



## DYNA Controller For Stanadyne "D" Series Injection Pumps Using DYNC 70025 Integrated Actuator

### General

The Barber-Colman controller for the DYNC 70025 actuator is an isochronous, solid state design, resulting in fast, stable engine response to speed or load changes. The controller circuits measure proportional (amount of offspeed), integral (time of offspeed) and derivative (rate of change of offspeed) to ensure optimum performance.

The controller electronics are environmentally potted providing protection against the various liquids and vibrations associated with engines. This makes the unit suitable for panel or engine mounting. It is easy to adjust, having only SPEED and GAIN adjustments. The power for the governor is obtained from the engine's DC starting system, eliminating the need for mechanical drives and hydraulic lines.

### Standard Features

- All electric
- Precise
- High reliability
- Temperature stable
- Isochronous

### Available Models:

DYN1-10784-000-0-12  
 DYN1-10784-000-0-24  
 DYN1-10784-001-0-12\*  
 DYN1-10784-001-0-24\*

DYN1-10786-000-0-12  
 DYN1-10786-000-0-24  
 DYN1-10786-001-0-12\*  
 DYN1-10786-001-0-24\*

### Input Signal Frequency

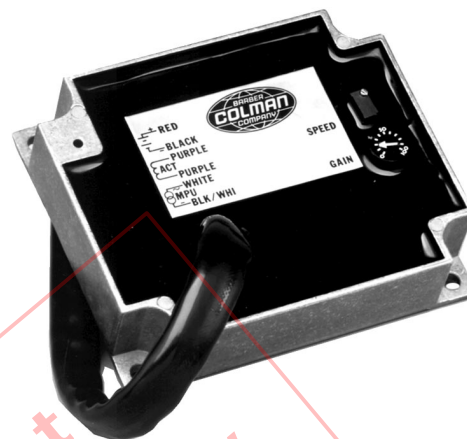
2500 - 5000 Hz

5000 - 9500 Hz

\* CE

### Speed Sensing

The DYNA all-electric governor requires a frequency signal to read engine speed. Typically, a hole is drilled and tapped in the flywheel housing perpendicular to the crankshaft, and a magnetic pickup is inserted into it to sense the teeth on the ring gear.



### Failsafe

The DYNA Governor has an internal FAILSAFE circuit that instantly reacts to:

- Interruption of the DC power returns actuator to minimum fuel position.
- Loss of speed reference signal removes power from actuator causing it to spring return to minimum fuel position.

