



DYNA 2000 & 2500 LINEAR ACTUATORS

General

The Barber-Colman "Linear Actuator" design is coupled with 65 years of actuator design experience, providing accurate precise positioning with a minimal number of moving parts. Many of the moving parts normally associated with electric are eliminated, prolonging the MTBF (mean time between failure).

The actuator design utilizes the principal of variable reluctance. This simple design of a proportional electric solenoid has a sliding armature whose magnetic force is proportional to the input coil current.

The "Linear Actuator" is very easy to install by mounting near the fuel system and direct connecting to the fuel control rod or lever. In most installations the normal rotary to rotary connection is eliminated, resulting in a more troublefree and accurate control system.

The actuator is suitable for installation on diesel, gasoline or natural gas engines with fuel system force requirements of less than 13 pounds of force.



TYPICAL APPLICATIONS

- Speed governing
- Generator sets
- Forklift trucks
- Power carts
- Off-road vehicles
- Pump sets
- Pleasure boats
- Wood chippers

AVAILABLE MODELS:

- **DYNC-10202-000-0-(12 or 24)**
Select voltage required.
- **DYNC-10502-000-0-(12 or 24)**
Select voltage required.

STANDARD FEATURES

- All electric
- Fast response
- Small — compact
- Meets INR & EMP for moderate tactical battlefield environment
- Mounts in any position
- Precise repeatability
- Spring return to min fuel
- Two moving parts

