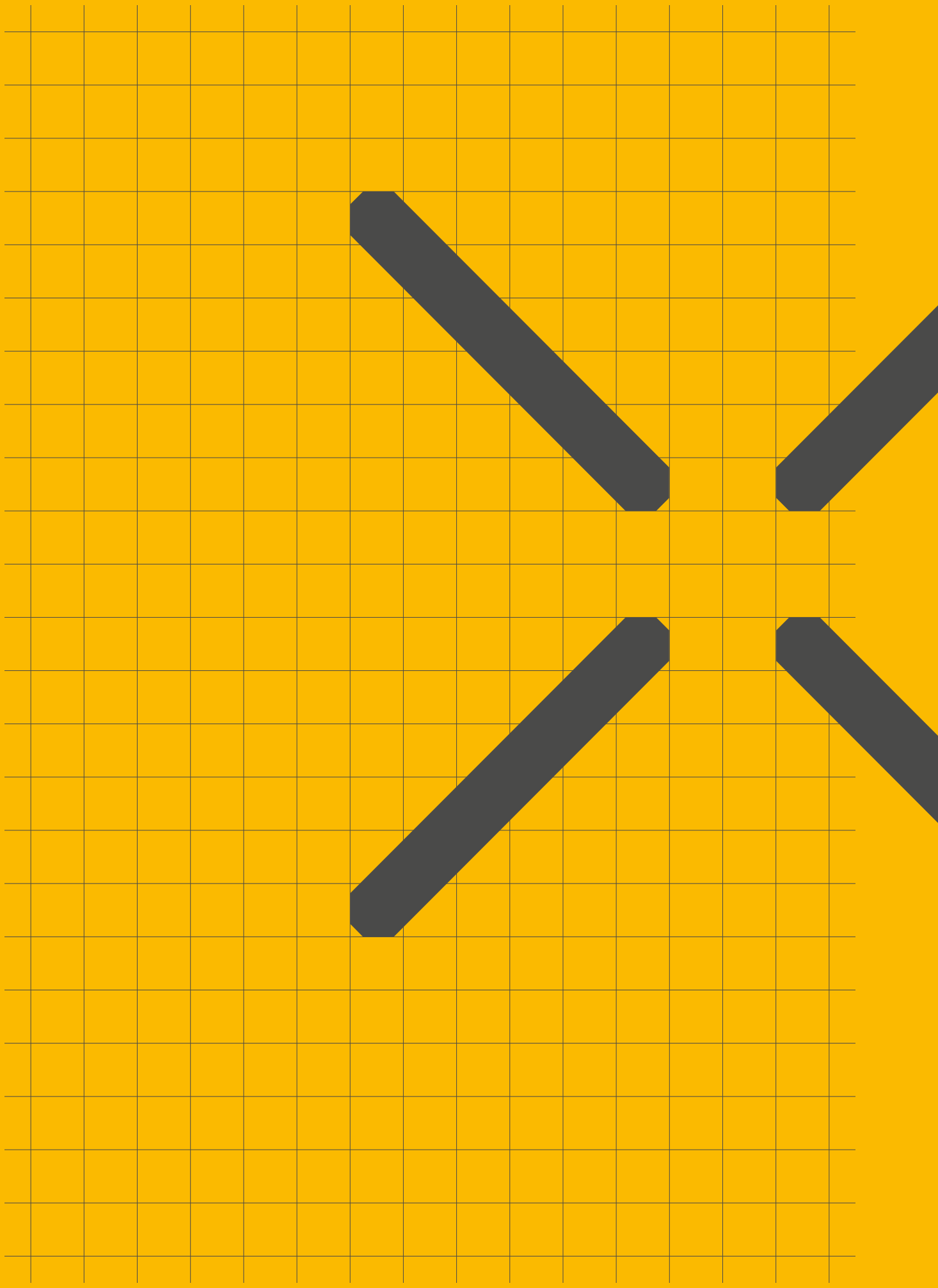
EWELLIX

MAKERS IN MOTION

INSTALLATION, OPERATION AND MAINTENANCE MANUAL

CALA

Linear actuator



Contents

⚠ WARNING

Read this manual before installing, operating or maintaining this actuator. Failure to follow safety precautions and instructions could cause actuator failure and result in serious injury, death or property damage.

