Standard Options

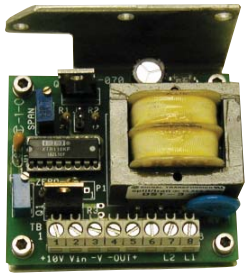
Model 4100 Position Indicating Meter

A percent-of-full-travel meter is supplied with a trim potentiometer resistor, terminal block and connectors. A potentiometer is required in the actuator for feedback.

Three Phase Motor Control

All 230 or 460 VAC, 60 Hz., 3 Phase actuators can be supplied with a factory wired, NEMA 4X, separately mounted motor control station.

Standard equipment includes: control transformer, control fuser, thermal overload relay, reversing contactor, multi-point terminal block sector switches and indication lights.



Positran™ Transmitter

This position transmitter outputs a 4-20mAdc signal proportional to actuator position. The signal can be used for the following functions:

- Drive a position indicating meter
- A feedback or control signal for other control devices

A potentiometer and compartment heater are required with the actuator.

Positran is a trademark of Positran Manufacturing, Inc,

Position/Process Control

Remote Model 5100

Solid-state, closed-loop, panel-mount controller for use with single phase, motor-driven actuators. Automatically directs actuator movement in response to a signal generated by a command potentiometer mounted to the controller face (Figure 1) or a 4-20 mAdc, 10-50 mAdc or 1-5 VDC control signal (Figure 2).

The Andco Model 5100 control is a solid state servo device capable of driving a 10 Amp inductive load. It is designed for position or process control of an electric motor driven actuator.

A mode selection switch allows control with either the command potentiometer mounted on the controller face or a 4-20 mAdc (STD) 10-50 mAdc or a 1-5 VDC control signal. The selected mode signal is compared with the signal from the actuator feedback potentiometer. If an imbalance exists, the controller automatically directs actuator movement in the appropriate direction until the two signals match.

For positioning accuracy, an electronic braking circuit is provided. This circuit applies dynamic braking to the motor, stopping the motor rotor with 20 milliseconds.

Upon loss of the process command signal, the controller can control the actuator to stay in the last position, move to full open, move to full closed or switch to the command potentiometer position (specify).

For protection during system imbalance, the maximum number of motor starts is automatically limited to 25 per minute.

The output board is a separate plug-in module, electrically isolated from the main control board. An active filter is incorporated to reject electrical noise, normally eliminating the use of the shielded cable.

Standard equipment includes:

- Position Indicator
- Motion Indicator
- Power On-Off Switch with Indicator
- Auto/Manual Switch with Indicator
- Command Potentiometer with 0-100% Dial
- Panel Mount Enclosure

