

# Speed Control Unit

## ESD2200 SERIES

The ESD2200 Series speed control unit is an all-electronic device designed to control engine speed with fast and precise response to transient load changes. This closed loop control, when connected to a proportional electric actuator and supplied with a magnetic speed sensor signal, will control a wide variety of engines in an isochronous or droop mode. It is designed for high reliability and it's hard potted to withstand the engine environment.



## **FEATURES**

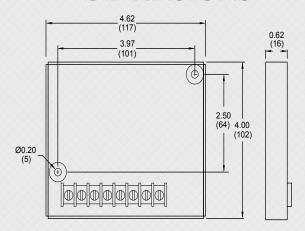
- Light Force Option Available
- Adjustable PID Functions
- Isochronous Operation

- Transient Voltage Protection
- 8:1 Speed Range Control
- 12 or 24 VDC

## **SELECTION CHART**

|            | 12 Volt | 24 Volt | Idle Circuit | Light<br>Force |
|------------|---------|---------|--------------|----------------|
| ESD2210-12 | •       |         |              |                |
| ESD2210-24 |         | •       |              |                |
| ESD2241-24 |         | •       | •            |                |
| ESD2244-12 | •       |         |              | •              |
| ESD2244-24 |         | •       |              | •              |

## **DIMENSIONS**



## **SPECIFICATIONS**

#### Performance

| Isochronous Operation        | ±0.25%                                  |
|------------------------------|---|
| Speed Range                  | 1 - 7.5 KHz Continuous                  |
| Speed Drift with Temperature | ±1.0%                                   |
| Speed Trim Range             | ±250 Hz                                 |
| Terminal Sensitivity         | 130 Hz., ±15 Hz/Volt @ 5.1 KΩ Impedance |

#### **Flectrical**

| ~~~~~~~~~~ <del>-</del> !~           | . ci i cui                                |
|--------------------------------------|---|
| Power Supply                         | 12 VDC or 24 VDC Battery Systems          |
|                                      | (Transient and Reverse Voltage Protected) |
| Polarity                             | Negative Ground (Case Isolated)           |
| Power Consumption                    | 60 mA (Continuous Plus Actuator Current)  |
| Actuator Current Range @ 77°F (25°C) | 10 Amps Continuous                        |
| Speed Sensor Signal                  | 1.0 - 50 VRMS                             |
|                                      |   |

#### **Environmental**

UNITS

in mm

| Operating Temperature Range | -40 ° F to +185 ° F (-40 ° C to +85 ° C) |  |
|-----------------------------|--|--|
| Relative Humidity           | up to 100%                               |  |
| Vibration                   | 5 G @ 20 - 500Hz                         |  |
| All Surface Finishes        | Fungus Proof and Corrosion Resistant     |  |

## Reliability

| Vibration | 5 G @ 20 - 500Hz         |
|-----------|--------------------------|
| Testing   | 100% Functionally Tested |
|           |                          |

### **Physical**

| Dimensions | 5.00 in x 5.00 in (127 mm x 127 mm) |  |
|------------|-------------------------------------|--|
| Weight     | See Outline Front Page              |  |
| 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











台北市 105 復興北路 427 巷 30 號 (02)2717-5038 ( 代表號 ) (02)2717-5039

taipei@arith.com.tw www.arith.com.tw