4-20mA Positioner

Models

- 4-20mA Board 0-115/230V
- 115 or 230 Volt A.C. Actuators
- 4-20mA Board 10-24VAC
- 24 Volt A.C. Actuators

Models

- 4-20mA 24VDC
- 12 or 24 Volt D.C. Actuators

(Micro-Processor Based Analog Controller)

The Valtorc 4-20mA electric positioner card provides accurate positioning control of electric motor actuators using an analog input signal. Setup and calibration is greatly simplified using microprocessor based technology. There are no dip switches to set or trim pots to adjust. Setup is quick and easy using the menu viewed on an LED display. No external meters are required, even for potentiometer setup. Once the initial menu settings are chosen, the board performs a self-calibration routine, applying the menu selections to actual actuator performance. Calibration values are then stored in permanent non-volatile memory.
Features

Onboard LED display facilitates setup and calibration using the Menu Setup.

Menu selection of input/output ranges including 4-20 ma, 1-5 VDC, 2-10 VDC and 6-10 VDC, or virtually any custom range required.

Automatic calibration; no resistors to add; no jumpers, trim pots or dip switches to adjust. Calibration is as simple as pressing a button.

Three relay outputs: fault, full closed and full open. (A.C. Models Only.)

Current sensing (over torque protection).

Menu selectable fail options.

Intelligent positioning reduces motor cycling, increases motor life and extends the actuator duty.

Auto-jog feature. Constantly corrects and refines the positioning accuracy.

Quick disconnect terminal strips facilitate fast and easy actuator maintenance and troubleshooting.

Always wires the same; no need to determine rotation direction during installation; rotation is selected using the Menu.

Robust power switching components, designed specifically for actuator motors, virtually eliminates field failures.

Specifications

Power Requirements

4-20mA Board -115/230A: 115 or 230 VAC, 1 Phase, 50/60 Hz.
(5) Jumper selectable)

4-20mA Board -24VAC: 24 VAC, 50/60Hz.

4-20mA Board -24VDC: 10-28 VDC.

Input Command Signal

Menu selectable factory defaults:

115/230A: 115 or 230 VAC, 1 Phase, 50/60 Hz.
(5) Jumper selectable)

4VAC: 24 VAC, 50/60 Hz.

24VDC: 10-28 VDC.

Infinite adjustment using Menu System

Signal Impedance

Input: 250Ω current, 200kΩ voltage

Output: maximum lead 500Ω current, 500Ω voltage

Size

3-1/2 x 1-5/8 x 4 in.

Output Command Signal

Menu selectable factory defaults:

— 4-20 mA
— 1-5 VDC
— 2-10 VDC
— 0-10 VDC

Infinite adjustment using Menu System

Power Output

Solid state, isolated from the input command and output position signals and rated at:

— 5 amps continuous at 115 VAC
— 5 amps continuous at 230 VAC
— 5 amps continuous at 24 VAC
— 10 amps continuous at 24 VDC

All ratings assume the board is mounted on the actuator base plate.

Sensitivity

Fully adjustable from 0.5% of total span, factory set to 1% of total span.

Dead Band

Automatically set during calibration. Factory default at 1% of total span. Additional settings available using the Menu System.

Zero Adjustment

Automatically set during calibration.

Span Adjustment

Automatically set during calibration.

Split Range

Settable within the span range using at least 1.5VDC or 3mA of input.

Ambient Temperature

-40°F (with heater) to +150°F (40°C to +65°C)

Action or Loss of Command Signal

Factory default:
— Fail in last position (no movement)

Additional settings available through menu:
— Fail open (maximum signal value)
— Fail closed (minimum signal value)
— Fail to a preset position

Relay Outputs - A.C. Models Only

Three dry contacts outputs:
— Fault indicating loss of power, fuse failed, command signal loss or failure to move to position in preset time.
— End of travel open
— End of travel closed
— Contact Ratings: 1A @ 30VDC, 0.5A @ 135VAC resistive