Feedback Potentiometer

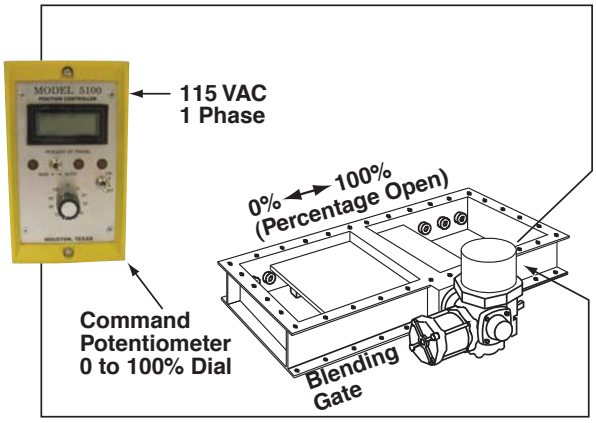


Figure 1

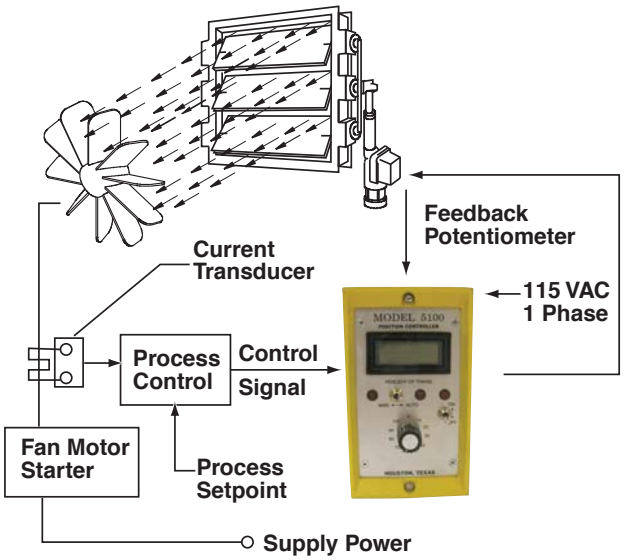
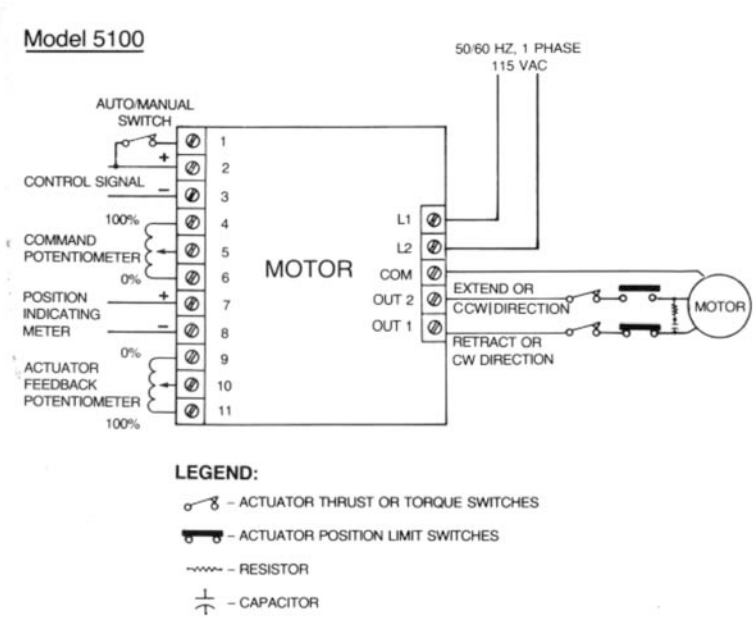


