Digital Speed Governor Versions

SDG-725 **with discrete output (Overspeed)**
SDG-735 **with auxiliary input (Synchronizer and Load Sharing)**
SDG-755 **with discrete output (Overspeed) and aux input (Synchr/ Load Sh.)**

Introduction

The SDG (Smart Digital Governor) is an all electric device designed to control engine speed with fast and precise response to transient load changes. This closed loop control unit, when connected to a GAC proportional electric actuator and supplied with a magnetic speed sensor signal, will control a wide variety of engines in isochronous or droop mode. It is designed for high reliability and built ruggedly to withstand the engine environment.
The SDG offers password protection to ensure security and system integrity.

Customer configurable settings included in the SDG:

- PID parameters for optimized performance
- Three fixed and one variable speed settings or four fixed settings
- On demand droop for each individual speed setting
- Acceleration and deceleration speed ramps for smooth speed changes
- Starting fuel schedule, allows for minimized smoke as well as fuel economy.

.

GAC Governors America Corp. Engine Governing Systems	**Document:** Product Information **Version:** 2 **Status:** actual **Author:** bs **Date:** 04-07-21 **Approved:** ro **Date:** 04-07-21 **File:** *PC*	**SDG 700 Series** **Smart Digital Governor**	ARITH

Technical Data

Physical:

Dimensions	96 x 141 x 37 mm
Weight	0.64kg
Mounting	Direct engine frame mounting, isolated via rubber elements, vertical preferred, or in panel.

Performance:

Isochronous Operation / Steady State Stability	±0.25% or better
Speed Range of Governor	400 – 8000 Hz
Speed Drift with Temperature	±0.25% maximum

Environmental:

Ambient Operating Temperature Range	-40° to 85 °C
Relative Humidity	up to 95%

Input / Output Parameters:

Supply	12 or 24 VDC battery systems (6.5 to 33 VDC)
Polarity	Negative Ground (case isolated)
Power Consumption	70 mA max. continuous plus actuator current
Actuator Current Max	10 A continuous
Speed Sensor Signal	1 to 120 V RMS
Discrete Output (terminal L on SDG-725/755)*	Sinks up to 25 mA, Rated 20 mA @ 12V,600Ω
Auxiliary Input (terminal L on SDG-735) *	5 VDC, for GAC/ComAp Synchr. & Load Sharer Sensibility: approx. 100 Hz/V

Configuration Parameters :

Flywheel Teeth Range	50 – 250 teeth
Overspeed Setting	400 –10000 Hz **
Crank termination	50 – 1000 Hz **
Fixed Speed settings (all 3 speeds)	400 – 8000 Hz **
Variable Speed settings	400 – 8000 Hz **
Start Fuel Ramp	0 – 100%
Start Fuel Preset	0 – 100% (max fuel)
Droop Range	0 – 10% regulation
Speed Ramp up	0 – 100%
Speed Ramp down	0 – 100%

Reliability:

Vibration	7G @ 20-100Hz.
Testing	(100%) Functionally tested

Password Protection:

Password	4-digit number

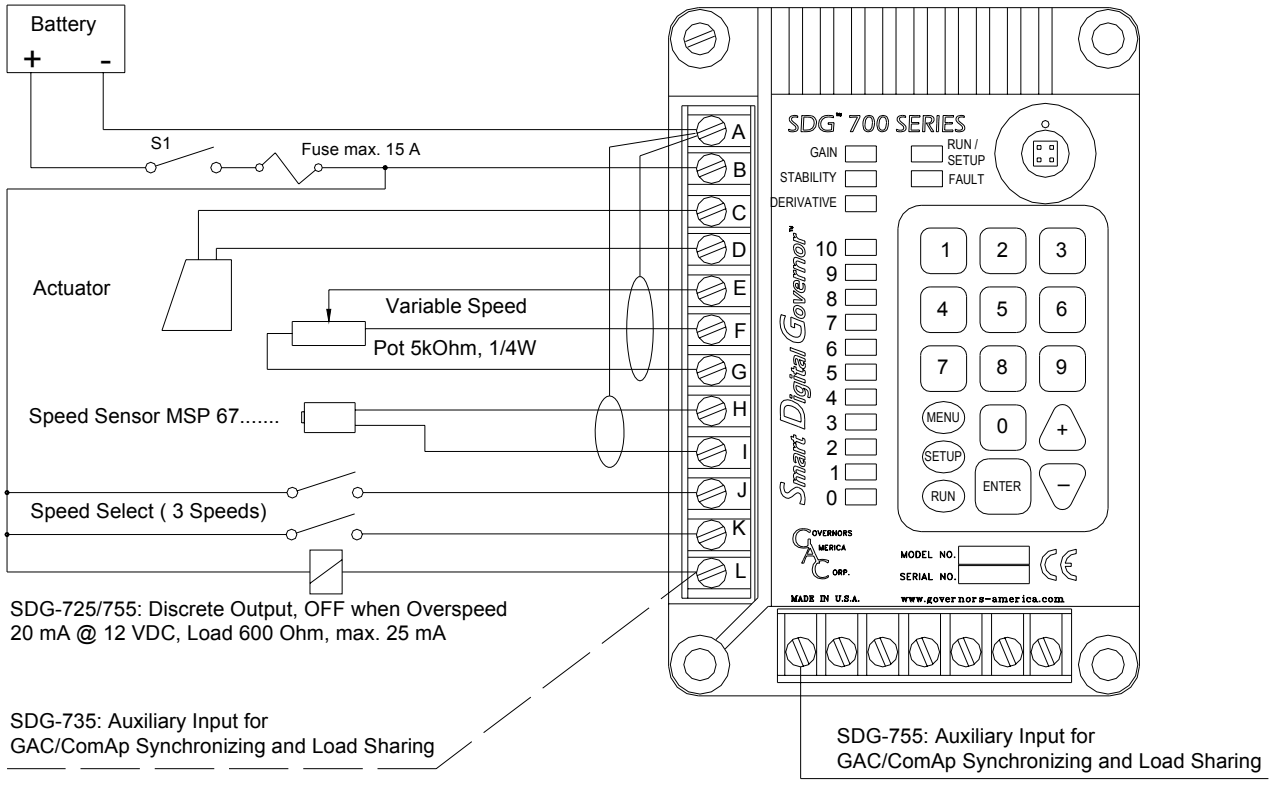
*) Terminal L used as:
in SDG-**725** and **755** as output, normally ON, OFF when overspeed tripped, latching, reset by cycling power
in SDG-**735** as auxiliary input for synchronizing and load sharing.

**) Speed values in RPM are based on the number of flywheel teeth.
RPM = Pickup frequency x 60 / flywheel teeth. (Max. frequency is 10'000 Hz.)

誥鑫企業有限公司
ARITH COMPANY LTD.
地 址： 台北市復興北路427巷30號
電 話： (02)2717-5038
傳 真： (02)2717-5039
e-mail: taipei@arith.com.tw
網 址： http://www.arith.com.tw

Governors America Corp. Engine Governing Systems	**Document:** Product Information **Version:** 2 **Status:** actual **Author:** bs **Date:** 04-07-21 **Approved:** ro **Date:** 04-07-21 **File:** *PC*	**SDG 700 Series** **Smart Digital Governor**	ARITH

Wiring and Dimensions



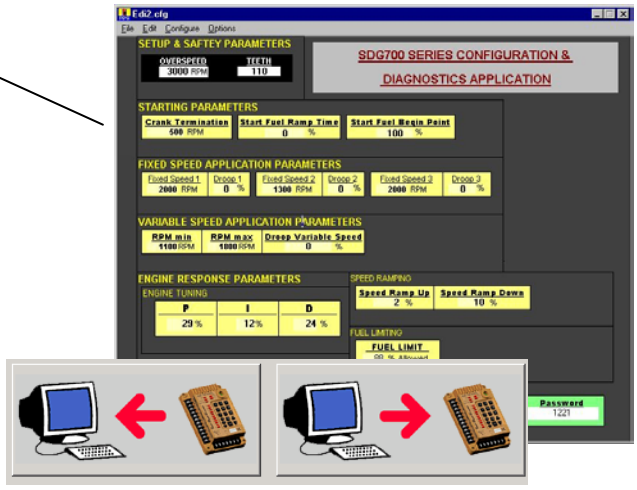
Configuration Possibilities (access code protected)

Via Diagnostic Port with:

- TSE-205 Programmer
  for download of configuration only

- TSE-208 SmartView Kit (Dongle and PC software)
  for upload and download of configuration

Key pad



誥鑫企業有限公司
ARITH COMPANY LTD.
地 址： 台北市復興北路427巷30號
電 話： (02)2717-5038
傳 真： (02)2717-5039
e-mail: taipei@arith.com.tw
網 址： http://www.arith.com.tw