



Product Information

DYNA I Controller

DYNA I Controller for Stanadyne "D" Series Injection Pumps Using DYNC 70025 Integrated Actuator

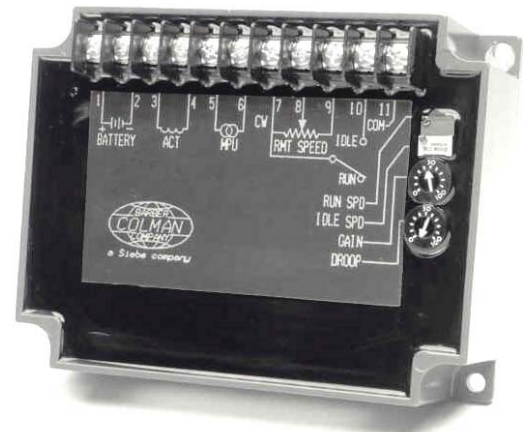
General

This Barber-Colman DYNA I Controller incorporates solid state technology to provide cost effective and versatile units for precise control of the DYNC 70025 actuator used on the Stanadyne "D" Series Injection Pump.

Separate circuits measure the Proportional (amount of offspeed), Integral (time of offspeed) and Derivative (rate of change of offspeed). These parameters work together to provide isochronous control that results in fast and stable engine response to load changes while maintaining precise speed regulation.

Controller Specifications

- **Operating Voltage:** 12 or 24 volts, $\pm 20\%$
- **Steady State Speed Band:** $\pm 0.25\%$
- **Ambient Operating Temperature:** -40°F to $+180^{\circ}\text{F}$ (-40°C to $+85^{\circ}\text{C}$)
- **Temperature Stability:** Better than $\pm 0.5\%$ over temperatures of -40°F to $+167^{\circ}\text{F}$ (-40°C to $+75^{\circ}\text{C}$)
- **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 2 amp max
- **Connections:** Terminal strip
- **Circuit Boards:** Potted for moisture and vibration protection
- **Enclosure:** Die cast aluminum
- **Weight:** 1.8 lbs. (.81 kg)
- **Actuator Compatibility:** DYNC 70025



Speed Sensing

Typically the engine speed reference signal is obtained from a magnetic pickup mounted in the flywheel housing perpendicular to the ring gear. The number of teeth sensed per revolution is converted into an engine speed signal. Other techniques may be used to obtain speed reference.


Adjustments

- **Speed Setting:** 20 turn potentiometer
- **Idle Speed:** 20 turn potentiometer
- **Gain:** Single turn potentiometer 0 to 100%
- **Droop:** Single turn potentiometer 0 to 15%
- **Remote Speed:** Use DYN5 10000 potentiometer
- **Integral Upper Limit:** Single turn potentiometer 0 to 100%

Other Models Available:

DYN1-10794-000-0-12/24

DYN1-10794-002-0-12/24*

*DYN1-10794-002 has Integral Upper Limit Pot and  conformity.

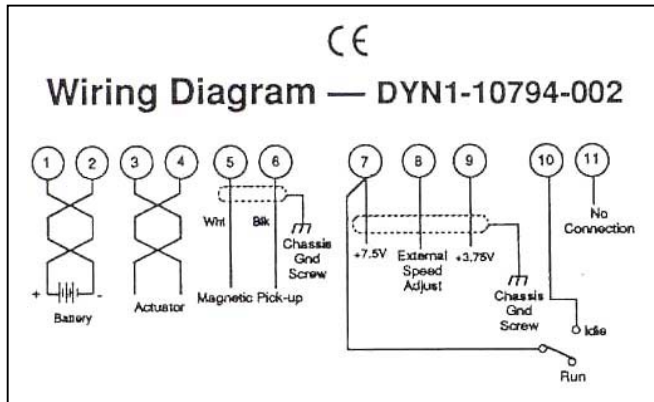
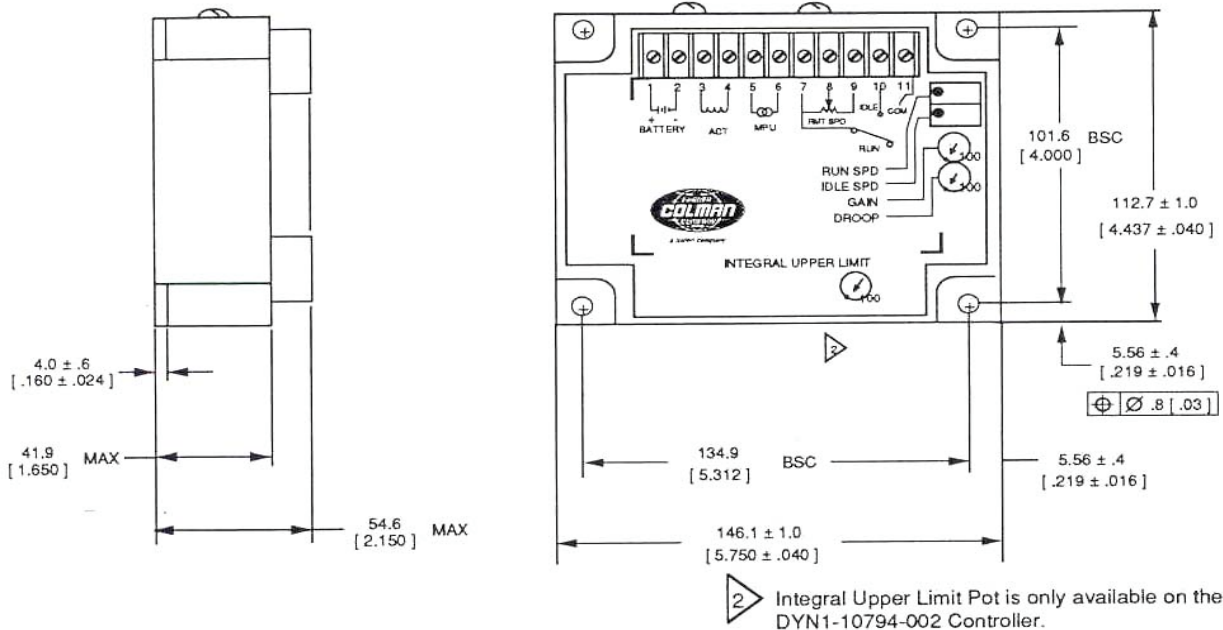
Input Signal Frequency

2500 – 5000 Hz

Standard Features

- All electric
- Idle/Run selectable
- Remote speed
- Generator paralleling option
- Temperature stable
- Mounts in any position

Controller Installation Dimensions



- 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.

- NOTE -

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

Wiring Diagram- DYN-10794-000