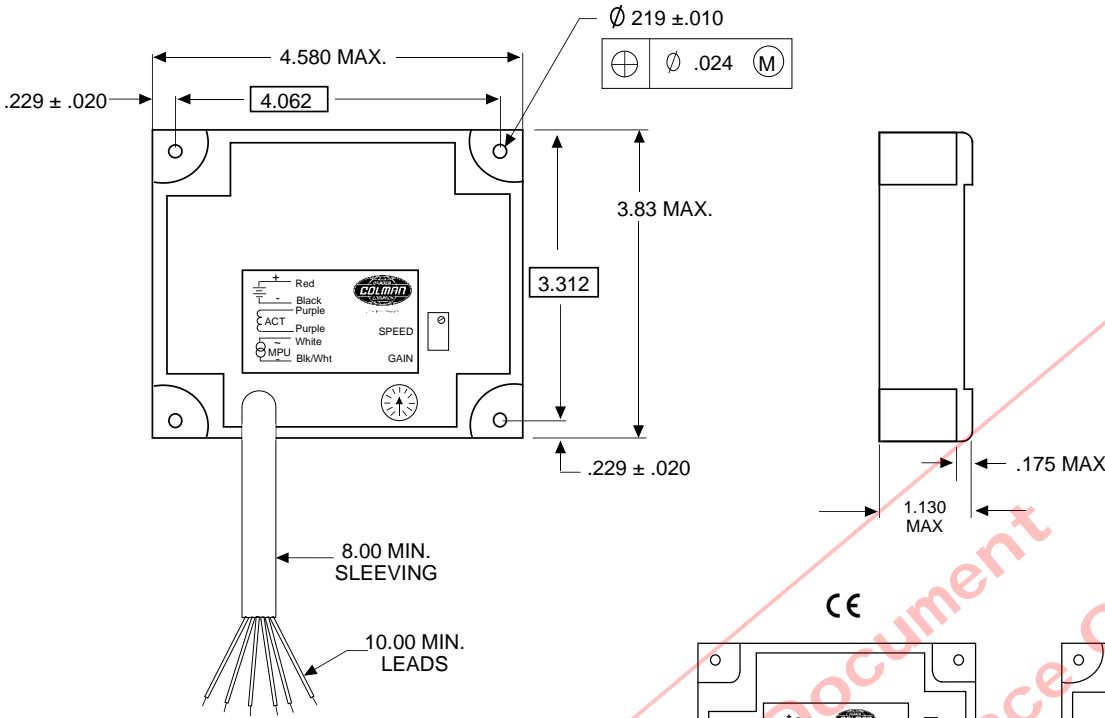
### Controller Specifications

CONTROLLER		DYN1-10784 & DYN1-10786
Max. Output Current in Amperes @ 12 Vdc		6.0
Max. Output Current in Amperes @ 24 Vdc		4.0
Weight	Pounds	1.25
	Kilograms	0.568
Operating Voltage		12 or 24 Vdc ±20%
Ambient Operating Temp.		-40° to +180°F (-40° to +85°C)
Mechanical Vibration		5 to 500 Hz, Curve L, per MIL STD 810C
Sealing		Oil, water and dust tight
Connections		#18 gauge leads with minimum length of 10 inches (25.4 cm) with no connector of any kind
Input Signal Frequency From Mag Pickup		Input Signal Frequency in Hertz = Engine RPM x number of gear teeth on flywheel / 60
Input Signal Voltage From Mag Pickup		2.5 Vac RMS minimum during cranking
Steady State Speed Band		±0.25%
Controller Adjustments		GAIN and SPEED

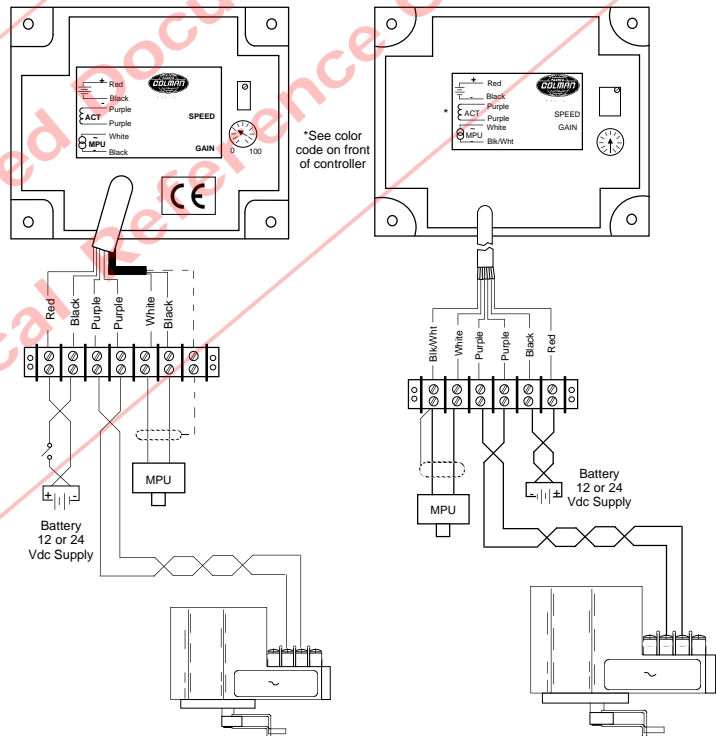


# Controller Installation Dimensions

(For CE and non CE.)



## Typical Wiring Diagrams



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**DYNA Product Group**

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**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 and reserves the right to update at any time. Barber-Colman does not assume any responsibility for its use unless otherwise expressly undertaken.