

# ENGINE GOVERNING SYSTEM

## ACB2001 Electric Actuator



- Easy Installation
- Universal Design
- Multiple Voltage Selection
- Internal Return Spring

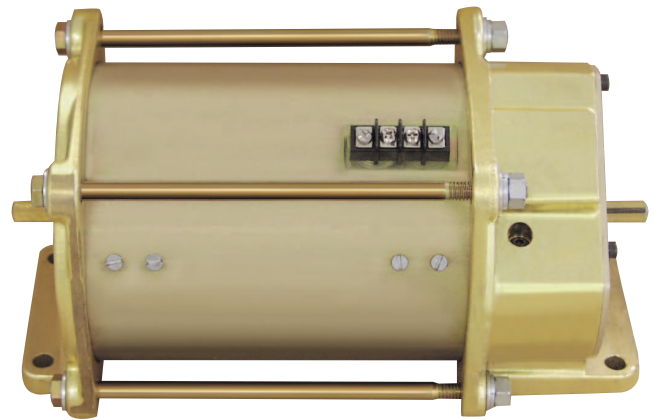
- Rapid Response to Transient Conditions
- Multiple Mounting Positions
- Uni-directional cw/ccw
- Maintenance Free

### INTRODUCTION

The ACB2001 actuator is a rotary output, 24V, linear torque proportional electric servo designed for mechanical actuation of fuel system control levers requiring torques in the 5 lb ft range. The actuator is energized by appropriate speed control unit signals, and is capable of 35 degrees of rotation with torques as high as 12 Lb-Ft.

Internal springs provide fail safe operation by forcing the actuator to the fuel shut off position when the actuator is de-energized. Both CW and CCW shafts are available. Engine applications include large block pumps, and dual medium and some large size carburetors.

Its matching speed control, the ESD5330, offers a versatile range of features such as cranking termination, overspeed sensing, fuel limiting during start up, and speed ramping to minimize exhaust emissions during the starting cycle.



### DESCRIPTION

The ACB2001 actuator is an electromagnetic servo device which can be integrated into a closed loop control system. A typical engine control system can be described as follows. An electrical signal, proportional to engine speed, is generated by a magnetic speed sensor. This signal is sent into the electronic speed control unit which compares it to the preset engine speed setting. If the magnetic speed sensor signal and the engine speed setting are not equal, a change in current from the speed control unit to the actuator will alter the magnetic force in the actuator.

The change in magnetic force causes the actuator shaft to rotate. The rotation of the actuator shaft will then adjust the fuel to the engine and cause the engine speed to be equal to the desired speed setting. Shaft rotation is proportional to the amount of current and counter-balanced by the internal springs.

Since the design has no sliding parts, and is totally sealed, its reliability is outstanding. No maintenance is necessary.

### SPECIFICATIONS

#### PERFORMANCE

Available Torque .....Max 12 lb-ft (16.3 Nm)  
Maximum Angular Travel of Shaft.....35° ± 1° CW/CCW

#### RELIABILITY

Vibration.....Up to 20 G, 50-500 Hz  
Testing.....100% Tested

#### PHYSICAL

Dimensions.....See Diagram 1  
Weight.....30 lb. (13.6 kg)

#### ENVIRONMENTAL

Temperature Range.....-65°F to 200°F (-55°C to +95°C)  
Relative Humidity.....up to 100%  
All Surface Finishes.....Fungus proof and corrosion resistance

