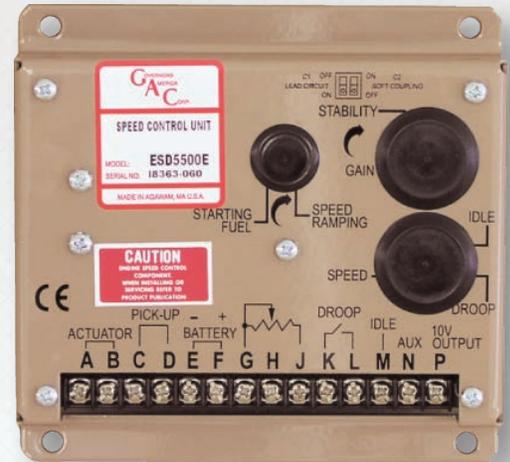


Speed Control Unit ESD5500E SERIES

The ESD5500E 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's STARTING FUEL and SPEED RAMP features will minimize engine exhaust smoke experienced prior to attaining engine operating speed and smooth out response.

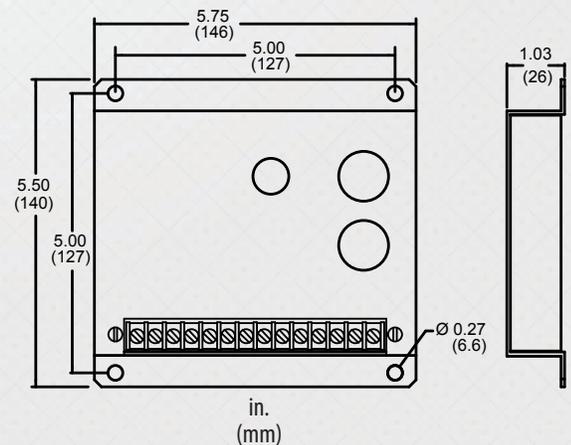


FEATURES

- Simple Installation and Adjustability
- Environmentally Protected
- Adjustable Droop and Idle Circuits
- Accessory Inputs for Load Sharing
- Variable Speed Operation
- Reverse Battery Voltage Protected
- Soft Coupling & Lead Circuit Options

SELECTION CHART / DIMENSIONS

| | Standard Features | Light Force | ATB Applications | GASEOUS | | |
|----------|-------------------|-------------|------------------|---------------------|------------------------|------------------------|
| | | | | Anti-Windup Circuit | 25-45mm Small Bore ATB | 55-95mm Large Bore ATB |
| ESD5500E | ● | | | | | |
| ESD5520E | | ● | | | | |
| ESD5526E | | | ● | ● | ● | |
| ESD5528E | | | ● | ● | | ● |



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% |
| Idle Speed Adjust CW | 60% of Set Speed |
| Idle Speed Adjust CCW | Less than 1200 Hz |
| Droop Range | 1 - 5% Regulation |
| Droop Adj. Max. (K-L Jumpered) | 400 Hz., ±75 Hz per 1.0 A change |
| Droop Adj. Min. (K-L Jumpered) | 15 Hz., ±75 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 |

Environmental

| | |
|-----------------------------|--------------------------------------|
| Operating Temperature Range | -40 °F to +180 °F (-40 °C to +85 °C) |
| Relative Humidity | up to 95% |
| Vibration | 1 G @ 20 - 100Hz |
| 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 plus Actuator Current |
| Actuator Current Range @ 77°F (25°C) | 2.5 - 10 Amps Continuous |
| Speed Sensor Signal Range | 0.5 - 50 VAC |
| Speed Sensor Signal | 0.5 - 120 VRMS |

Physical

| | |
|------------|---|
| Dimensions | 5.50 in x 5.75 in x 1.03 in (140 mm x 146 mm x 26 mm) |
| Weight | 1.2 lb (0.544 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
- Engine Mounted
- Pump Mounted
- Universal



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