1.0 General information

1.1 Important safety information

The actuator is assembled and delivered by Ewellix according to the ordering key. Modification of the actuator is not allowed in any way. Any modification will void the warranty and could create a safety hazard. Ewellix disclaims any and all liability or responsibility for the modified product and for any claims, demands or causes of action for damage or for personal injury resulting from modification and/or use of such product. In addition, if the actuator has been disassembled, misused or altered without prior written authorisation, warranty will be voided. These installation instructions are part of the actuator and should be kept together with all relevant documentation regarding the application in which it is used.

The following are important safety precautions that must be followed during installation:

- All electrical installation and maintenance should be carried out by qualified personnel.
- Terminate power supply to the actuator before installation or maintenance.
- Make sure that the actuator is not under load or in tension before installation or maintenance.
- Use the appropriate safety equipment when installing/repairing the actuator.
- When connecting the actuator, make sure that the power supply corresponds to what is required in the technical specifications. See section 5 below.
- When heavy load and high duty factor is used, motor and surrounding components can get hot.

⚠ DANGER

Indicates a dangerous situation, which will lead to death or serious personal injury, if the precautionary measures are ignored.

⚠ WARNING

Indicates a dangerous situation, which can lead to minor or moderate injury or property damage, if the precautionary measures are ignored.

⚠ CAUTION

Indicates a dangerous situation, which can lead to minor or moderate injury, if the precautionary measures are ignored.

NOTE

Emphasizes useful hints and recommendations as well as information for efficient and trouble-free operation.

2.0 Intended use

The actuator is designed to be used only in the following situations:

- Axial loads
- Indoor applications
- Ambient temperature range of 0 to +50 °C (32 to +122 °F)
- Intermittent use

2.1 Duty factors

Permitted load is related to the duty factor i.e. load must be reduced when the duty factor is increased.

If the recommended duty factor is exceeded the actuator may be overheated and damaged.

Duty factor is defined as amount of time running under load vs. total cycle time.

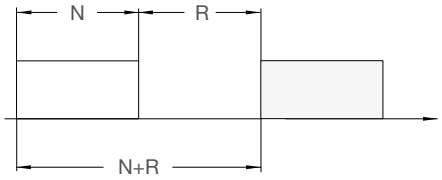
$$\text{Duty factor \%} = \frac{N}{N + R} \times 100$$

N = running under load

R = rest period

N+R = total cycle time

Permitted load for DC actuators at a specific duty factor is expressed in percentage of maximum dynamic load capacity.



Duty factor at max dynamic load and at 20 °C (68 °F): 5%

2.2 Requirements for correct installation

- Maximum angle between the actuator's attachment and the rear mounting attachment must not exceed 30° (↳ **fig. 1**).
- The surface to which the actuator is attached must be able to withstand the force applied by the actuator.
- Ensure that the applied force on the attachments is always centered on the actuator(↳ **fig. 2**).

Fig. 1

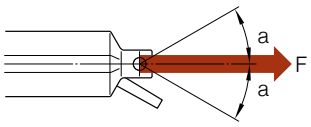
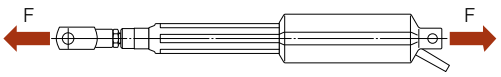


Fig. 2



⚠ WARNING

Do not exceed the actuator's load limits. Doing so can result in serious injury and/or property damage. For technical data on load limits, see section 5 below.

⚠ CAUTION

Avoid running the actuator into the mechanical end position. Repeatedly running into the mechanical end position may damage the actuator or shorten its lifespan

3.0 Available versions

- CALA 36A 12/24 V DC

4.0 Optional equipment

- Control unit
- Hand control unit
- Limit switches

More information is available on www.ewellix.com

5.0 Technical data

All values for standard actuators are tested under the following conditions:

- Temperature + 20 °C (68 °F)
- Stabilized voltage
- Compression load

Table 1

Description		Unit	-
Rate push load		N	600
Rate pull load		N	600
Speed (full load to no load)		mm/s	17 to 31[1]
Stroke		mm	50 to 200
Retracted length		mm	S+215/226/257[2]
Voltage		V DC	12 and 24
Power consumption		W	N/A
Current consumption	12 V DC	A	4,4
	24 V DC	A	2,2
Duty cycle		%	5
Ambient temperature		°C	0 to +50
Type of protection		IP	44
Weight		Kg	0,9 to 1,4
Color		-	Black

