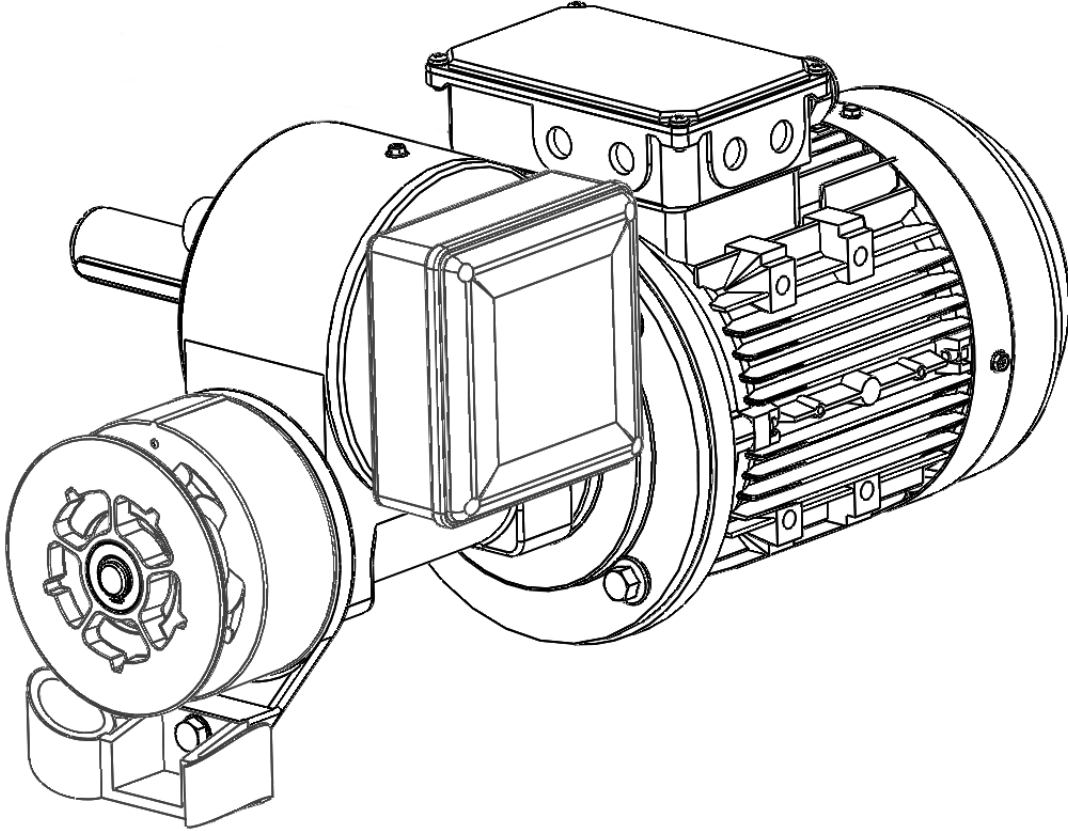


LiftMaster®

HEAVY DUTY

**Mechanical Industrial
Door Opener**



دليل المستخدم لجهاز فتح الأبواب الصناعية الميكانيكي

للاستخدام الشاق

صنع بواسطة

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المورّد

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SAFETY SYMBOL AND SIGNAL WORD REVIEW

Safety symbol and signal word review

This commercial door opener has been designed and tested to offer safe service provided it is installed, operated, maintained and tested in strict accordance with the instructions and warnings contained in this manual.



WARNING

Mechanical

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of serious injury or death if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock.



WARNING

Electrical



CAUTION

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your commercial door and/or the commercial door opener if you do not comply with the cautionary statements that accompany it.

THESE ARE IMPORTANT SAFETY INSTRUCTIONS. FOLLOW ALL INSTRUCTIONS AS INCORRECT INSTALLATION CAN LEAD TO SEVERE INJURY OR DEATH

