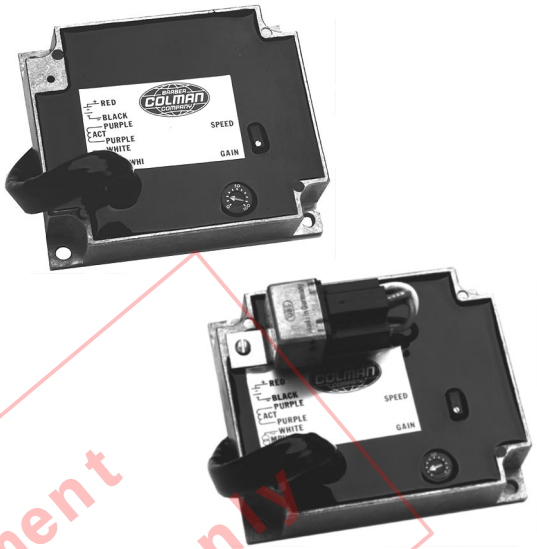
DYNA CONTROLLERS



General

The Barber-Colman controllers for the DYNA 2000 and 2500 actuators are all 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.

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 to spring return actuator to minimum fuel position.
- Loss of speed reference signal to remove power from actuator causing it to spring return to minimum fuel position.

Standard Features

- **All electric**
- **All engine compatibility**
- **Mounts in any position**
- **High reliability**
- **Temperature stable**

Available Models:

	Input Signal Frequency
● Diesel	
DYN1-10704-000-0-12	
DYN1-10704-000-0-24	2500-5000 Hz
DYN1-10704-001-0-12*	
DYN1-10704-001-0-24*	
DYN1-10706-000-0-12	
DYN1-10706-000-0-24	5000-9500 Hz
DYN1-10706-001-0-12*	
DYN1-10706-001-0-24*	
DYN1-10714-000-0-12**	2500-5000 Hz
DYN1-10714-000-0-24**	
DYN1-10716-000-0-12**	5000-9500 Hz
DYN1-10716-000-0-24**	
● Spark Ignited Engines	
DYN1-10724-000-0-12	
DYN1-10724-000-0-24	2500-5000 Hz
DYN1-10724-001-0-12*	
DYN1-10724-001-0-24*	
DYN1-10726-000-0-12	
DYN1-10726-000-0-24	5000-9500 Hz
DYN1-10726-001-0-12*	
DYN1-10726-001-0-24*	
DYN1-10734-000-0-12**	2500-5000 Hz
DYN1-10734-000-0-24**	
DYN1-10736-000-0-12**	5000-9500 Hz
DYN1-10736-000-0-24**	