Figure 2

Position/Process Control

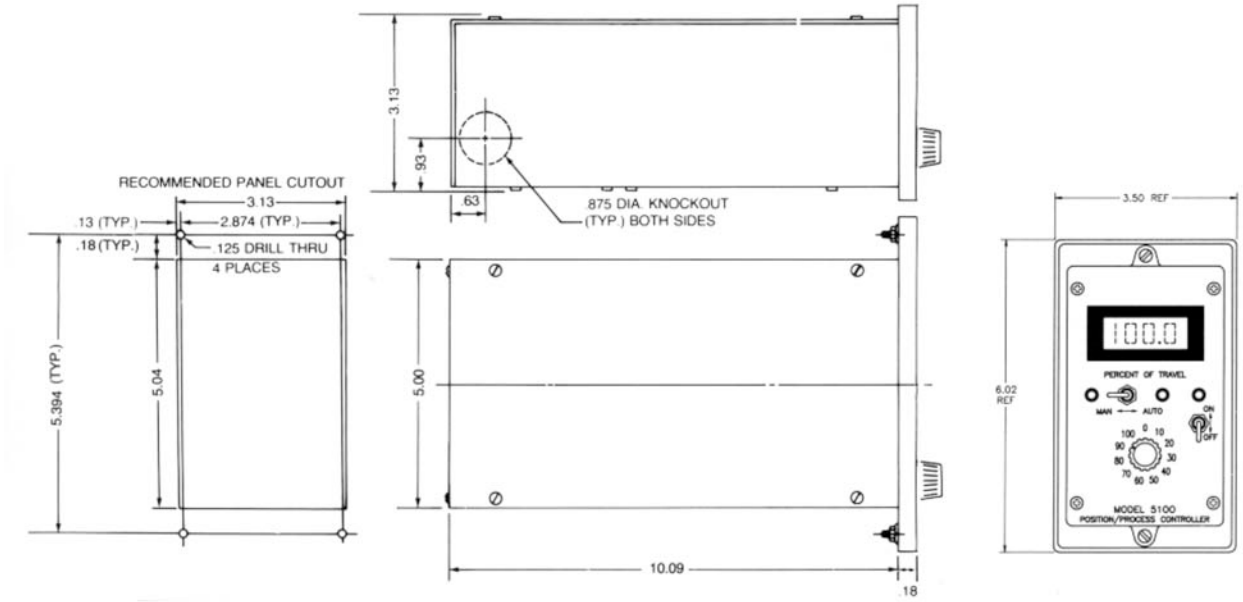
Remote Model 5100

Connection Diagram



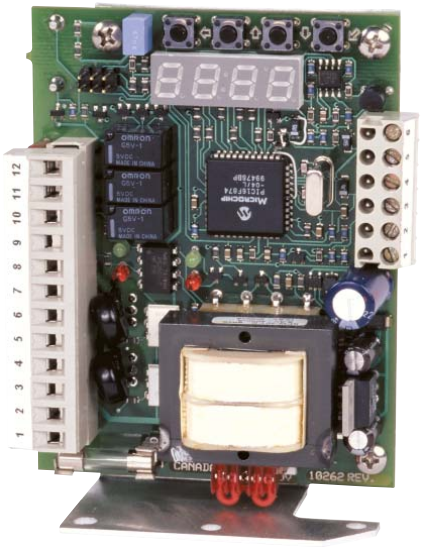
Notes	
Power, single phase	115 VAC 50/60 Hz
Manual Mode Input (command potentiometer)	0-1000 Ohms
Auto Mode Input (control signal)	4-20 mAdc 10-50 mAdc or 1-5 VDC
Feedback Input (actuator potentiometer)	0-1000 Ohms
Active Filter, 60 Hz Rejection	-24 dB
Temperature Range	0° to 150° F 0° to 65° C
Position Indicating Meter Range	0-100 percent of full travel
Output (two triacs)	10 Amp inductive load

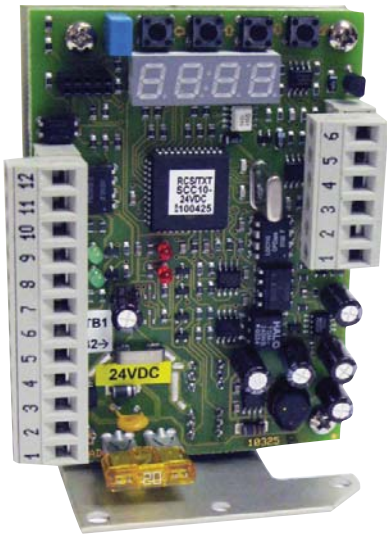
Outline Drawing



Electric Actuator Smart Controller (EASC)

Model: SCC10





Models
SCC10-115/230 VAC 115 or 230 Volt A.C. Actuators
SCC10-24 VAC 24 Volt A.C. Actuators

Model
SCC10-24 VDC 12 or 24 Volt D.C. Actuators

EASC (Micro-Processor Based Analog Controller)

The Electric Actuator Smart Controller (EASC Model SCC-10) 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 EASC menu viewed on an LED display. No external meters are required, even for potentiometer setup. Once the initial menu settings are chosen, the EASC 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 EASC Menu Setup.
- Menu selection of input/output ranges including 4-20 mAdc, 1-5 VDC, 2-10 VDC and 0-10 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). — Optional on A.C. Models. Standard on D.C. Models.
- 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 EASC Menu.
- Robust power switching components, designed specifically for actuator motors, virtually eliminates field failures.

Electric Actuator Smart Controller (EASC)

Model SCC10

Specifications

Power Requirements
Model SCC10-115/230A: 115 or 230 VAC, 1 Phase, 50/60 Hz. (Jumper selectable)

Model SCC-24 VAC: 24 VAC, 50/60 Hz.

Model SCC-24 VDC: 10-28 VDC

Input Command Signal
Menu selectable factory defaults:

— 4 – 20 mADC
— 1 – 5 VDC
— 2 – 10 VDC
— 0 – 10 VDC

Infinite adjustment using EASC menu system

Signal Impedance
Input: 250Ω current, 200KΩ voltage
Output: maximum load 500Ω current, minimum 500KΩ voltage

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

Output Command Signal
Menu selectable factory defaults:

— 4 – 20 mAdc
— 1 – 5 VDC
— 2 – 10 VDC
— 0 – 10 VDC

Infinite adjustment using EASC 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 EASC 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 EASC 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.

Remote Control
Optional Modus RTU control of all controller functions over a RS-485 multi-drop network

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

Action on Loss of Command Signal
Factory default:

— Fail in last position (no movement)

Additional settings available through EASC 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