



APECS[®] 500

Single Speed Electronic Engine Controller

The APECS 500 single speed controller is designed to meet the needs of the small genset market where simplicity, ease of operation, and low cost are key features.

DESCRIPTION

The APECS 500 controller combines the convenience of manual adjustments with the flexibility of a computer-based calibration tool. Electrical connections consist of six wires to battery, actuator and magnetic engine speed pickup. For most applications, APECS 500 can be connected and adjusted with simple hand tools.

APECS 500 controls and limits engine speed by adjusting the fuel control lever with a proportional actuator. The controller will maintain fixed engine RPM regardless of load provided that the engine's available power is not exceeded (i.e., isochronous operation).

The controller has a multi-turn potentiometer for speed adjustment and a single-turn potentiometer for gain adjustment. It has six Euro-style screw terminals for:

- Battery Positive and Negative (9-30 Vdc). Reverse voltage protected.
- Actuator Positive and Negative (6A continuous). Short circuit protected.
- Magnetic Pickup (MPU) Positive and Negative (2 VAC minimum at 1000 Hz)

As shipped from the factory, APECS 500 can be manually adjusted for stable operation on most applications that supply a magnetic pickup frequency of 2500 to 5000 Hz. Through use of the optional APECS calibration tool (ACT), several user-adjustable features may be accessed, including:

- Frequency range (200-15,000 Hz)
- Synchronized speed sampling
- Proportional, Integral and Derivative gains
- Overspeed shutdown and delay
- Underspeed shutdown and delay
- Crank-to-run transition speed
- Warmup speed and time
- Startup gains
- Offset to actuator command
- Battery voltage compensation

APECS 500 Controller: SA-4492

**Calibration Tool (ACT): SA-5206
(optional)**

- Manual or PC-based calibration
- Environmentally sealed plastic enclosure
- Six Euro-style terminals for battery voltage, actuator and magnetic pickup
- 20-turn speed setpoint potentiometer
- Single-turn gain potentiometer
- Status lamp
- Programming interface for optional user flexibility
- Microprocessor control

PO Box 1519
 Fort Collins CO, USA
 80522-1519
 1000 East Drake Road
 Fort Collins CO 80525
 Ph: +1 (970) 482-5811
 Fax: +1 (970) 498-3058

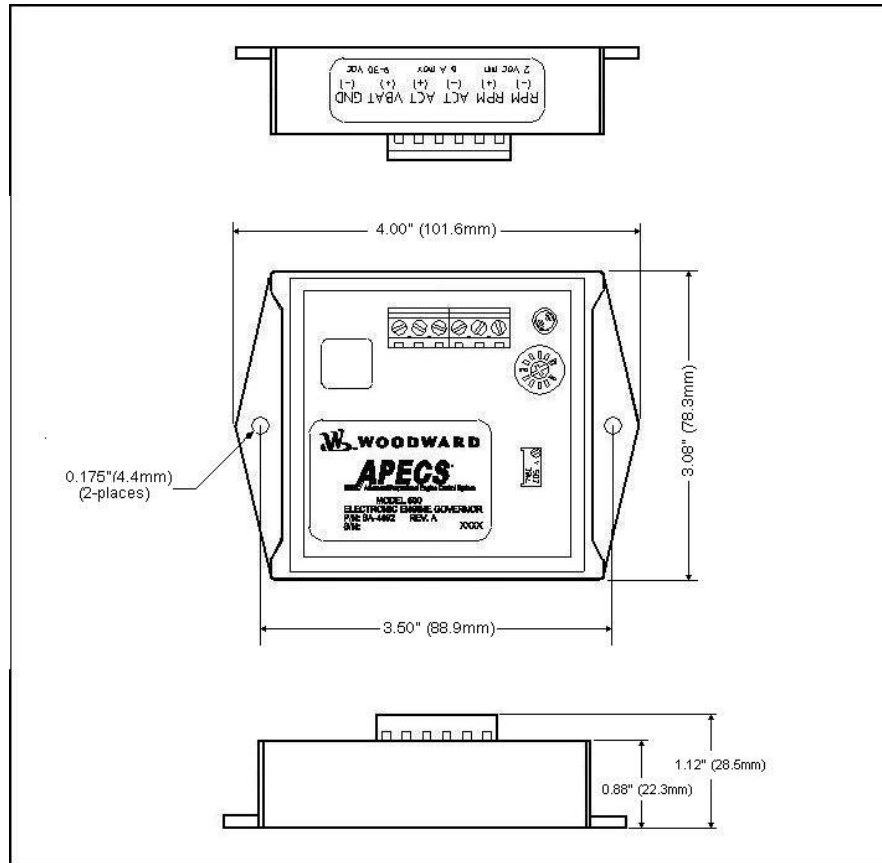
Distributors & Service
 Woodward has an international network of distributors and service facilities. For your nearest representative, call the Fort Collins plant or see the Worldwide Directory on our website.

Corporate Headquarters
 Rockford IL, USA
 Ph: +1 (815) 877-7441

www.woodward.com

Ambient Operating Temperature	-40 to 85°C (-40 to 185°F)
Battery Voltage	9-30 VDC, reverse voltage protected
Electro-magnetic Compatibility	30 V/m 2-1000 MHz
Magnetic Pickup	2 VAC minimum at 1000 Hz
Actuator Output*	6 A max Pulse Width Modulated (PWM)

(*) Compatible with all APECS proportional actuators (linear and rotary).
 Includes short circuit and open circuit detection/protection.



APECS 500 Controller Dimensions

This document is distributed for informational purposes only. It is not to be construed as creating or becoming part of any Woodward Governor Company contractual or warranty obligation unless expressly stated in a written sales contract.

© Woodward 2005
 All Rights Reserved

For more information contact: