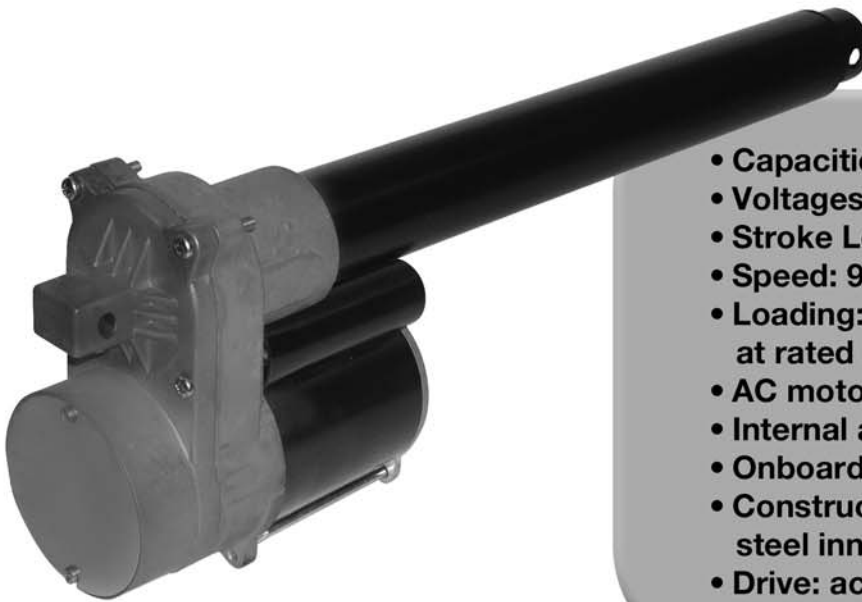


LS Series Electromechanical Actuators

Duff-Norton Electromechanical Linear Actuators are low cost, easy to install, and excellent replacements for pneumatic and hydraulic cylinders. The Linear Master™ actuator is constructed using an aluminum die cast housing and steel inner and outer tubes and motor cover. Actuator can be mounted in any position and installs easily with housing clevis and cross hole in extension tube.



- Capacities: 450 to 675 pounds
- Voltages: 115 VAC single phase and 12 VDC
- Stroke Lengths: 4, 8, 12, and 24 inch
- Speed: 9 to 16 inches per minute
- Loading: tension (pull) or compression (push) at rated load
- AC motor thermal protection
- Internal adjustable limit switches
- Onboard capacitor for AC models
- Construction: die cast aluminum housings, steel inner and outer tubes
- Drive: acme screw

Duff-Norton Model No.	Voltage	Rated Load (Lbs.)	Volts	Travel (In.)	Speed (In. / Min.)	Duty Cycle %	Retracted Length (In.)	Full-Load Amps	Shipping Weight
LS25-1B5TN-04	AC	450	115VAC	4	16	17	11.4	1.4	9.1
LS25-1B5TN-08	AC	450	115VAC	8	16	17	15.4	1.4	9.8
LS25-1B5TN-12	AC	450	115VAC	12	16	17	19.4	1.4	10.6
LS26-1B5TN-04	AC	560	115VAC	4	13	17	11.4	1.4	9.1
LS26-1B5TN-08	AC	560	115VAC	8	13	17	15.4	1.4	9.8
LS26-1B5TN-12	AC	560	115VAC	12	13	17	19.4	1.4	10.6
LS28-1B5TN-04	AC	675	115VAC	4	9	17	11.4	1.4	9.1
LS28-1B5TN-08	AC	675	115VAC	8	9	17	15.4	1.4	9.8
LS28-1B5TN-12	AC	675	115VAC	12	9	17	19.4	1.4	10.6
LS35-3B4TN-12	DC	675	12VDC	12	13	17	19.4	10	8.6
LS35-3B4TN-24	DC	675	12VDC	24	13	17	31.4	10	10.8
LS35-1B4TN-12	AC	675	115VAC	12	16	17	19.4	1.6	10.6
LS35-1B4TN-24	AC	675	115VAC	24	16	17	31.4	1.6	12.8
LS48-S001	AC	660	115VAC	24	9	17	38.75	1.4	21.6

Installation & Operating Instructions

1. Application

The LS series actuators are intended for industrial use only and should not be used to lift, support, or otherwise transport people or loads over people. The actuator is designed for lifting or pushing loads no more than its load rating, on an intermittent basis, not for applications requiring continuous operation. The actuator is designed for clevis mounting and cannot support side loading of the tubes. The actuator is not suitable for use in uncovered outdoor locations or areas containing explosive dust, vapors, or gases.

2. Installation

The actuator should be connected with a 10mm (.394") steel clevis pin at each end. An M10, grade 8.8, DIN 931 cap screw can be used. Use a screw at least 75mm long to obtain at least 50mm of unthreaded shank.

3. Wiring

All electrical connections are made to the pigtail cable. Refer to the diagrams below for 115 Vac and 12 Vdc models. End of travel limit switches are internally connected. AC units can be operated with a SPDT-center-off switch. DC units require a DPDT-center-off switch. AC units must be connected according to local electrical codes, with the green wire grounded.

4. Limit Switch Adjustment

a. Temporarily connect power, per the appropriate wiring diagram. Run actuator in the "Retract" direction until stopped by the limit switch. Rotate translating tube until the pin-to-pin dimension of the clevis holes match the installed, fully retracted position. Translating tube should not be fully retracted against internal stop. At least 1/4" of overtravel allowance is recommended.

b. With the translating tube restrained against rotation, run the actuator to the desired extended position.

c. Disconnect power. Remove round limit switch cover.

d. Loosen the flat head screw in the middle of the round plastic cam. Loosen screw about three turns – complete removal is not required. Rotate the cam counterclockwise until the limit switch just clicks. Hold the cam in this position and retighten screw.

e. Restore power and, with the translating tube restrained from rotation, operate the actuator to check limit switch setting.

f. If settings are correct, disconnect power and reinstall round cover. Note: moving the cam one notch changes limit switch setting about 4mm (5/32").

Notes:

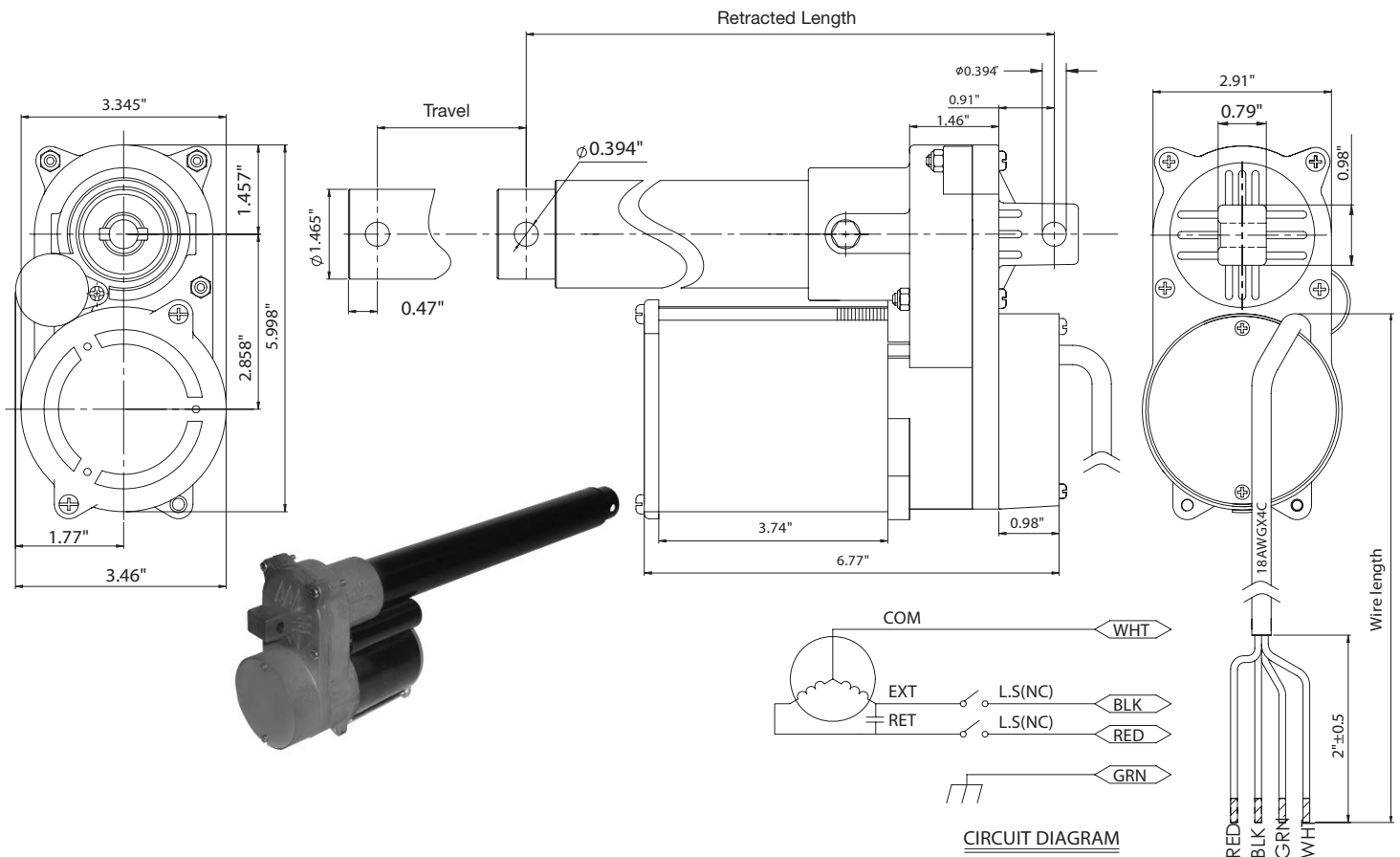
1. Exercise care to avoid jamming the actuator.

2. With no load, some actuator drift is typical. If precise setting is required, it must be done with the expected operating load.

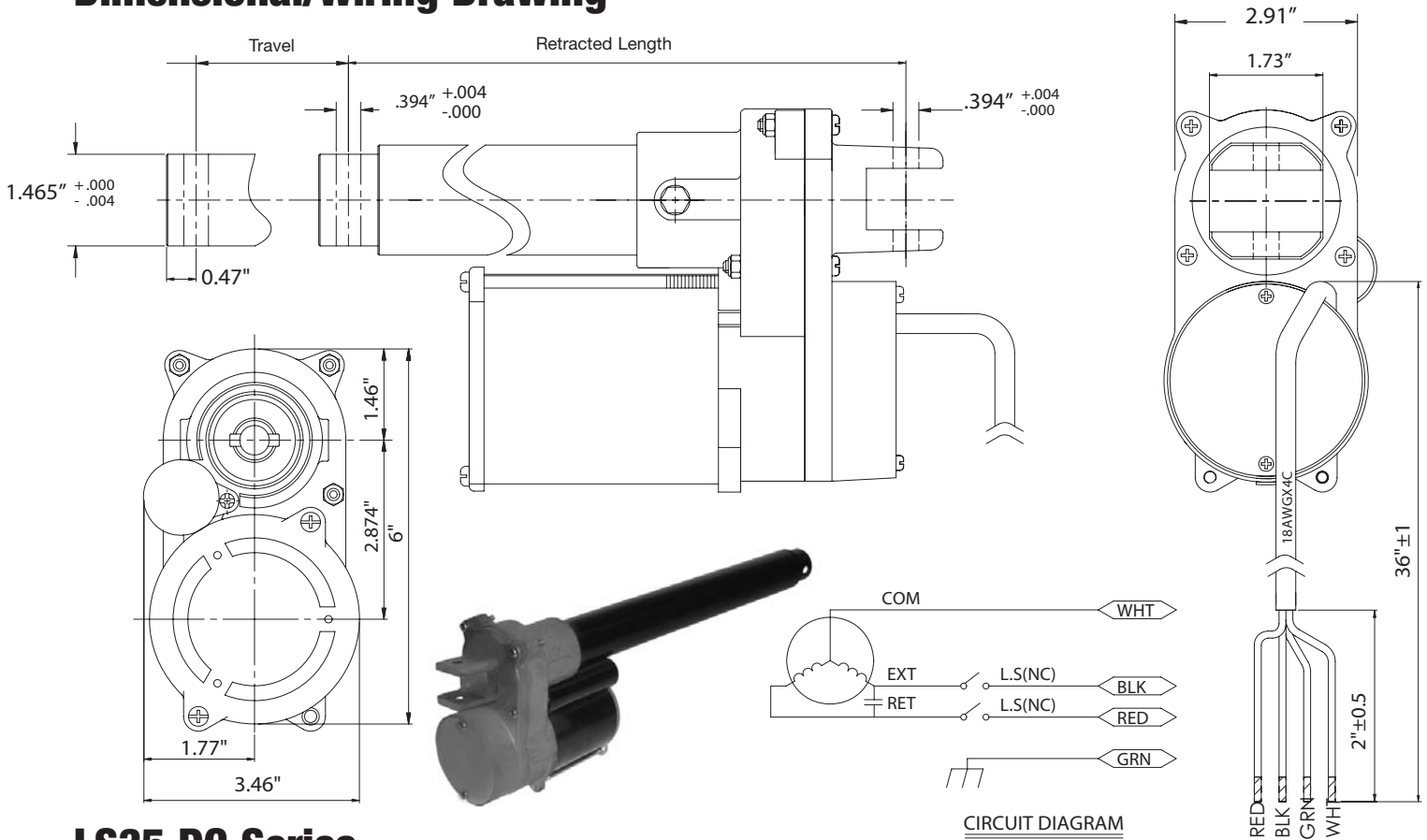
⚠ DANGER

To avoid electric shock hazard and possible electrocution, disconnect power before making any adjustments inside motor cover.