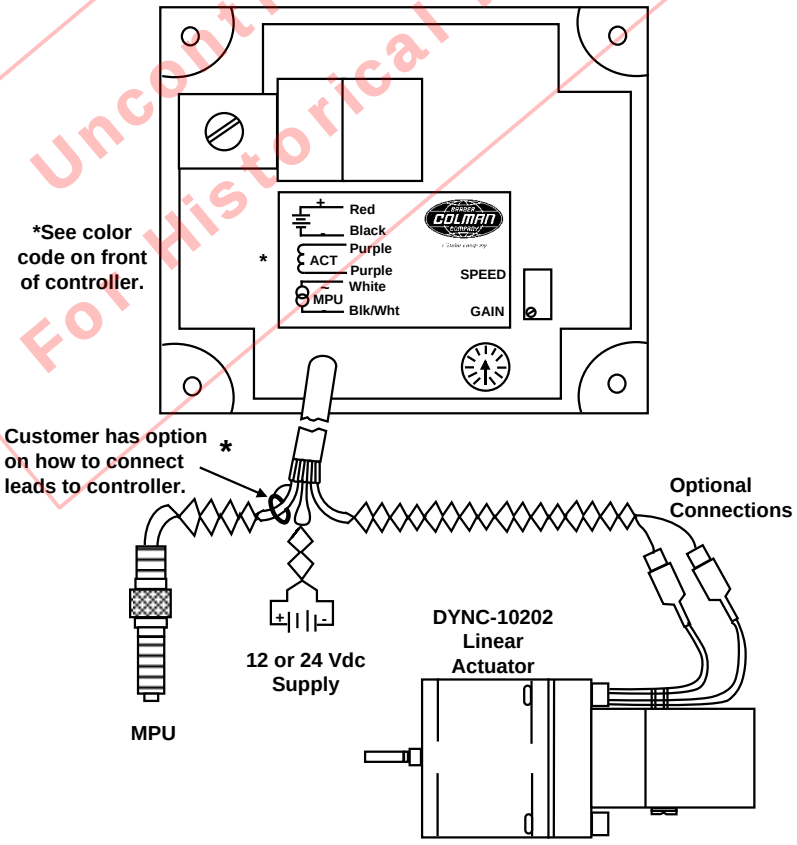
* CE

** Units have self monitoring feature

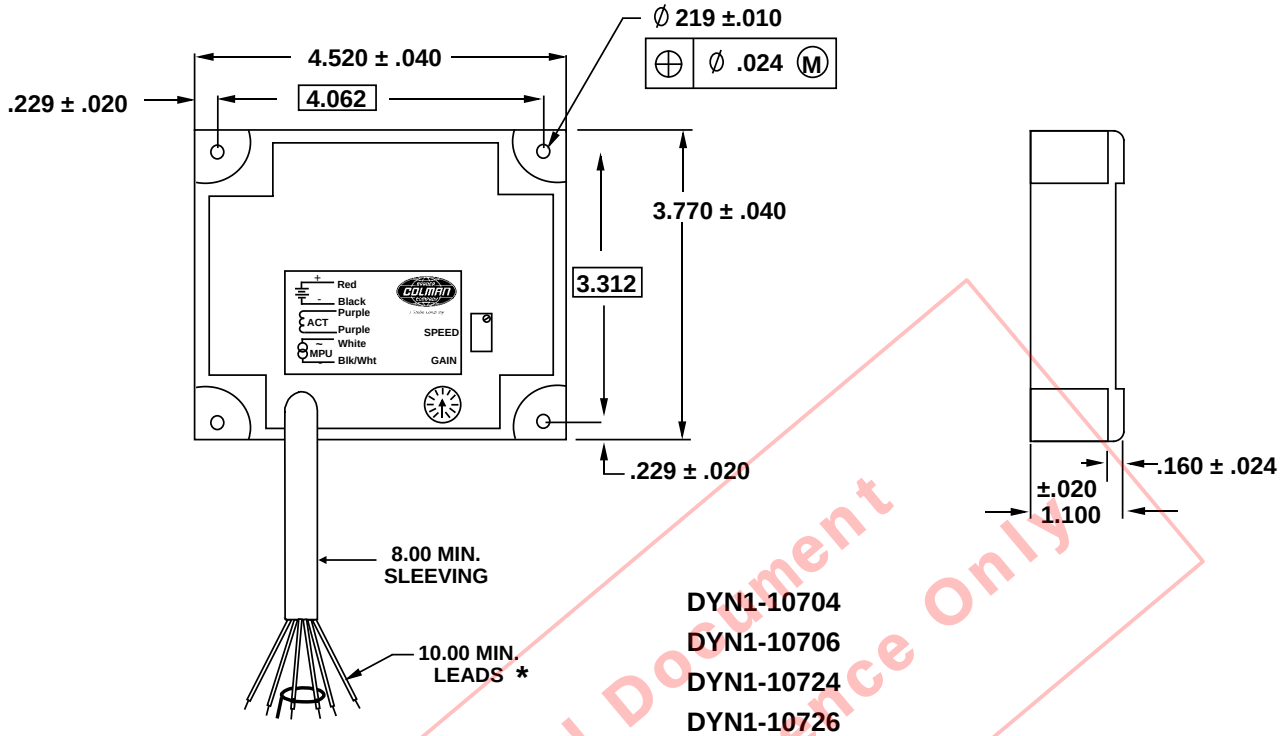
TABLE 1. CONTROLLER SPECIFICATIONS

CONTROLLER		DYN1-10704 DYN1-10706	DYN1-10724 DYN1-10726	DYN1-10714 DYN1-10716	DYN1-10734 DYN1-10736
Max. Output Current in Amperes @ 12 Vdc		6.0	6.0	6.0	6.0
Max. Output Current in Amperes @ 24 Vdc		5.0	5.0	5.0	5.0
Weight	Pounds	1.25	1.25	1.35	1.35
	Kilograms	0.568	0.568	0.613	0.613
Operating Voltage		12 or 24 Vdc ±20%			
Ambient Operating Temperature		-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 Magnetic Pickup		Input signal frequency in Hertz = (Engine RPM x number of gear teeth on flywheel) / 60			