	Keep commercial door balanced. Sticking or binding doors must be repaired. Commercial doors, door springs, pulleys, brackets and their hardware are under extreme tension and can cause serious personal injury. Do not attempt to loosen, move or adjust them. Call for commercial door service.		Disengage all existing commercial door locks to avoid damage to commercial door. Install the wall control (or any additional push buttons) in a location where the commercial door is visible during operation. Do not allow children to operate push button(s) or remote control(s). Serious personal injury from a closing commercial door may result from misuse of the opener.
	Do not wear rings, watches or loose clothing while installing or servicing a commercial door opener.		Permanently fasten all supplied labels adjacent to the wall control as a convenient reference and reminder of safe operating procedures.
	To avoid serious personal injury from entanglement, remove all ropes connected to the commercial door before installing the door opener.		Activate opener only when the door is in full view, free of obstructions and opener is properly adjusted. No one should enter or leave the building while the door is in motion.
	Installation and wiring must be in compliance with your local building and electrical codes. Connect the power supply cord only to properly earthed mains.		An electrician must disconnect electric power to the commercial door opener before making repairs or removing covers.
	Moisture and water can destroy the electronic components. Make sure under all circumstances that water moisture or storage moisture cannot penetrate the electronics. The same applies for openings and cable entries.		If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. A disconnection device incorporated in the fixed wiring must be provided in accordance with the wiring rules of the country in which it is installed.
	After the installation a final test of the full function of the system and the full function of the safety devices must be done.		The actuating member of a biased-off switch is to be located within direct sight of the door but away from moving parts. Unless it is key operated, it is to be installed at a minimum height of 1500mm and not accessible to the public.
	When operating a biased-off switch, make sure that other persons are kept away.		Make sure that people who install, maintain or operate the door follow these instructions. Keep these instructions in a safe place so that you can refer to them quickly when you need to.
	The opener cannot be used with a driven part incorporating a wicket door (unless the opener cannot be operated with the wicket door open).		If the opener is installed at a height less than 2.5 metres from floor level or any other level from which the unit can be accessed (eg mezzanine) the installer is responsible to fit guards to the opener to prevent access to the chain drive.
	Ensure that entrapment between the driven part and the surrounding fixed parts due to the opening movement of the driven part is avoided.		This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
	Motor may become hot during operation. Appropriate clearance and/or shielding should be supplied by the installer to ensure any cabling, wiring and/or other items cannot come in contact with the motor. If temperature rise exceeds 50°C all fixed wiring insulation must be protected, for example, by insulating sleeving having an appropriate temperature rating.		Use the commercial door opener for its intended purpose. Openers in this manual are designed for operating spring balanced roller shutters, spring balanced roller doors and counterweighted bi-fold and vertical lift doors.

