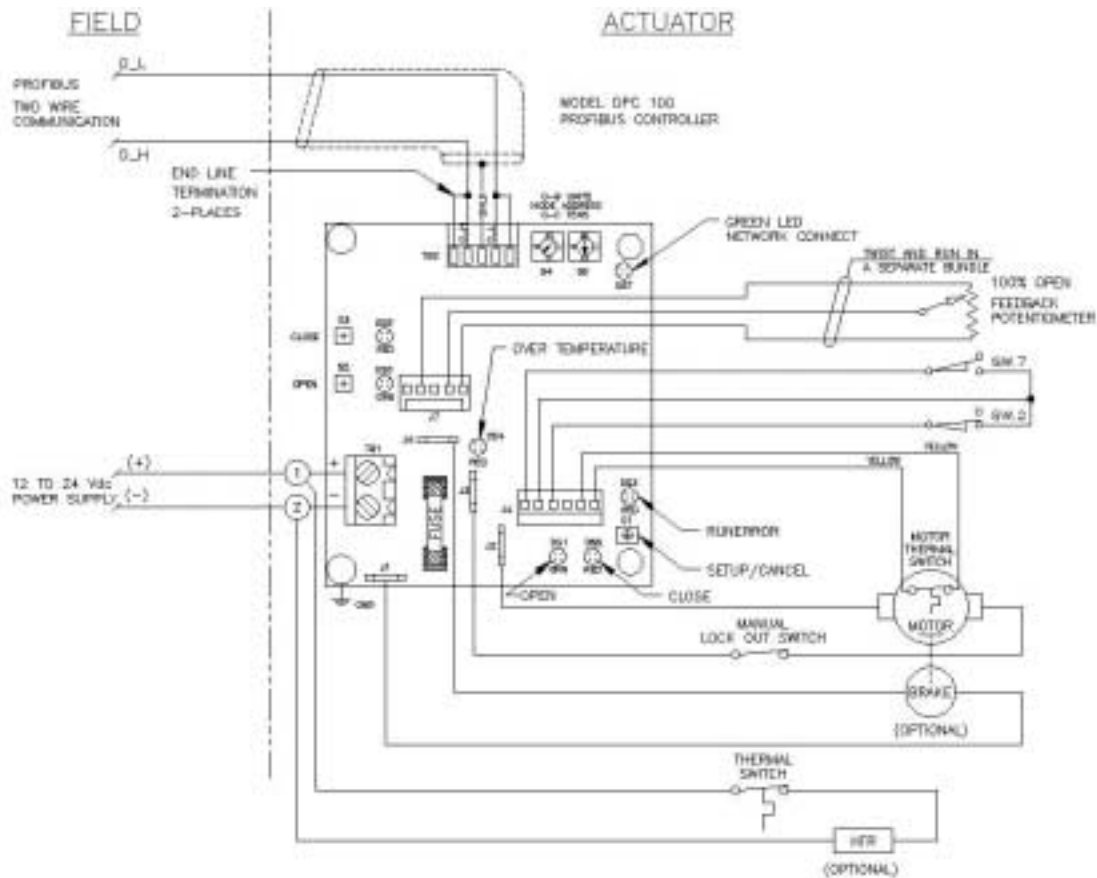


Fig. 3. Profibus Controller DPC 100.

- Apply the power to the actuator.
- Check the mode lamp is flashing at the rate of one second, in normal operation.
- Verify the Profibus communication lamp is on if the Profibus network is running.
- Press the **OPEN** push button and check the actuator moves in the **OPEN** direction. The lamp for the end of travel limit switch in **CLOSE** direction will begin to flash when the actuator's shaft leaves the fully closed position. Maintain the command until the **OPEN** limit switch is reached and verify that the fully open limit lamp is lit continuously.
- Press the **CLOSE** push button and verify the actuator's shaft moves in the close direction. The lamp for the end of travel limit switch in **OPEN** direction will begin to flash when the actuator leaves the fully open position. Maintain the command until the **CLOSE** limit switch is reached and check that the lamp is lit continuously.
- Momentarily depress the **Mode** (calibration) push button to return the actuator to remote control.
- If the actuator fails to pass the above test, it needs to be calibrated. Press and hold the **Mode** push button for 5 seconds. The **Mode** lamp will flash at a rate of 3 flashes per second and the calibration procedure will start. Wait for the mode lamp to return

to the rate of one flash per second and then repeat steps 6 to 10 to recheck the calibration.

12. Replace the actuator's cover.

Appendix 1 Indicator LED Lamp and Push Button Functions.

LED Functions

LAMP	DISPLAY	INTERPRETATION
Mode	One/sec	Normal operation
	Three/sec	In calibration
	Ten/sec	Controller fault
Communication	Steady on	Profibus ready
Opening motor run	Steady on	Opening
Closing motor run	Steady on	Closing
Open status	Steady on	At full open limit switch
	On .1 sec, Off .9 sec	Manual open mode
	On .9 sec, Off 1 sec	Manual open mode at full open limit switch.
Close status	Steady on	At full close limit switch
	On .1 sec, Off .9 sec	Manual close mode
	On .9 sec, Off 1 sec	Manual close mode at full close limit switch.
Over temperature	Steady on	Motor temperature exceeded.

Push Button Functions

BUTTON	ACTION	RESULT
Open	Press to open	Starts local open
Close	Press to close	Starts local close
Calibrate	Pressed and held during power up	Loads factory default parameter values
	Pressed and held for five seconds during operation	Starts a local calibration procedure

Pressed and held for five seconds during calibration

Terminates the calibration sequence

Pressed during local operation

Terminates local command mode

