



## 701A Digital Speed Control for Reciprocating Engines

8280-192, 8280-193, 8280-194

Installation and Operation Manual

Discrete input voltages provide on/off command signals to the electronic control, such as Raise Speed, Lower Speed, etc. Each discrete input requires 10 mA at its nominal voltage rating:

- 24 Vdc where 24 volts is used for switching logic;
- internal auxiliary voltage provided on the control for use on high voltage versions of the 701A control in systems where 24 Vdc switching logic voltage is unavailable (dry contact switches or relays must be used).

Other available options are:

- proximity switch input for speed signal frequencies below 100 Hz;
- tandem actuator outputs;
- speed filter.

These models of the 701A Digital Speed Control are available with the following option combinations. The part number is stamped on the identification tag on the front of the control.

Part Number	Speed Input	Power Supply Voltage	Actuator Current	Speed Range
8280-192	Mag. Pickup	Low	0-200 mA	8-2100 rpm
8280-193	Mag. Pickup	High	0-200 mA	8-2100 rpm
8280-194	Mag. Pickup	Low	0-20 mA	8-2100 rpm

The magnetic pickup versions are limited to operating speeds providing 60 Hz magnetic pickup frequency minimum.

## 701A Digital Speed Control Accessories

Hand Held Programmer (Figure 1-2), part number 9907-205, is used for adjusting the 701A control. It plugs into the serial port of the control.

Generator Load Sensor, for load sharing or droop-parallel generator applications.

SPM-A Synchronizer, for synchronizing the generator phase to that of the power bus. The synchronizer generates a close generator breaker signal to parallel the generator with the power bus.

Power Output Sensor, for load sharing or droop operation in mechanical load applications.

Real Power Sensor, for load sharing or droop-parallel generator applications.

# 701A Control Specifications

---

Woodward Part Numbers:

8280-192	701A w/ MPU, low-voltage power supply, 0-200 mA output
8280-193	701A w/ MPU, high-voltage power supply, 0-200 mA output
8280-194	701A w/ MPU, low-voltage power supply, 0-20 mA output
9907-205	Hand Held Programmer

Power Supply Rating	18–40 Vdc (24 or 32 Vdc nominal) 88–132 Vac 50/60 Hz (120 Vac nominal) 90–150 Vdc (125 Vdc nominal)
---------------------	---

Power Consumption	8 watts nominal
Steady State Speed Band	MPU: 60–15 000 Hz (8–2100 rpm) proximity switch: 7.5–1000 Hz (8–2100 rpm)

Remote Speed Setting Input	4–20 mA
Tachometer Output	4–20 mA

Ambient Operating Temperature	–40 to +70 °C (–40 to +158 °F)
Storage Temperature	–55 to +105 °C (–67 to +221 °F)

EMI/RFI Specification	US MIL-STD 461C (Parts 5 & 9)
-----------------------	-------------------------------