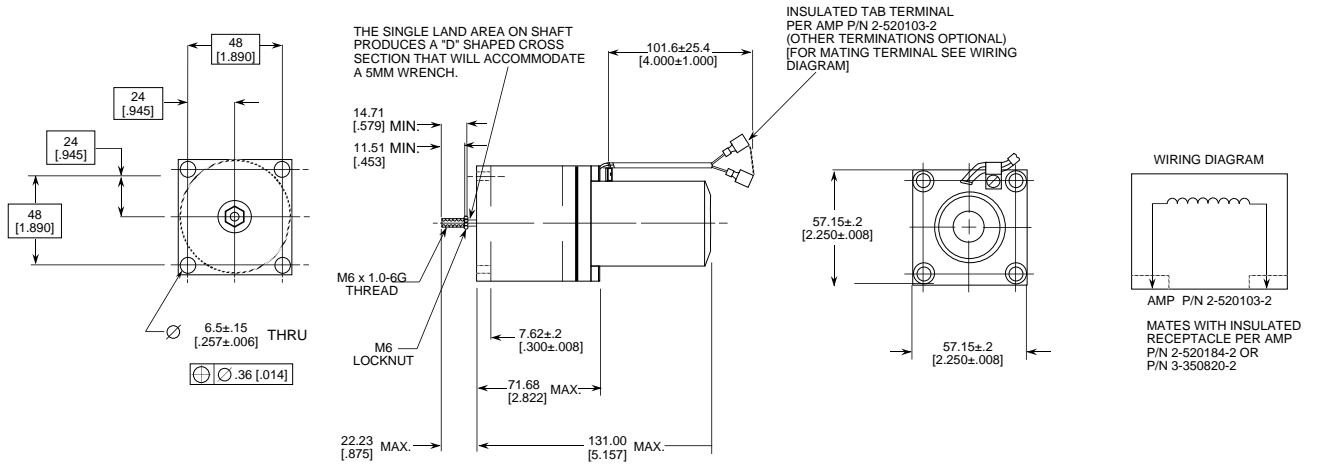
CAUTION

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

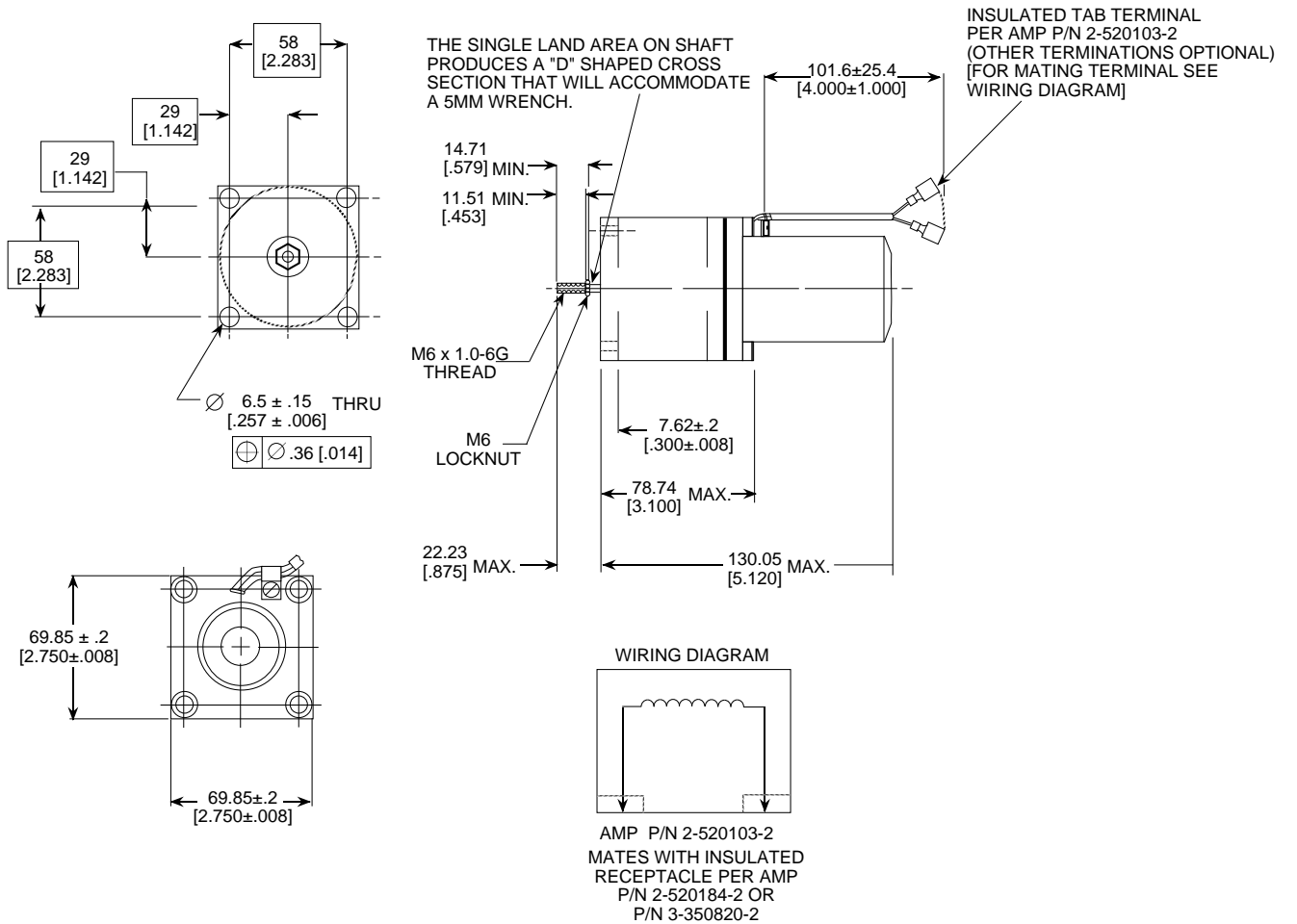
TABLE 1. ACTUATOR SPECIFICATIONS

ACTUATOR		DYNC-10202	DYNC-10502
Work	Joules	0.33	0.66
	Foot-pounds	0.25	0.50
Force	Pounds energized	6.5	13.0
	Grams energized	2955	5910
Output Stroke	Linear travel in inches	0.775-0.825	
	Linear travel in millimeters	19.68-20.95	
Weight	Kilograms	1.14	1.73
	Pounds	2.5	3.8
Current @ 12 Vdc	Nominal steady state amperes	2.5	2.5
	Maximum amperes @ stall @ 24°C	5.4	5.9
	Maximum amperes @ stall @ 125°C	3.9	4.2
Current @ 24 Vdc	Nominal steady state amperes	1.0	1.0
	Maximum amperes @ stall @ 24°C	3.0	3.0
	Maximum amperes @ stall @ 125°C	2.0	2.0
Nominal Response Time to Travel 63% of Stroke in ON Direction (seconds)		0.05	0.05
Nominal Response Time to Travel 63% of Stroke in OFF Direction (seconds)		0.032	0.032
Operating Voltage	12 or 24 Vdc ±20%		
Ambient Operating Temperature	-65° to +250°F (-55° to +125°C)		
Mechanical Vibration	5 to 500 Hz, Curve L, per MIL-STD-810C		
Sealing	Oil, water and dust resistant.		
Connection	#18 gauge leads with min. length of 3 inches (7.6 cm) with insulated tab terminal per AMP P/N 2-52013-2. Mates with insulated receptacle per AMP P/N 2-520184-2.		

DYNC-10202



DYNC-10502



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NOTE

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

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