Input Signal Voltage from Magnetic Pickup		2.5 Vac RMS. minimum during cranking			
Steady State Speed Band		±0.25%			
Controller Adjustments		Gain and Speed			
Self Monitoring Shutdown		112.5% of set point speed			

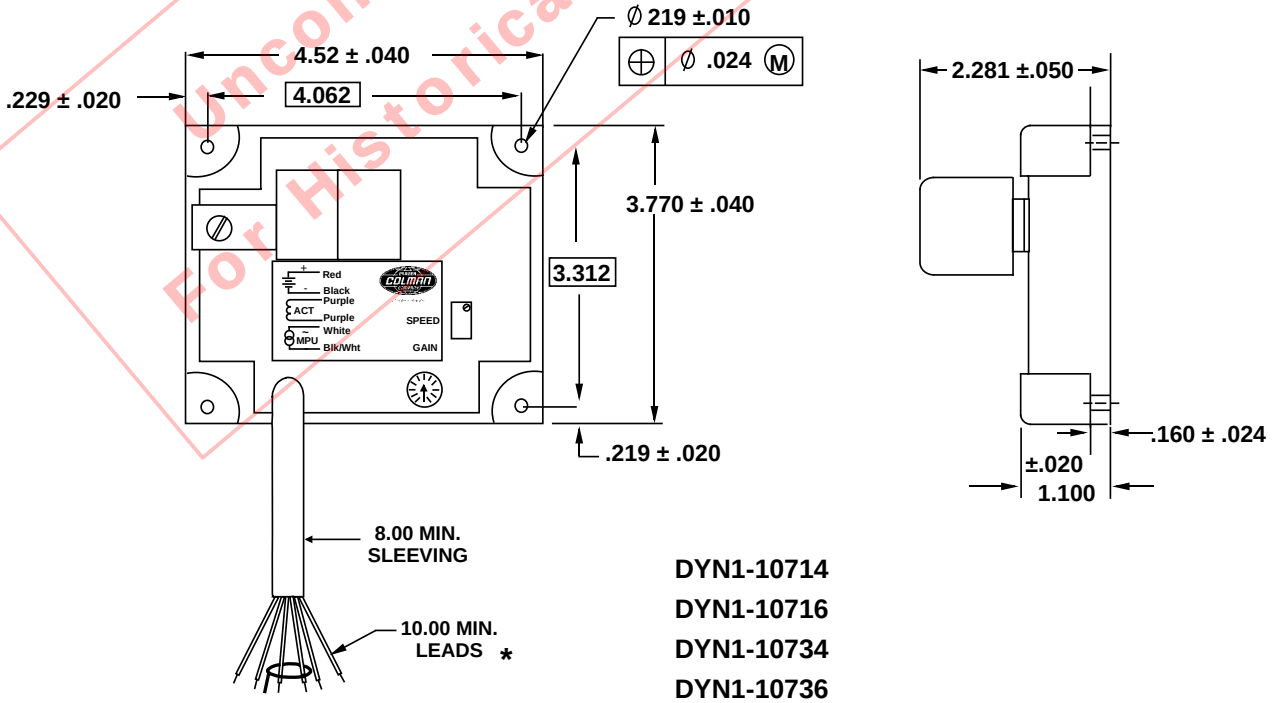
Typical Wiring Diagram (all units)



CONTROLLER INSTALLATION DIMENSIONS (For CE and non CE.)



DYN1-10704
DYN1-10706
DYN1-10724
DYN1-10726



DYN1-10714
DYN1-10716
DYN1-10734
DYN1-10736

* **Note**: Shielded cable for Mag Pickup required for CE versions 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.

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.

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