# LINEAR ACTUATOR

## OWNER'S MANUAL



**⚠ WARNING:**
Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

**Item#s 41484, 41485 & 41486**



Thank you very much for choosing an Ironton product. For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This item is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this item not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use this product until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call 1-800-222-5381.

### TECHNICAL SPECIFICATIONS

| Item# | 41484 | 41485 | 41486 |
|---|---|---|---|
| Stroke Length | 3 15/16in. (100mm) | 7 7/8in. (200mm) | 11 13/16in. (300mm) |
| Rated Load Thrust | 675 LBF (3000N) | | |
| Maximum Load | 1350 LBF (6000N) | | |
| No-load Speed | 8mm/s | | |
| Load Speed | 5.5mm/s | | |
| Rated Voltage | 12V DC | | |
| Mounting Hole Dia. | 0.4in. (10.2mm) | | |
| Gear Ratio | 1:18.5 | | |
| Duty Cycle | 10% | | |
| Ambient Temperature | 23°F – 104°F | | |
| Protection Class | IP44 | | |

### GENERAL SAFETY RULES

⚠ **WARNING: Read and understand all instructions.** Failure to follow all instructions listed below may result in serious injury.

⚠ **CAUTION: Do not allow persons to operate or assemble this linear actuator until they have read this manual and have developed a thorough understanding of how the linear actuator works.**

⚠ **WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur.** It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

### SPECIFIC WARNINGS AND PRECAUTIONS

1. Read and understand the manual before using this linear actuator.
2. Test battery before operation to make sure the battery has adequate power to lift the linear actuator.
3. Stop working and switch off the power before changing the direction. If you change the direction when the motor is running, the motor may be damaged.
4. If the linear actuator is connected to the power source incorrectly, it may run exceeding its stroke, and may run in wrong direction.
5. Do not open actuator manually. This can cause damage to the actuator.