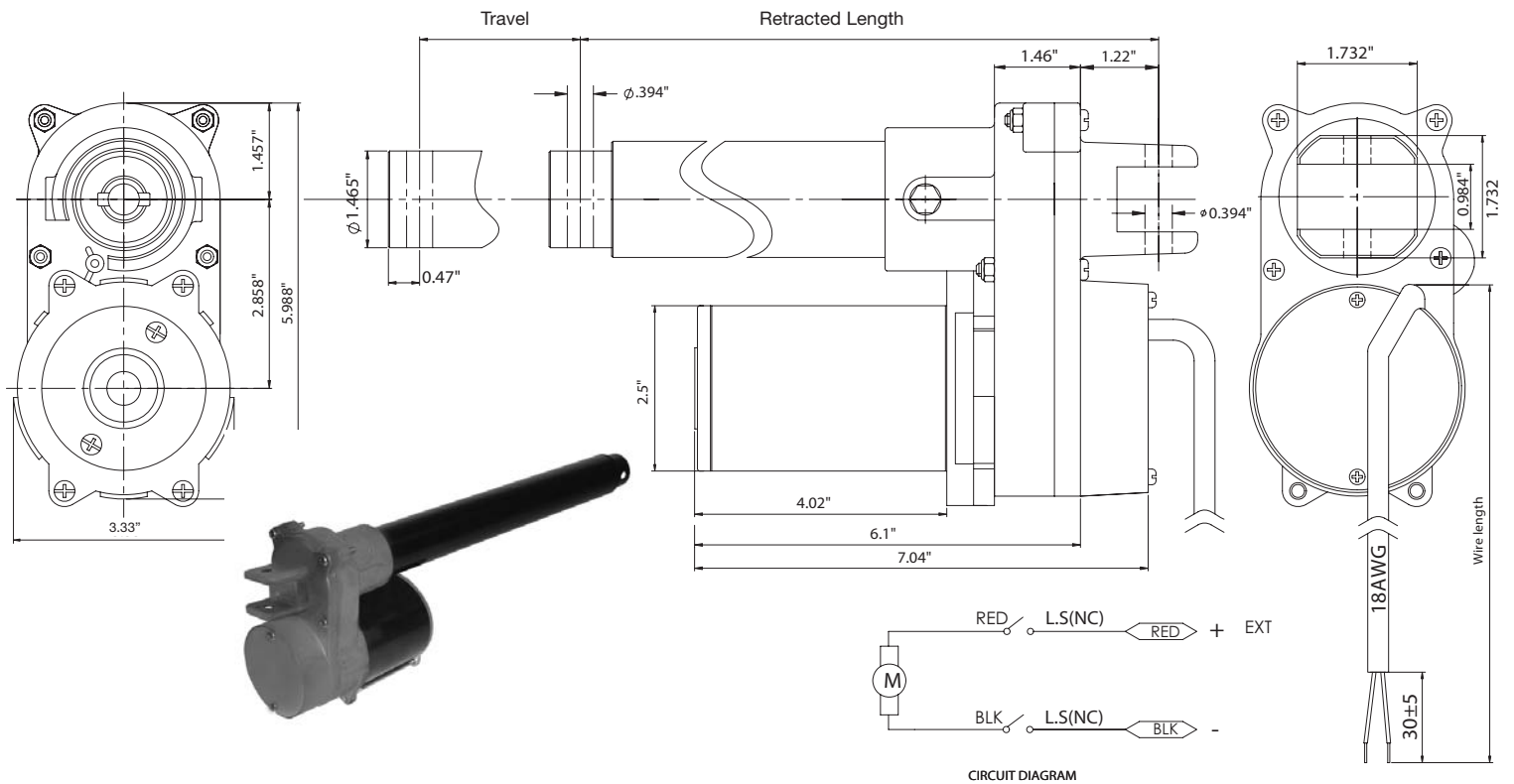
LS25, 26, 28 AC Series Dimensional/Wiring Drawing