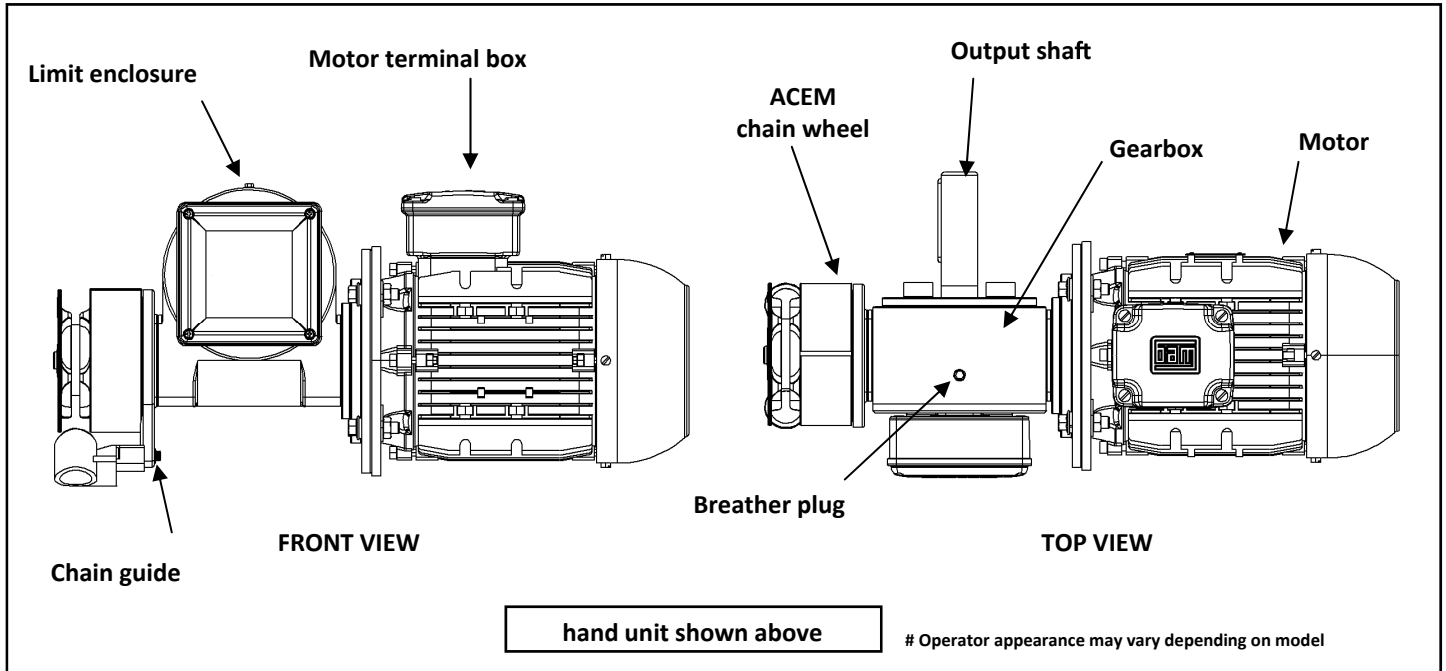


WARNING: Important safety instructions. It is important for the safety of persons to follow all instructions. **SAVE** these instructions.

INTRODUCTION

Congratulations on your purchase of the Heavy Duty Roller Shutter Operator. For more than 50 years, we have been producing industrial mechanical operators that are well known for their proven reliability & robust design.

IDENTIFYING YOUR OPERATOR



PLANNING

Identify the type and dimensions of your commercial door. A survey of the application is recommended to see if any of the requirements below are not applicable with your installation.

Opener Build	Rated Load (Nm)	Duty Rating (%)	Phase	Door size (m ²)*	kW	Amp
75004A406	150	30	3	80	1.57	2.8

Installer is to check that the temperature range marked on the drive is suitable for the location.

Based on "standard shutter":

- The shutter is correctly spring balanced
- The shutter has $\leq 1.0\text{mm}$ x $\geq 100\text{mm}$ slats
- The shutter has no wind-locks
- A $\geq 4:1$ sprocket ratio is used

If any conditions above are not met, some consideration should be given to increasing the sprocket ratio, or operator size. The operator should be installed on the correct side of the commercial door. Select the side that meets the requirements.

- Must have minimum distance of 15mm between mounting plate and door drum sprocket
- Must have minimum distance of 200mm between limit housing and imposing structure
- Must have minimum clearance of 200mm from the terminal box

Before installing the operator, check that the commercial door is in good mechanical condition, correctly balanced and open & closes properly.

