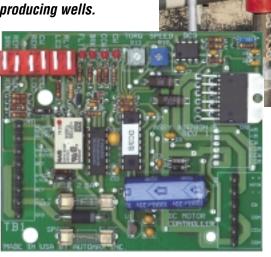




For over ten years,
Automax Centura CE
Series electric actuators
have been successfully
used for hundreds of
quarter turn choke valve
applications to remotely
control flow & pressure
from Natural Gas
producing wells.



To meet demanding services in remote areas, Automax has developed a unique actuator control package. The controller board also provides protection and operational advantages over "hardwired" DC motor actuators. A current sensing circuit continuously monitors motor operating conditions. When stalled or abnormally high motor current exists, the controller automatically shuts power off to the motor. Current sensing protects not only DC motor brushes from destruction, but also protects power supplies during fault conditions, including solar recharging systems from extreme battery discharge. A fault latching circuit will maintain this off status until an input direction change is detected to reset the latched controller for normal operation.

The current sensing circuit and initial setup procedures use on-board local control switches and adjustments. Local control and LED status indicators ease calibration by eliminating special test measurements and control room activity. Remote operations are accomplished by 2-wire switching from PLC's, dry contact relays or switches. A 2-wire "brake" control is optionally used for mid-stroke positioning.

## Features

The AUTOMAX DC Motor Controller Board conveniently mounts inside Centura CE Series Electric Actuators. The CE actuators' unique housing design satisfies NEMA 4, 4X, 7, and 9 ratings simultaneously, providing indoor and outdoor protection in hazardous environments.

The Controller Board offers:

- Adjustable, fault current motor protection.
- Two, 2-wire signal inputs: direction and dynamic brake.
- Control of 12 and 24Vdc motor actuators.
- Adjustable torque and speed control.
- PCB plugable terminal blocks for interface wiring.
- Solid-state microprocessor based motor driver replaces relays.
- An on-board glass fuse, field replaceable.
- Four (4) status LED indicators: CW and CCW direction, BRAKE set, and FAULT latch set.
- Local switches provide for alarm and LED disabling to conserve power consumption.
- Reverse polarity protection.
- · Field settable failure mode.

## **Specifications**

DC Motor System	12V	24V	
Supply Voltage (maximum)	14V	28V	Volts
Remote Signal (18AWG)	5000	5000	ft.
Cycle Time*, (min/max adj)			
CE2B, CE2C	6-14	6-14	sec.
CE4B, CE4C	8-20	8-20	sec.
CE7B, CE7C	15-31	15-31	sec.
CE1B, CE1C	20-42	20-42	sec.
CE5B, CE5C	32-60	30-60	sec.
Supply Currents (typ.)			
Controller Board	10**	15**	mΑ
DC Motor (full load)	1.60	0.9	Α
I Sense Adj. (max)	2.0	2.0	Α
Operating Temperature	-40 to 160 Deg. F (-40 to 70 Deg. C)		

 <sup>\*</sup> Times are approximate under no load conditions and may vary slightly under actual operating conditions.

## Flowserve Corporation Flow Control Division

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<sup>\*\*</sup>Board operations set st minimum current draw.