APECS® 2000

The powerful microprocessor-based controller of the APECS (Advanced Proportional Engine Control System) monitors the actual speed of the engine through a speed sensor, compares the actual speed with the desired speed, then sends a pulse width modulated signal to the precision proportional actuator to maintain the desired speed.

Features:
- Proportional, Integral and Derivative control (PID)
- Isochronous governing ± 0.25% (20 turn setpoint)
- Remote speed setpoint (± 10% speed change or 0-100% of internal setpoint)
- Surface mount technology
- Signal source: magnetic pickup
- Electrostatic discharge protection
- Reverse polarity protection
- Protection against miswiring
- Diagnostics for broken wire, overspeed, and internal component check
- Engine compartment mountable and can be used with all sizes of APECS actuators
- Rugged case potted for environmental protection

Order Information:

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<th>ORDER NO.</th>
<th>Model</th>
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<tr>
<td>SA-4389</td>
<td>2000</td>
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E.E.C. Directive Compliance: All parts supplied by Synchro-Start Products 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® Controllers

APECS® 2000

SA-2170

Integral connection

SIDE VIEW

Advanced Proportional Engine Control System

TM

SYNCHRO-START PRODUCTS, INC.

CONTROLS DIVISION

NILES, IL. 60714 USA

847-967-7730

P/N

S/N

MODEL

CONTROLLER

R

PRODUCTS, INC.

1.55" MAX. [39.4 mm]

5.12" [130 mm]

1.25" MAX. [31.8 mm]

.25" REF [6.4 mm]

6.50" MAX [165 mm]

TERMINAL BLOCK WITH #6-32 PAN HD. SCREWS (9)

2.00" REF [50.8 mm]

.265" REF [6.73 mm]

THRU HOLE (4 PLACES)

4.00" MAX [101.6 mm]

5.70" REF [144.8 mm]

DATE CODE

TERMINAL BLOCK WITH #6-32 PAN HD. SCREWS (9)

SIDE VIEW

5.12" [130 mm]

1.55" MAX. [39.4 mm]

.25" REF [6.4 mm]

WARNING: An overspeed shutdown device, independent of the APECS system, should be provided to prevent loss of engine control that may cause personal injury or equipment damage.

Specifications are for reference only.

Electrical Specifications:

Operating Voltage 9–30 VDC (wide range)

Overspeed Protection Automatic shutdown at 125% of setpoint speed

Speed Input Signal 250 Hz to 10,000 Hz

(5 ranges)

Signal Input Minimum 2 VRMS at cranking

Output PWM up to 8 A

Mechanical Specifications:

Operating Temperature -40°F to 185°F

(-40°C to 85°C)

Vibration 6 G’s from 20 to 500 Hz

Shock 4 foot drop test

Protection Potted electronics for environmental protection

Terminals Nickel plated, humidity and salt spray resistant

Weight 1.4 lbs (0.6 kg)