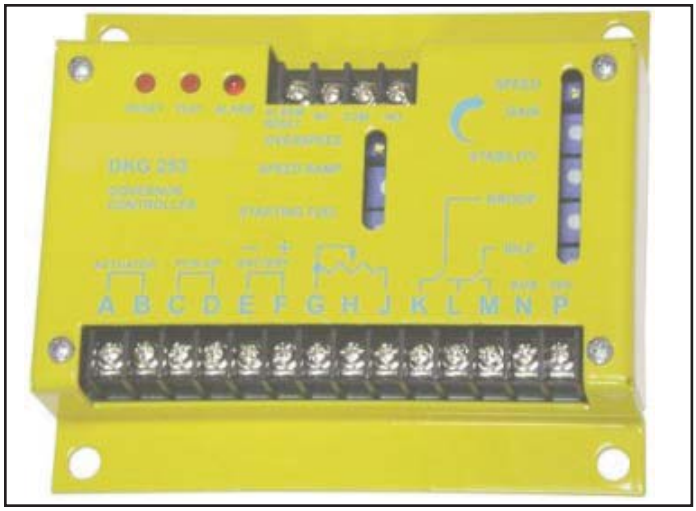
DKG-253

Governor Controller

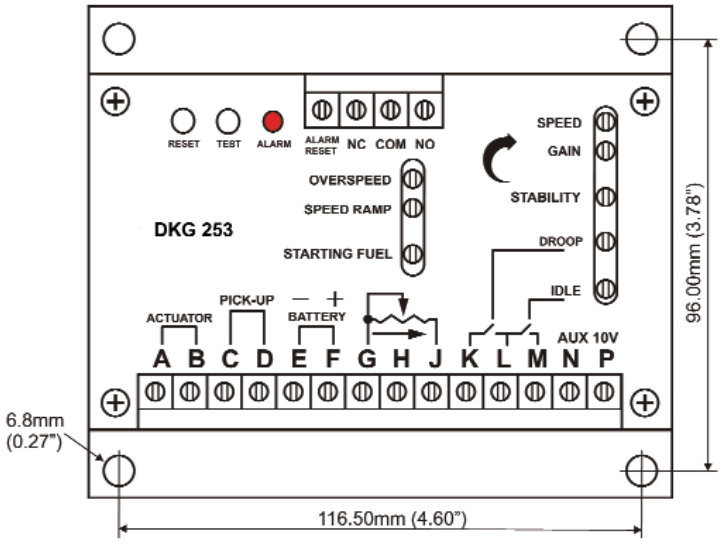
NEW!

FEATURES

- 12V and 24V operation
- Capable of governing various engines
- Forward acting actuator output
- Fast and accurate response
- Idle and rated speed modes
- Starting fuel adjustment
- Speed ramp adjustment
- Overspeed alarm output
- Adjustable rated and idle speeds
- Isochronous and droop operation
- Gain and stability adjustments
- External speed adjustment capability
- Synchronizing and load sharing input
- Switchmode output circuit
- 10 Amps continuous current output
- Speed sensor failure detection
- Battery reverse voltage protection
- Output short circuit protection
- Rugged design
- Enamel protected electronic circuit
- Small dimensions
- Low cost



INSTALLATION



DESCRIPTION

The DKG-253 is a low cost electronic governor control unit designed to control the engine speed with fast and accurate response to load changes.

The unit is housed in a metallic chassis and consists of a single enamel coated printed circuit board for reliable operation in harsh automotive environment.

The unit features an adjustable internal overspeed alarm relay with indicating LED. This relay provides supplementary speed protection in case of speed control failure. DKG-253 connects to a forward acting proportional electric actuator and a magnetic speed sensor. It is able to control a wide variety of engines in constant speed (isochronous) or droop modes. The unit offers various adjustment potentiometers. All potentiometers are accessible from the front facia. The DKG-253 has potentiometer-adjusted IDLE and RATED speed settings. The IDLE or RATED speedmodes are selected with an external switch.

The GAIN and STABILITY adjustments control the dynamic performance of the unit and allow stable operation with most engine types. In clockwise direction, the GAIN control potentiometer increases the sensitivity of the unit. In clockwise direction, the STABILITY control increases the reaction delay of theunit in order to match various engines. The STARTING FUEL adjustment allows smoke-free engine starting. During engine cranking, the actuator output is partly energized and the shaft moves to the starting fuel position.