**External structure and installation diagrams:**
NOTE: All the sizes mentioned in Fig. 1, 2 & 3 are in inches.

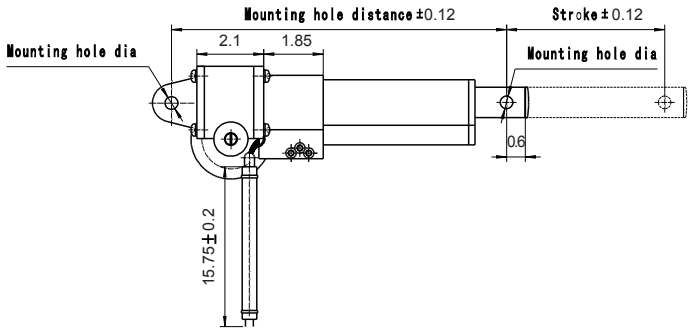



Fig. 1

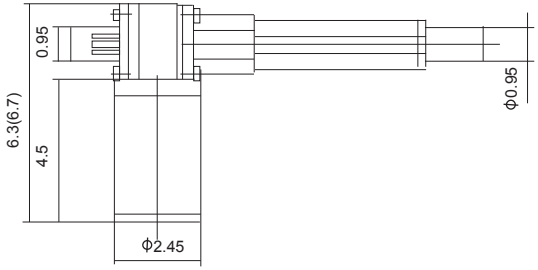



Fig. 2

WIRING DIAGRAM DC 12V two lead wires

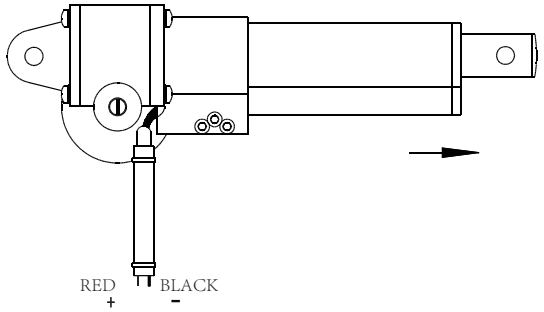



Fig. 3

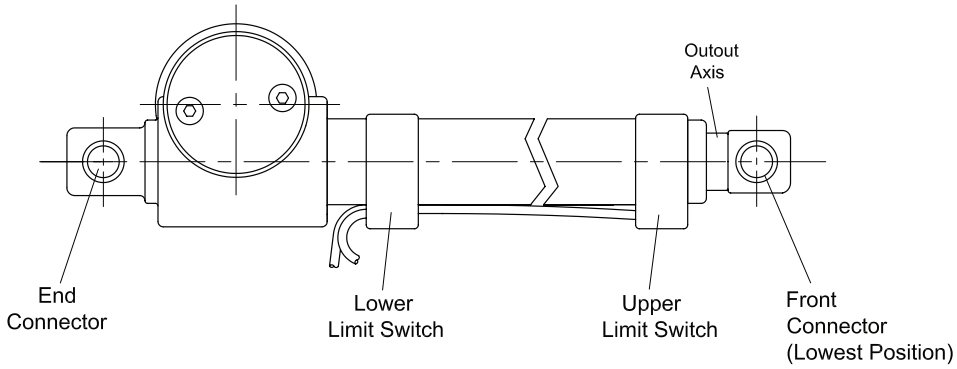
**INSTALLATION**

**⚠ WARNING: The load added onto the actuator must be less than or equal to the rated load of actuator.** The distributor cannot be held responsible for any injuries and/or damages caused as a result of not complying with the clauses of this section.

1. Please ensure that the extension tube is in the "lowest position". The term "lowest position" in this manual refers to the position in which there is no further movement towards the DC motor while the actuator is powered on. (Please refer to fig. 4 below).







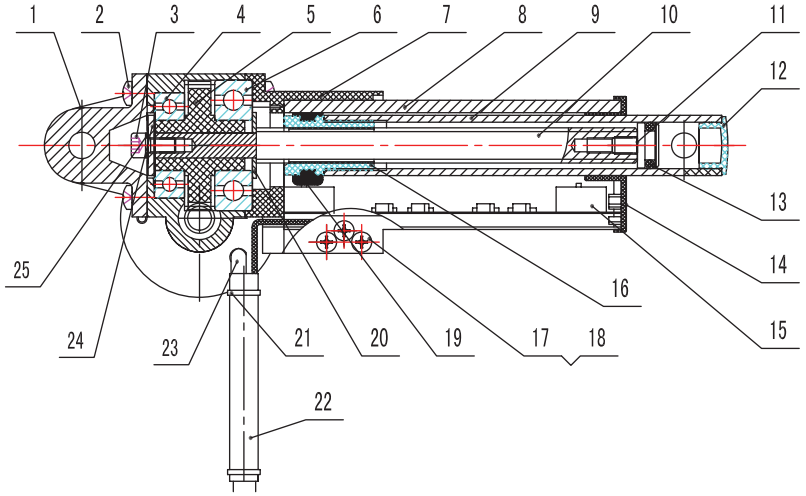

2. The front and end joints of the linear actuator should be mounted onto two fixed positions on the main chassis. Locations of these fixed positions should be chosen according to the stroke length of the linear actuator. Users must use caution to ensure that the two-way movement of linear actuator is smooth and within the stroke length after it installed onto the fixed positions. Please ensure that no obstacle exists along the travel path of the actuator.
3. After the fixed positions have been selected, install the fixtures onto these selected positions of the main chassis. These fixtures are used to fix the front and end joints of linear actuator to the chassis.
4. Assemble the front and end joints of the linear actuator onto the two fixtures using fixture bolts. Please ensure that the fixture bolts are able to rotate freely after this step is completed, while ensuring that the fixture bolts will not drop off either during operating or resting period.
5. The chassis of linear actuator should be fixed in the horizontal direction if it is going to be operated in this direction and likewise for vertical operation.
6. To extend the piston rod, connect red wire to positive post (Red) and black wire to negative post (Black). To retract, connect red wire to negative post (Black) and black wire to positive post (Red)
7. The operation of the linear actuator should be tested manually after the installation is completed. Users should use caution to ensure that:
   - The travel distance of the actuator is matching the requirement of the structural design.
   - The up and low limit switches operate normally.
   - The motor should stop when the extension tube reaches up and low limit switch positions.