LS35 AC Series Dimensional/Wiring Drawing

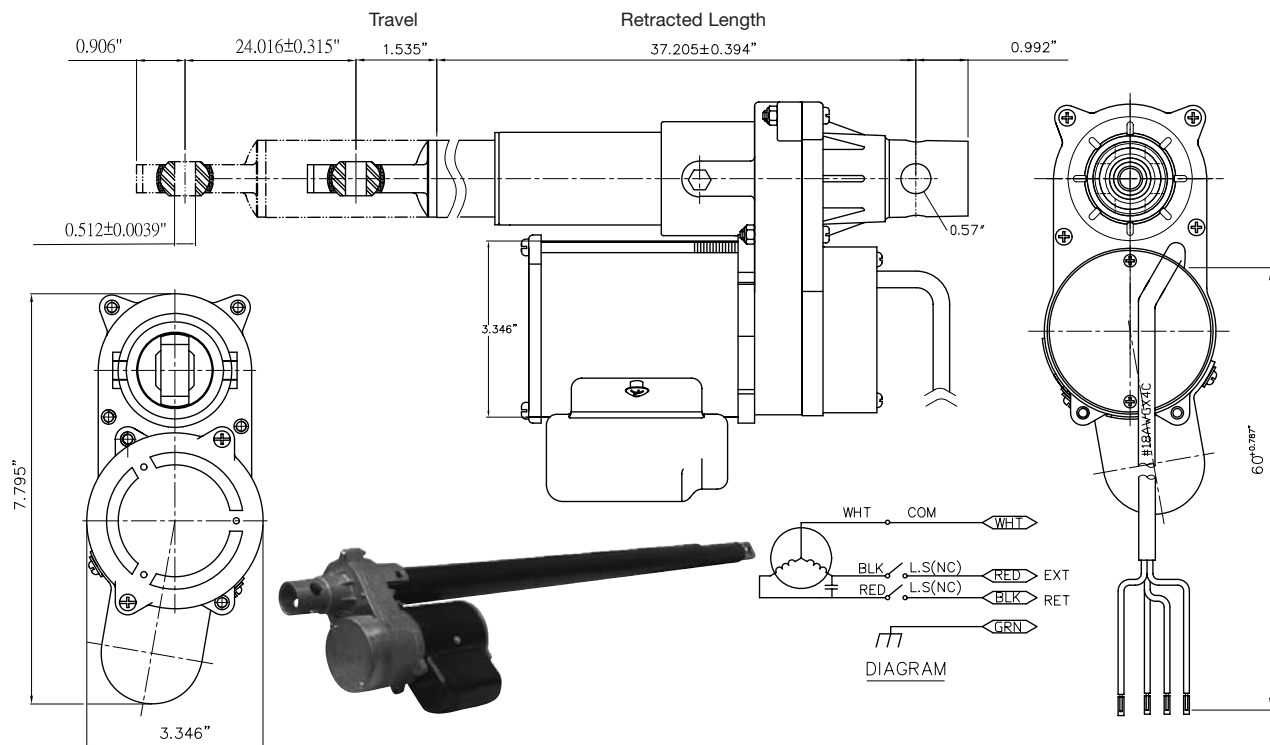


LS35 DC Series Dimensional/Wiring Drawing



LS48 AC Series

Dimensional/Wiring Drawing



DUFF-NORTON ELECTROMECHANICAL ACTUATOR

LIMITATION OF WARRANTIES, REMEDIES AND DAMAGES

The warranty stated below is given in place of all other warranties, express or implied, of merchantability, fitness for a particular purpose or otherwise. No promise or affirmation of fact made by any agent or representative of seller shall constitute a warranty by seller or give rise to any liability or obligation.

Seller warrants that on the date of its delivery to carrier the goods are free from defects in workmanship and materials.

Seller's sole obligation in the event of breach of warranty or contract or for negligence or otherwise with respect to goods sold shall be exclusively limited to repair or replacement, f.o.b. seller's point of shipment, of any parts which seller determines to have been defective or if seller determines that such repair or replacement is not feasible, to a refund of the purchase price upon return of the goods to seller.

Any action against seller for breach of warranty, negligence or otherwise must be commenced within one year after such cause of action accrues.

No claim against seller for any defect in the goods shall be valid or enforceable unless buyer's written notice thereof is received by seller within one year from the date of shipment.

Seller shall not be liable for any damage, injury or loss arising out of the use of the goods if, prior to such damage, injury or loss, such goods are (1) damaged or misused following seller's delivery to carrier; (2) not maintained, inspected, or used in compliance with applicable law and seller's written instructions and recommendations; or (3) installed, repaired, altered or modified without compliance with such law, instructions or recommendations.

Under no circumstances shall seller be liable for incidental or consequential damages as those terms are defined in section 2-715 of the uniform commercial code.

⚠ WARNING

The equipment shown in this catalog is intended for industrial use only and should not be used to lift, support, or otherwise transport people unless you have a written statement from Duff-Norton, which authorizes the specific actuator used in your applications as suitable for moving people.

NOTE

Duff-Norton has made every effort to ensure that the information contained in this publication is accurate and reliable. Determining the suitability of our products for specific applications is the user's responsibility.



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