### INSTALLATION

The EDG5330 speed control unit is rugged enough to be placed in a control cabinet or engine mounted enclosure with other dedicated control equipment. The circuit board is conformally coated to seal out moisture and resist vibration. If water, mud or condensation can come in contact with the unit, it should be mounted up high to allow for any accumulated fluids to drain away from the speed control unit.

### DEFINITION

- **Frequency Trim**
- **Magnetic Pickup**

### NOTES

- **E & F OFF WIRES**
- **DTC 4X**
- **10 VDC, Internal Supply - A(+) & C(-)**

### WIRING

See the back of the document for the wiring diagram.

### PRE-START SETUP

Preheat the adjustments. Check to see that the GAIN, STABILITY, and External Frequency Sensing are set to their respective positions. Also check to see that the STARTING FUEL adjustment is set to “100” initially.

### GOVERNOR SPEED SETTING

The governed speed set point is increased by clockwise rotation of the SPEED adjust pot. Reverse speed adjustment can be made by counterclockwise rotation. Parameter 1 should be adjusted to zero before attempting to center the governor.

### ADJUSTING FOR STABILITY

If the engine is running at operating speed and at no load, the following governor adjustment can be made.

**PARAMETER**

<table>
<thead>
<tr>
<th>Adjustments</th>
<th>PROCEDURE</th>
</tr>
</thead>
</table>
| 1. Gain     | Adjust the gain to achieve a steady-state operation. (1/2 turn clockwise)
| 2. Lag      | Adjust the lag to achieve a steady-state operation. (1/2 turn clockwise)

### DUAL GAIN FEATURE

The EDG5330 can operate with two distinct gain settings. The two gain adjustments, Gain 1 and Gain 2 are independent adjustments. With the connection from B to C and the Gain 1 adjustment is set to a low value, and with a connection from B to D and the Gain 2 adjustment is set to a high value, there should be an improvement in the manner of speed change.

### OVERSPEED MONITOR

The overspeed monitor circuit trip point is set by the mult-turn potentiometer. The Overspeed trip when the governor speed is equal to or greater than the overspeed trip setting (OS). To set the overspeed trip, turn the overspeed trip potentiometer until the speed is 10% above the trip setting.

### ADDITIONAL FEATURES

- **DIP SWITCHES**
- **C1 Lead Circuit**
- **C2 Standard Drive Train**

<table>
<thead>
<tr>
<th>RESONANT DRIVE TRAINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIP SWITCHES: C2 ON, Resonant Drive Train is enabled.</td>
</tr>
</tbody>
</table>
For slow instability use the SLOW INSTABILITY SEQUENCE and for fast instability use the FAST INSTABILITY SEQUENCE. Start by setting the switches to reflect Sequence 1. If instability persists, adjust the switches to reflect Sequence 2. Continue through each sequence until instability stops.

### SW2 SWITCH SETTINGS FOR INSTABILITY

#### SW1 INSTABILITY SEQUENCE

<table>
<thead>
<tr>
<th>SW1</th>
<th>SW2</th>
<th>SW3</th>
<th>SW4</th>
<th>SW5</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
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#### SW2 INSTABILITY SEQUENCE

<table>
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<th>SW3</th>
<th>SW4</th>
<th>SW5</th>
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<tbody>
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</table>

### SPECIFICATIONS

**Performance**

- **± 0.25% Isochronous Operation**
- **1.0 - 7.5 KHz Continuous Speed Range / Governor**
- **± 1% Maximum Speed Drift with Temperature**
- **25 - 85% of rated speed Idle Speed Adjust Range**
- **0 - 5% for a 1.5 A actuator current change Droop Range**
- **± 200 Hz Speed Trim Range**
- **266 Hz/sec - 1300 Hz/sec Accel Adjustment**
- **250 Hz/sec - 1000 Hz/sec Decel Adjustment**
- **120, 175, 225, 275 Actuators / SW2-"OFF" (24 Volt Only) 2500 Actuators / SW2-"ON" Overcruise Set Point**
- **2330 Hz - 8500 Hz**
- **200 Hz - 2050 Hz Crank Termination Set Point**
- **105 Hz, ±15 Hz/ Volt @ 5 K Impedance**
- **130 Hz, ±15 Hz/ Volt @ 1 M Impedance**
- **685 Hz, ±40 Hz/ Volt @ 325 K Impedance**
- **1000 Hz, ±50 Hz/ Volt @ 8 K Impedance**

**Input / Output**

- **24 VAC Battery System**
- **RS-232-C, IEEE J1939 Communications**
- **10 G (11ms) Shock**
- **130 Hz, ±15 Hz/Volt @ 1 M Impedance Chopping Frequency Range**
- **1.250 - 5.0 A Maximum Continuous Supply**
- **± 1% Maximum Current, Relay Contact Rating**
- **0.3 - 5.0 A Maximum Actuator Current**
- **0.0 - 1.5 A Terminal Sensitivity**
- **0.3 - 5.0 A Maximum Actuator Current**
- **10 V ACCESSORY**
- **32 Volts Terminal Power Consumption**
- **3.0 - 50 VAC Power Supply**

### ENVIROMENTAL

- **-40° to 85°C (-40 to 185°F) Ambient Temperature**
- **≤-95% Relative Humidity**
- **50 Hz - 8500 Hz Frequency Range**
- **1.0 - 50 KHz Power Consumption**
- **< 50 Volts Supply**

### PHYSICAL

- **14” x 5-1/2” x 5-1/2” (356 x 140 x 140 mm) Dimensions**
- **1.0 kg (2.2 lbs) Weight**
- **Not Applicable Mounting**
- **12.5 Years Reliability**

### COMPLIANCE / STANDARDS

- **CE and RoHS Requirements**
- **ISO 9001:2008**
- **4164 A**

### RELIABILITY

**Version:** 1.28

**Shock:** 15 G (11ms)

**Sounding:** 100% Functional Testing