

**NEW**

# APECS® 5000

This newest addition to the APECS series of programmable engine controllers applies Woodward's advanced digital governing technology to stepper motors. Designed as an economical means of throttle actuation in small spark ignition engines, the APECS 5000 is also an excellent engine protection system.



### Features:

- User-selectable isochronous or droop governing
- Actuator output tailored to Woodward bi-polar stepper motor. Position control to one-quarter degree accuracy
- Easily programmed with software calibration tool:
  - Adjustable PID gains
  - Programmed speed setpoints, ramp rates
  - Simplified calibration with software wizard
  - Graphic or numeric real-time display
- Universal speed inputs for either magnetic pickup, coil-type spark ignition system, magneto spark ignition system, or Hall Effect sensor.
- External analog speed setpoint input may be configured for trim mode or full authority mode.
- Two switched inputs allow for either multi-speed or variable speed operation.
- PTO switch input enables selection between analog and speed setpoint switch inputs. Also used to initiate an autocrank sequence when auxiliary output is configured for this purpose.
- Idle verification switch input can detect pedal position sensor faults.
- Engine protection switch input connects to one or more user-selected engine protection switches (e.g. engine coolant, engine oil pressure).
- Status lamp (LED) signals normal engine running condition and diagnostics including overspeed and underspeed.
- Auxiliary output configurable in several ways:
  - Engine shutdown
  - Crank disable
  - Autocrank sequence
  - Remote fault lamp or remote status lamp
- Ideal for mobile or stationary applications.

### Order Information:

<b>SA-4486</b>	APECS 5000 Controller
<b>SA-4490</b>	Deutsch Connector Kit
<b>SA-4488</b>	ACT Kit (All-purpose Calibration Tool)

E.E.C. Directive Compliance: All parts supplied by Woodward are classified as components, and therefore are not "CE" marked. Please contact factory direct for details on specific product compliance with 89/336/EEC and 89/392/EEC directives.

# APECS® 5000

## Electrical Specifications:

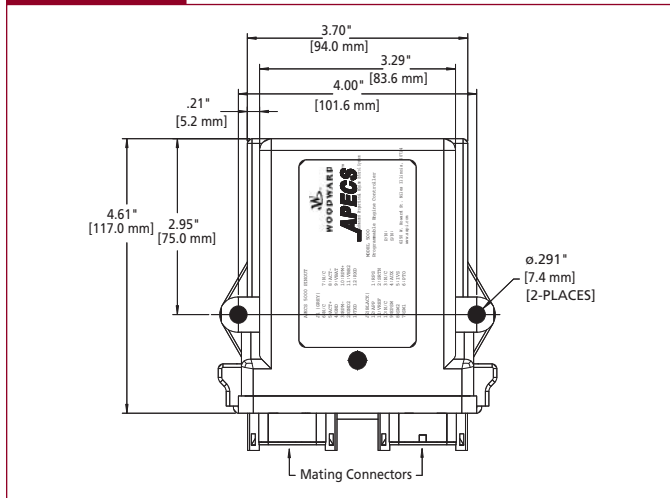
Power Input	9-32 VDC, reverse polarity protected	
EMI Immunity (ISO 14982:1988/E)	30 V/M 20 MHz to 1000 MHz	
Operating Current	<u>12 Volt</u>	<u>24 Volt</u>
Operating:	1.25 A	1.25 A
Standby:	25 mA	25 mA
Auxiliary Outputs	200 mA maximum	

## Mechanical Specifications:

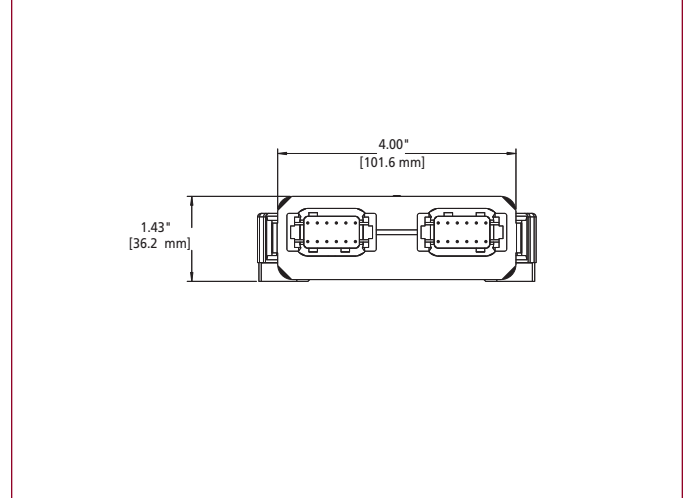
Operating Temperature	-40°F to +185°F (-40°C to +85°C)
Vibration	6 G's from 40 to 2000 Hz
Calibration	Requires interface adapter and software for calibration setup
Enclosure	Deutsch PCB enclosure EEC-325X4 with two 12-pin receptacles
Weight	Approx. 0.6 lbs (0.27 kg)

APECS® Controllers

### DIMENSIONS



### TWO 12-PIN RECEPTACLES



Specifications and dimensions are for reference only.