[1] Depending on selected motor

[2] Dimension depends on selected front attachment

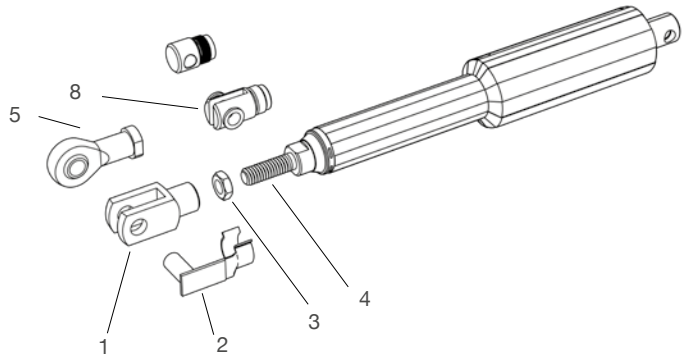
6.0 Installation

Only qualified personnel are allowed to install this equipment. Contact Ewellix for further information.

⚠ WARNING

Do not exceed the actuator's load limits. Doing so can result in serious injury and/or property damage. For technical data on load limits, see section 5 below.

Fig. 3

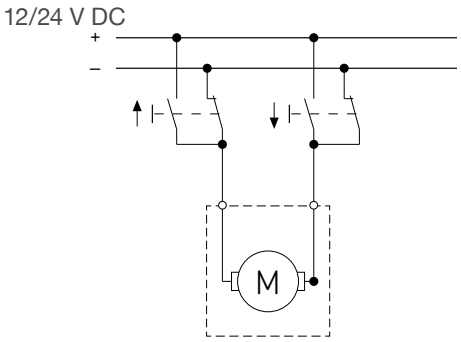


Description of the mechanical installation procedure.

1. Screw counter nut (**3**) onto the actuator front attachment (**4**)
2. Screw the front attachment (**1, 2**) onto the actuator's front attachment (**4**), making sure that the engaged thread length is, at a minimum, 12mm, which is the diameter of the thread.
3. Tighten the counter nut (**3**) onto the front attachment (**1**) with 20 Nm.
4. Disassemble pin (**2**) from front attachment (**1**).
5. Install the actuator onto the front and rear attachments. Mount the pin (**2**) onto the front attachment (**1**).

7.0 Wiring diagrams

Fig. 4



DC-voltage

⚠ WARNING

- All electrical installation/maintenance should be carried out by qualified personnel.
- Isolate the power before installation or maintenance. Use the appropriate safety equipment when installing/repairing the equipment.
- When connecting this equipment to the electrical supply, make sure that it corresponds to the one described in the technical specifications.
- For complete installation instructions regarding Ewellix limit switch, see separate installation instructions.

8.0 Maintenance

Table 2

Interval	Maintenance work
Daily	Check actuator for visible damage Clean off dust and dirt if necessary
Monthly	Check attachments and tighten if necessary Check that cables are not damaged, replace if necessary Functional check of operation
Annualy	Check labels

Keep this information for future reference. Please contact your local Ewellix sales office if you need more information or spare parts.

Please check www.ewellix.com for relevant addresses.

9.0 Remaining risks

Regardless if the actuator has been installed according to this instruction some remaining risk excist.

Take note of these points during the lifespan of the actuator:

If any unnormal noise occure stop the actuator directly.

If the actuator has been subjected to excessive load, even for a short time, be aware of unnormal noise or ”wobbling movement”.

Do not operate the brake on its own when actuator is under load.

10.0 Destruction/waste

As majority of the actuator is made of steel and stainless steel some amount of grease/oil can be found inside. The motor and some assesories, like limit switch and encoder is considered electrical waste.

Check for local rules and information on how to despose the actuator and its parts.

Keep this information for future reference. Please contact your local Ewellix sales office if you need more information or spare parts.

Please check ewellix.com for relevant addresses.

ewellix.com

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