#### POWER INPUT

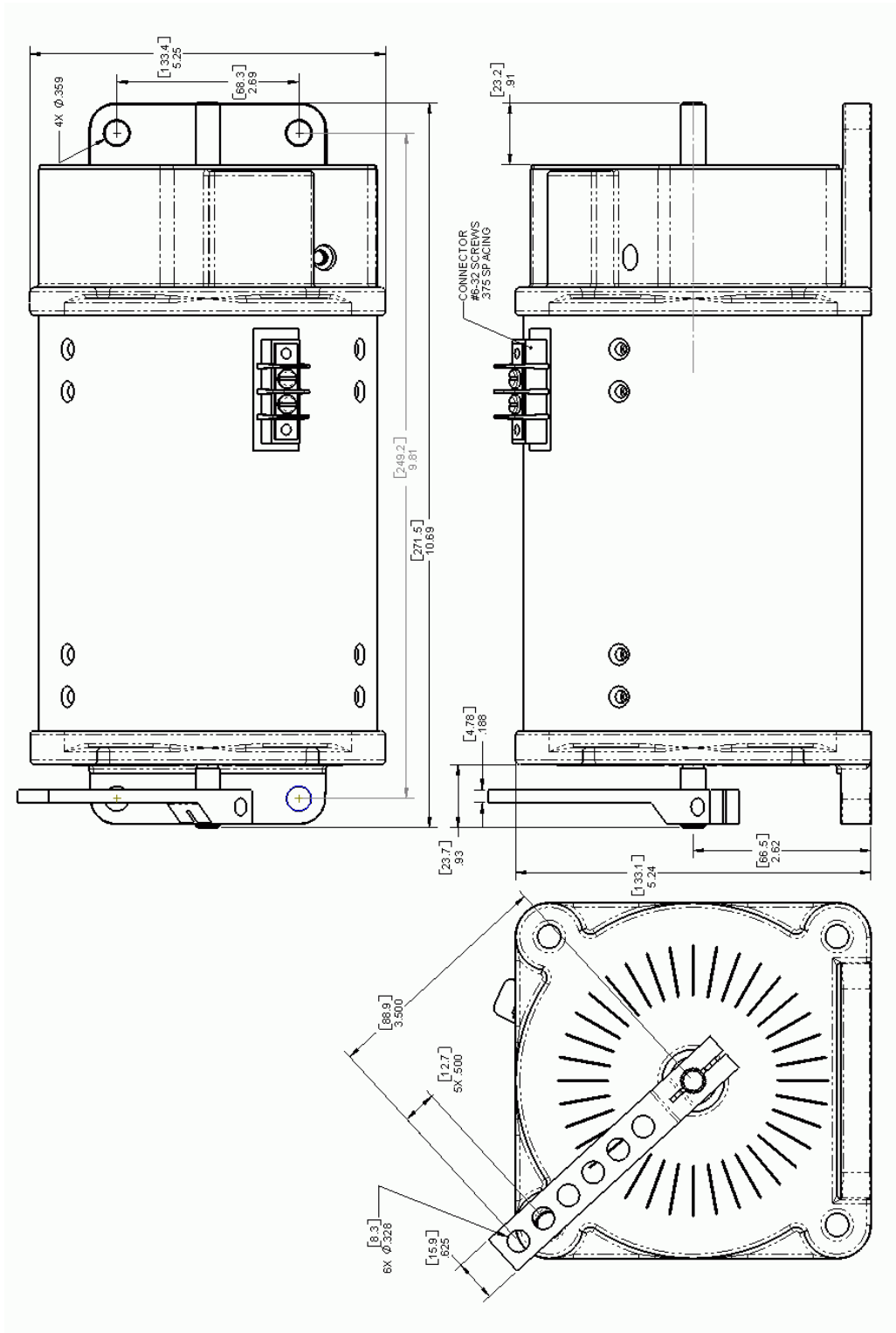
Operating Voltage.....Nominal 24 Volts  
Normal Operating Current.....Up to 5 Amps  
Maximum Stall Current (Short Duration).....Up to 12 Amps



Governors America Corp., 720 Silver Street Agawam, MA 01001  
phone: 413.786.5600 fax: 413.789.7736  
www.governors-america.com  
info@governors-america.com



DIAGRAM 1 OUTLINE AND DIMENSIONS



This document is subject to change without notice.  
 Caution: None of GAC products are flight certified controls including this item.