

ALN Series Electric Linear (Push Type) Actuators

1 SELECTION CHART

| Product No. | SYSTEM VOLTAGE | | Included KT130 Clevis Kit | AVAILABLE MOUNTING KITS | | |
|-------------|----------------|--------|---------------------------|----------------------------|-----------------------------|---------------------------|
| | 12 VDC | 24 VDC | | KT231J Bosch RSV Left Side | KT232J Bosch RSV Right Side | 0150-2878 Cummins/ Kubota |
| ALN025-12 | | | | | | |
| ALN025A-12 | | | | | | |
| ALN025-24 | | | | | | |
| ALN025A-24 | | | | | | |
| ALN050-12 | | | | | | |
| ALN050A-12 | | | | | | |
| ALN050-24 | | | | | | |
| ALN050A-24 | | | | | | |

* KT130 Clevis Kit may be purchased separately

2 SPECIFICATIONS

| PERFORMANCE | |
|------------------------------------|--|
| Operating Work | ALN025.....0.25 ft-lb (0.34 Nm) ALN050.....0.50 ft-lb (0.68 Nm) |
| Maximum Force | ALN025.....6.5 lbf (28.9 N) ALN050.....13.0 lbf (57.8 N) |
| Operating Stroke | 0.9 in. (22.86 mm) |
| Response Time | (10-90%, 2-18mm) 35 msec |
| ELECTRICAL POWER INPUT | |
| Operating Voltage (Dedicated Coil) | 12 or 24 VDC ±20% |
| Nominal Operating Current | ALN025 & 050 1.6 A @ 12 VDC 0.8 A @ 24 VDC |
| Maximum Current (Continuous) | ALN025 & 050 3.8 A @ 12 VDC 1.8 A @ 24 VDC |
| Coil Resistance | ALN025-12.....1.8 ± 0.2 Ohms ALN025-24.....7.3 ± 0.2 Ohms ALN050-12.....1.9 ± 0.2 Ohms ALN050-24.....7.7 ± 0.2 Ohms |
| Connection | 18 AWG (0.8 mm ²) leads |
| ENVIRONMENTAL | |
| Operating Temperature | -40 to 200 °F (-40 to 95 °C) |
| Relative Humidity | Up to 100% |
| Vibration | 20 g @ 20 to 500 Hz |
| Shock | 20 g @ 11 msec. |
| All Surface Finishes | Fungus Proof and Corrosion Resistant |
| Sealing | Oil, Water, and Dust Resistant |
| PHYSICAL | |
| Dimensions | See Section 3 |
| Weight | ALN025.....2.5lb (1.1 kg) ALN050.....4.3lb (2.0 kg) |
| Hardware (NOT INCLUDED) | |
| Mating Connector | Up to 7.5 G, 50 - 500 Hz |
| Rod end Bearings | 100% Tested |

3 OUTLINE DIAGRAM

Figure 1 ALN025 Outline Dimensions: [mm] inches

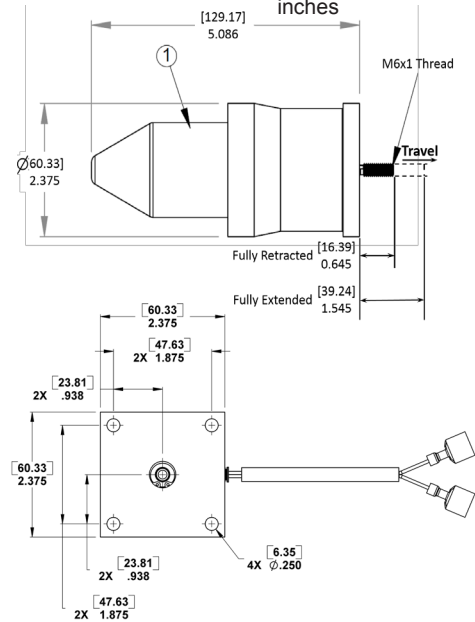
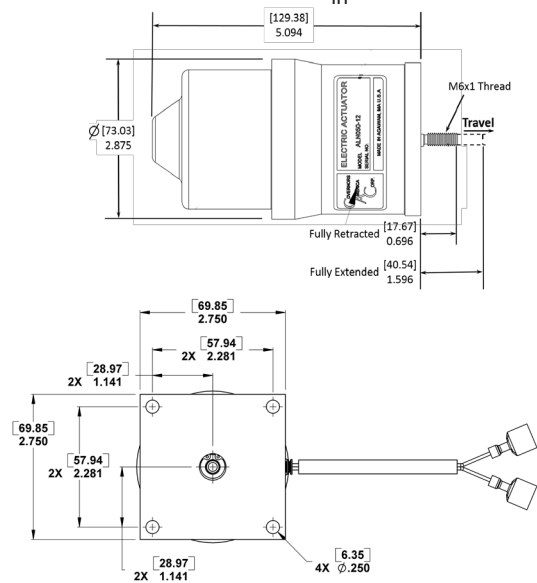


Figure 2 ALN050 Outline Dimensions: [mm] in



4 INSTALLATION

The actuator must be rigidly mounted as close as possible to the fuel control lever of the engine. The actuator can be mounted in any orientation. The linkage between the actuator and the fuel control lever shall be as short as practical and in a straight line to ensure maximum force is available for best operation. Normal vibration from the engine will not affect the operation of the actuator. High quality rod end bearings should be used. Rod end bearings that have high friction can cause instability and ultimately require servicing. The linkage should be sturdy yet low in mass for faster speed of response.

NOTE A torque for the nut and clevis link is 6 - 7 lb-ft (8 - 9.5 Nm).

CAUTION The engine should be equipped with an independent shut down device to prevent overspeed, which can cause equipment damage or personal injury.

5 WIRING

The ALN Series Electric Actuator is pre-wired for 12 or 24VDC operation.

WARNING

Do not use the ALN Series actuator on a 32-volt system, contact the factory for assistance.

6 TROUBLESHOOTING

IF THE ACTUATOR FAILS TO MOVE TO FULL FUEL

1. Measure battery voltage at controller (see specification for the operating voltage).
2. Check linkage. Manually operate linkage to see that it is not sticking or binding.

IF THE ACTUATOR FAILS TO MOVE

1. Measure the coil resistance between the leads (see specification for resistance).
2. Measure the resistance between one lead of the actuator and the housing of the actuator (infinity).
3. Energize the actuator, follow the procedure identified in the control unit publication, to full fuel. If the actuator does not move it is defective.
4. Clean any dirt or debris build up on the shaft causing binding.