DMC-100

Troubleshooting Guide

PROBLEM	POSSIBLE CAUSES	REMEDIES
No response from unit	Blown fuse	Replace with appropriate 8A fuse (Bussman No. ABC-8).
	Input power wires reversed.	Reverse input power leads.
	See "Actuator chatters" for additional possible causes.	
No response when using 0-10V input	JP2, JP3, or JP4 installed.	Remove JP2, JP3, or JP4.
	Command potentiometer improperly wired.	Check wiring.
	Input polarity reversed.	Reverse input wires.
No response when using 4-20mA input	Input polarity reversed.	Reverse input wires.
	Input current < 3mA when JP2 is installed.	Refer to "Loss of Input Signal" in manual.
Actuator runs to open position when using 4-20mA input.	JP1 not installed.	Install JP1.
Actuator chatters and/or blows fuses.	Power supply used cannot maintain the rated voltage when motor is energized.	Replace power supply with higher current capability.
	Power supply negative not connected to system's earth ground.	Connect power supply negative to earth ground.
	Undersized wire gauge	Use recommended wire gauge for length of wire used (see Wire Table).
	Signal Ground does not have separate wire to battery's negative terminal.	Run separate wires from battery's negative terminal to J2-4 and J2-9.
	Exposure to moisture or liquids	Use heater and thermostat or provide separate sealed enclosure.
	Deadband adjustment improperly set.	Refer to "Calibration" in manual.
	Ground loop created when using an XMA-105 transmitter.	Remove wire connected to XMA-105's (-) terminal.
Actuator runs to limit switch.	Feedback potentiometer wired backwards.	Reverse wires J1-1 and J1-3.
Actuator runs past limit switch.	Motor wired backwards.	Reverse wires J1-4 and J1-5.
Actuator cannot be reversed after reaching limit switches.	Limit switches reversed.	Reverse limit switches or wiring.

PEAKTRONICS, Inc. *1363 Anderson Clawson, MI 48017 Phone (248) 542-5640 sales@peaktronics.com*

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Actuator hunts for position.	Deadband adjustment improperly set. Feedback potentiometer mechanically unstable. Unstable command input signal from PID control loop Actuator load variations (e.g., 45^{o} position on butterfly valves) See "Actuator chatters" for additional possible causes.	See "Calibration" in manual. Repair as necessary. Adjust PID parameters for stable command signal. Increase deadband adjustment.
Output relay failures	Excessive hunting or chattering Locked rotor current over 15A. Applying external power to motor connections J1-4 and J1-5	See above. Contact actuator manufacturer. Remove J1 before applying external power.
Erratic operation	JP1 not installed when using 0-10V configuration. Bad feedback potentiometer Exposure to moisture or liquids on the printed circuit board	Install JP1. Replace feedback potentiometer. Use heater and thermostat, or provide separate sealed enclosure.
Unit current trips excessively	Actuator reverses quickly (hunting, erratic input, etc.).	Repair or adjust as necessary.