



a Siebe company

## Product Information

DYNA  
Power Controls

### DYNA I DIGITAL CONTROLLER

MODEL: DYN1 10840

#### GENERAL

The Barber-Colman DYNA I Controller incorporates the latest digital technology, providing a cost effective and versatile unit for precise control spark ignited engines in the marketplace.

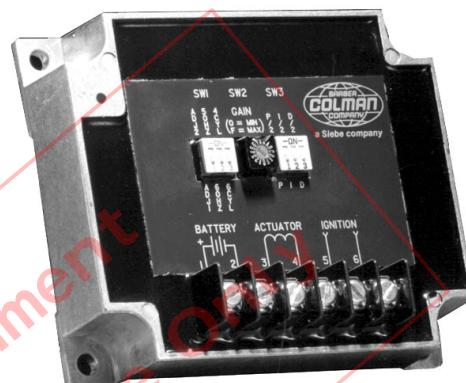
The microprocessor measures the engine speed, using a PID function to provide a control that results in fast and stable engine response to load changes while maintaining precise speed regulation.

#### SPEED SENSING

The engine speed reference signal is obtained from ignition system of either **COIL BASED** or **DIS** (distributorless) ignition system. The controller senses the ignition pulses to maintain either 50 or 60 Hz generator frequency.

#### SPECIFICATIONS

- **Operating Voltage** 7 to 30 VDC
- **Steady State Speed Band**  $\pm 0.25\%$
- **Ambient Operating Temperature**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+180^{\circ}\text{F}$ )
- **Temperature Stability** Better than  $\pm 0.5\%$  over temperature of  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ . ( $-40^{\circ}\text{F}$  to  $+167^{\circ}\text{F}$ )
- **Mechanical Vibration** Withstands the following vibration without failure or degraded performance: 0.06 inch double amplitude at 5 to 18 Hz; 1 G at 18 to 30 Hz; 0.02 inch double amplitude at 30 to 48 Hz; 2.5 G's at 48 to 70 Hz.
- **Output Signal** PWM Current to 6 Amp Max.
- **Connections** Terminal Strip
- **Sealing** Dust Tight
- **Enclosure** Die Cast Aluminum
- **Weight** 1.17 lbs. / .53 Kg.
- **Actuator Compatibility**  
DYNA 2000, 2500 and 7000



#### STANDARD FEATURES

- All Electric
- No Magnetic Pickup required
- Temperature Stable
- High Reliability
- Friction Compensation — Compensates for variations in linkage and carburetor

#### ADJUSTMENTS

##### Switch One

- Adjust 1 and 2 Friction Compensator
- 50/60 Hz Dip Switch
- 4/6 Cylinder Dip Switch

##### Switch Two

- Overall Gain — 16 Position Potentiometer  
"0" Minimum / "F" Maximum

##### Switch Three

- P and P/2 — Proportional Gain Reduced by 50%
- I and I/2 — Integral Reduced by 50%
- D and D/2 — Derivative Reduced by 50%

**WIRING DIAGRAMS**  
**See Data Sheet DYNA 112**

**CAUTION**

As a safety measure, the engine should be equipped with an independent overspeed shutdown device in the event of failure which may render the governor inoperative.

Uncontrolled Document  
For Historical Reference Only

**NOTE**

Barber-Colman believes that all information provided herein is correct and reliable and reserves the right to update at any time. Barber-Colman does not assume any responsibility for its use unless otherwise expressly undertaken.

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