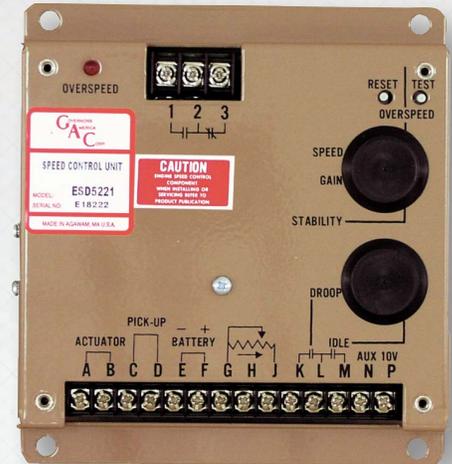


Analog Governor

ESD5221

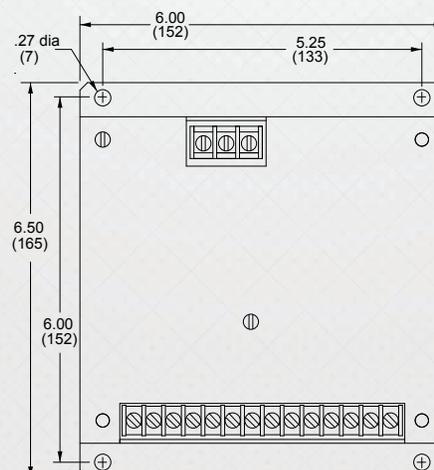
The ESD5221 Series speed control unit is designed to precisely control engine speed with rapid responses to transient load changes. The ESD speed control is compatible with all GAC proportional actuators except the ACB2001 electric actuator since this high torque actuator also requires current limiting. Ruggedly built to withstand all engine environments, the ESD will control a wide variety of engines in an isochronous or droop mode.



FEATURES

- Selectable Droop Operation
- Adjustable Idle Current
- Input for Accessories
- Auxiliary Accessory Input
- Reverse Voltage Protection
- Single Element Speed Switch
- Speed Anticipation
- Overspeed LED Indication

DIMENSIONS



UNITS
in
mm

ACCESSORIES

Magnetic Speed Pickups



The Magnetic Speed Sensor detects when ring gear teeth, or other ferrous projections, pass the tip of the sensor. Electrical impulses are produced by the sensor's internal coil and sent to the speed control unit. The signal from the magnetic speed sensor, teeth per second (Hz.), is directly proportional to engine speed. Speed sensors are available in various lengths in both U.S. and metric threads. Wire leads, military connectors, automotive connectors or stud terminals are also available. Over 30 styles currently available.

SPECIFICATIONS

Performance

Isochronous Operation	±0.25%
Speed Range	1 - 7.5 KHz Continuous
Speed Drift with Temperature	±1.0%
Idle Speed Adjust CW	Min. 1200 Hz. Below Set Speed
Idle Speed Adjust CCW	Min. 4100 Hz. Below Set Speed
Droop Range	1 - 5% Regulation
Droop Adj. Max. (K-L Jumpered)	875 Hz., ±75 Hz per 1.0 A change
Droop Adj. Min. (K-L Jumpered)	15 Hz., ±6 Hz per 1.0 A change
Speed Trim Range	±200 Hz
Remote Variable Speed Range	500 - 7.5 KHz
Terminal Sensitivity	
J	100 Hz., ±15 Hz/Volt @ 5 KΩ Impedance
L	735 Hz., ±60 Hz/Volt @ 65 KΩ Impedance
N	148 Hz., ±10 Hz/Volt @ 1 MΩ Impedance
P	10 VDC Supply @ 20 mA Max
Speed Switch Adjustment Range	1000 - 10000 Hz

Environmental

Operating Temperature Range	-40 ° F to +185 ° F (-40 ° C to +85 ° C)
Relative Humidity	up to 95%
Vibration	5 G @ 20 - 500Hz
All Surface Finishes	Fungus Proof and Corrosion Resistant

Electrical

Power Supply	12 or 24 VDC Battery Systems (Transient and Reverse Voltage Protected)
Polarity	Negative Ground (Case Isolated)
Power Consumption	50 mA (Continuous Plus Actuator Current)
Actuator Current Range @ 77°F (25°C)	10 Amps Continuous
Speed Sensor Signal	1.0 - 120 VRMS
Speed Switch Relay Contacts (N.O. and N.C.)	Max 10 Amps

Physical

Dimensions	See Dimensions on other side
Weight	1.8 lb (0.82 kg)
Mounting	Any Position, Vertically Preferred

OPTIONS

GAC ACTUATORS

GAC actuators incorporate fast response, multi voltage usage, and a field proven electromechanical design that allows for precise control when coupled with GAC's speed control devices. All of GAC actuators are easy to install with no maintenance required.

- Throttle Body
- Pump Mounted
- Engine Mounted
- Universal



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