In standard operation, the governor controller is in constant speed mode. If needed, a droop may be injected by connecting together terminals K and L. The droop range is then adjusted with the DROOP potentiometer. An external speed trim potentiometer may be connected to the unit to adjust the engine speed from a remote location. The auxiliary speed adjustment input allows voltage controlled speed trimming for synchronising and load sharing purposes. If an adequate speed signal is not supplied to the unit, the speed signal monitoring circuit will detect this and shut-off the actuator output in order to prevent any damage.

The output circuit provides a switched output current in order to reduce the internal power dissipation. As the switching frequency is very high, there is no visible motion of the actuator shaft.

The unit is capable to deliver actuator currents as high as 10 Amps. However the output current limiting circuit will protect the unit against output short circuits. Protection against reverse battery connection and transient voltages are provided.

For more information or the latest certifications, please contact:
PC&S, Inc. at +1 (800) 523-9194 or +1 (973) 448-9400
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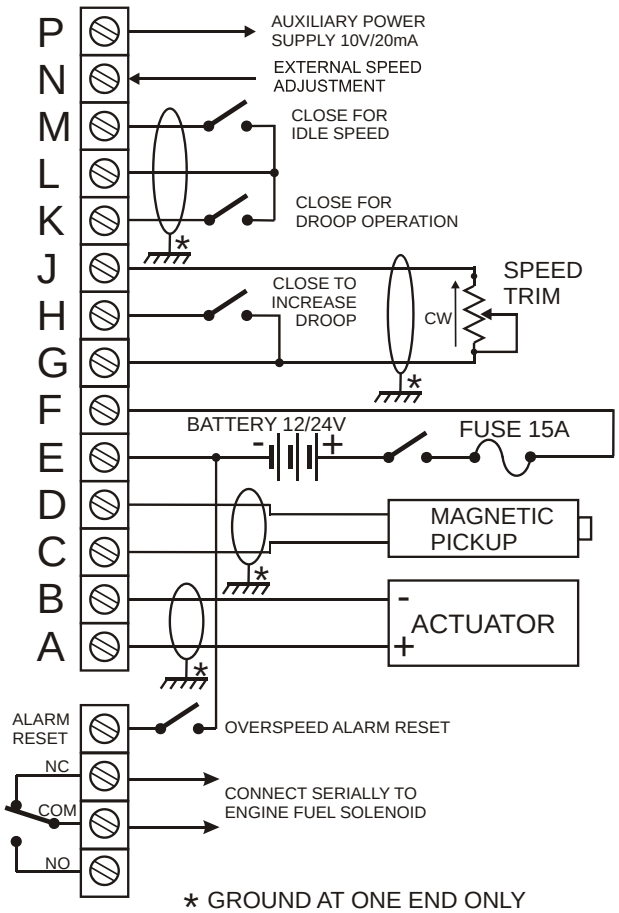
TECHNICAL SPECIFICATIONS

DC Supply Range	10.0 to 33.0V,DC
Current Consumption	60mA,DC (actuator not connected)
Speed	
Input Range	500Hz to 8000Hz
Signal Amplitude	1 to 35V,AC (RMS)
Signal Input Impedance	10K Ohms
External Speed	
Trim	5K Ohms trimpot (between terminals G and J)
Trim Range	±6% min @ 3000Hz
Auxiliary Input (Terminal N)	
Input Voltage Range	0 to 10V,DC
Input Impedance	1M ohms
Adjustment Range	±25% min @ 3000Hz
Steady State Speed	Accuracy: ±0.25%
Droop Adjustment Range	1 to 5% minimum

Actuator Output	10 Amps contimuous max.
Overspeed Alarm Relay	Output 10Amps @ 28V,DC
Alarm Reset Input	0 to 40V,DC
DC Supply Output	10V,DC (20mA,DC max)
Operating Temperature	-4°F to +158°F (-20°C to +70°C)
Storage Temperature	-22°F to +176°F (-30°C to +80°C)
Maximum Humidity	95% non-condensing
Dimensions	5.12" W x 4.33" H x 1.06" D
Weight	0.78 lbs. (350 g. approx.)
Case Material	Metallic chassis with enamel coated printed circuit board
Mounting	any position; vertical preferred

WIRING



* GROUND AT ONE END ONLY

COMPATIBILITY / CONFORMITY

CE

EU Directives Conformity

73 / 23 / EEC
93 / 68 / EEC
89 / 336 / EEC
92 / 31 / EEC
93 / 68 / EEC

Norms of Reference:

EN 61010 (safety requirements)
EN 50081-2 (EMC requirements)
EN 50082-2 (EMC requirements)

PC&S

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