   If the linear actuator fails to meet any of these conditions, please repeat steps 2 to 4.
8. The entire installation is complete only if steps 1 to 6 are executed successfully.

**MAINTENANCE**

1 Store the linear actuator in a dry place and out of direct sunlight.
2 Clean the linear actuator with dry cloth.

DIAGRAM & PARTS LIST




| NO. | Part# | Description | Qty. |
|---|---|---|---|
| 1 | 8LINIX.253.003 | MOUNTING HANDLE M10.2 | 1 |
| 2 | GB/T818 | PAN HD SCREW, BLACK M5X20 | 8 |
| 3 | GB/T70.1 | SCREW, SOCKET HD CAP, M6X | 1 |
| 4 | GB/T276 | BALL BEARING, 6004 | 1 |
| 5 | 8LINIX.245.008 | WORM WHEEL | 1 |
| 6 | GB/T276 | BALL BEARING, 6304 | 1 |
| 7 | 8LINIX.015.013BCP | ROD END | 1 |
| 8 | 8LINIX.170.010 | HOUSING DRIVE SLEEVE | 1 |
| 9 | 8LINIX.170.001 | PUSH ROD | 1 |
| 10 | 8LINIX.227.005 | SCREW DRIVE SHAFT | 1 |
| 11 | 8LINIX.900.004 | SHOCK PROOF SPECIAL MFG B | 1 |
| 12 | 8LINIX.373.001 | RUBBER BOOT, ROD END | 1 |
| 13 | Z | O-RING, ROD END | 1 |
| 14 | 8LINIX.374.003 | SEAL COMPONENTS | 1 |
| 15 | 5LINIX.557.021 | TRAVEL SWITCH COMPONENTS | 1 |
| 16 | 8LINIX.946.011 | DRIVE NUT SLEEVE | 1 |
| 17 | GB/T818 | PAN HD SCREW, M5X16 | 3 |
| 18 | GB/T41 | HEX NUT, M5 BLACK | 2 |
| 19 | 8LINIX.268.021 | BANKING JACKET | 2 |
| 20 | 8LINIX.950.014-01 | GASKET, M10.1 | 1 |
| 21 | Z | FLAST ARMOR TAPE | 2 |
| 22 | Z | PLASTIC BUSHING, M5 | 1 |
| 23 | 1LINIX.580.585 | MOTOR | 1 |
| 24 | 8LINIX.950.014-02 | GASKET, M6.1 | 1 |
| 25 | GB/T859 | ELASTIC GASKET, M6 | 1 |



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Note: The following parts are different for item#41484, 41485, 41486.

| NO. | | 41484 | 41485 | 41486 |
|---|---|---|---|---|
| 8 | HOUSING DRIVE SLEEVE | 8LINIX.170.010-2# | 8LINIX.170.010-6# | 8LINIX.170.010-4# |
| 9 | PUSH ROD | 8LINIX.170.011-3# | 8LINIX.170.011-9# | 8LINIX.170.011-6# |
| 10 | SCREW DRIVE SHAFT | 8LINIX.227.005-2# | 8LINIX.227.005-8# | 8LINIX.227.005-3# |
| | TRAVEL SWITCH COMPONENTS | 5Linix.557.021 | 5Linix.557.022 | 5Linix.557.023 |

For replacement parts and technical questions, please call **1-800-222-5381.**

**WARRANTY**
**1-year limited warranty**

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