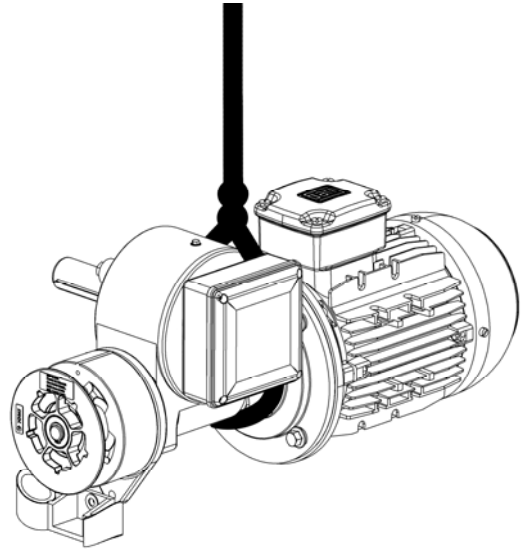
INSTALLATION

Mounting the Unit

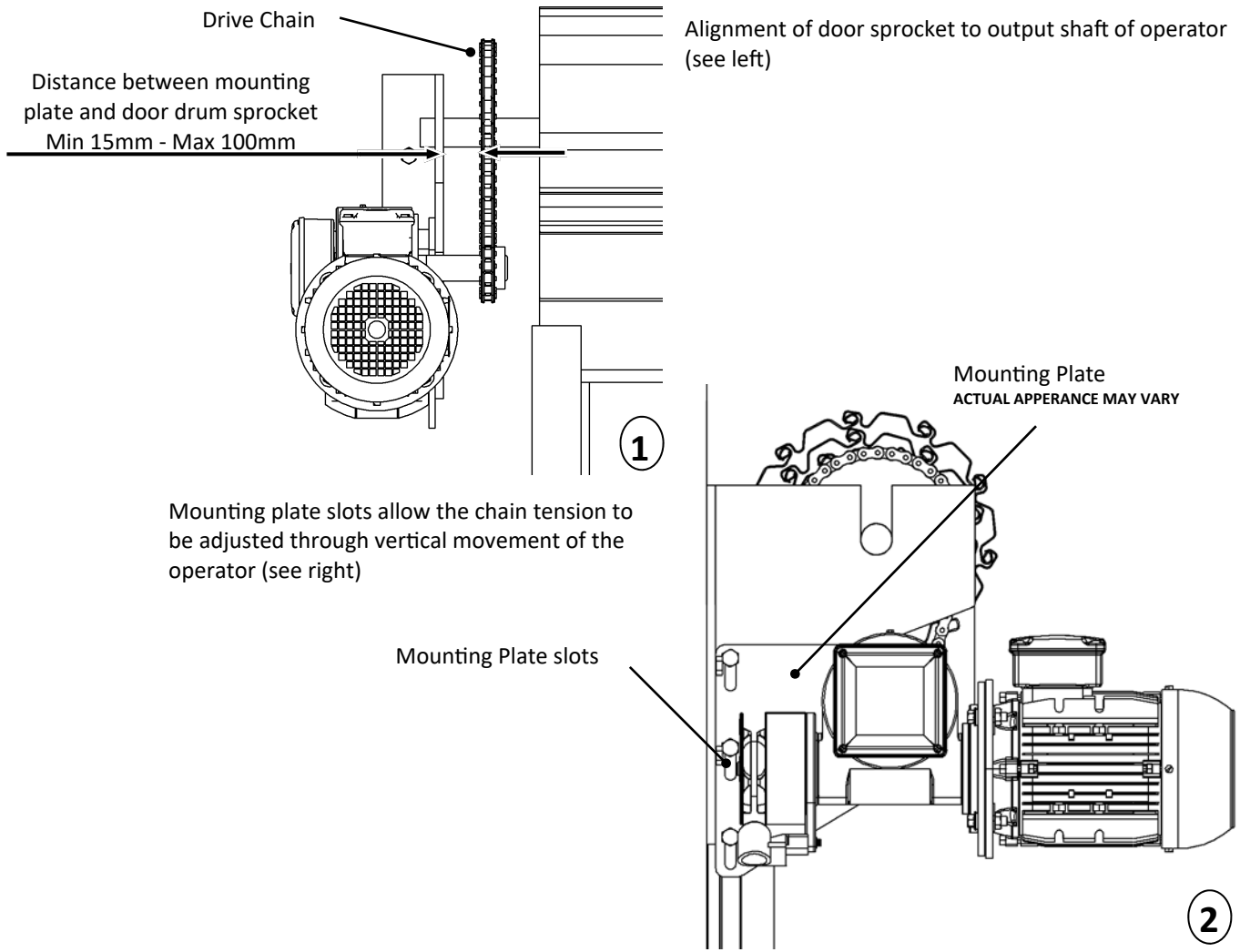
The Heavy Duty operator is typically flag mounted below the door drum so that the operator shaft points toward the door opening and lies beneath the sprocket of the door drum. For mounting you will need to either secure the operator to the roller shutter head plate with prepared holes or slots, or use a mounting plate that will need fixing via a wall angle or similar existing fixture.

Note: The chain guide must not be repositioned.

It is strongly recommended a strap be used to raise the operator to necessary height, shown right. The top end of the strap should be connected to a secure support beam above the door axle.



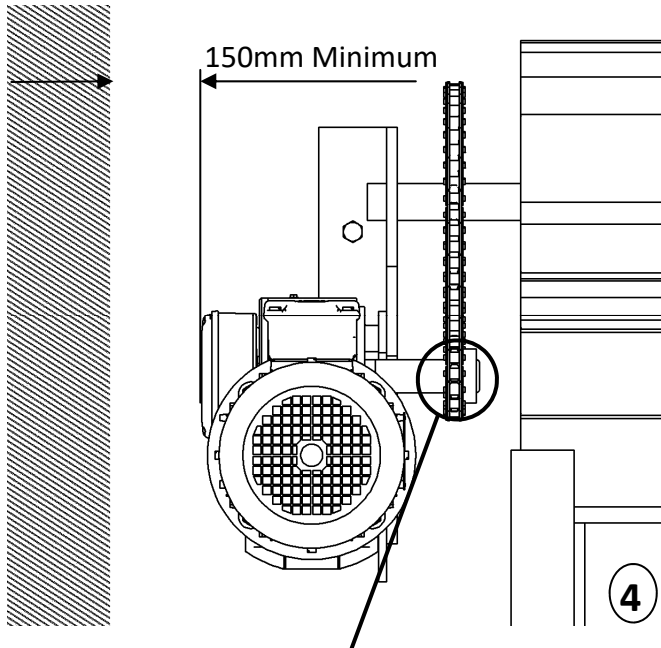
When assessing and selecting an appropriate mounting location, the following considerations should be made:



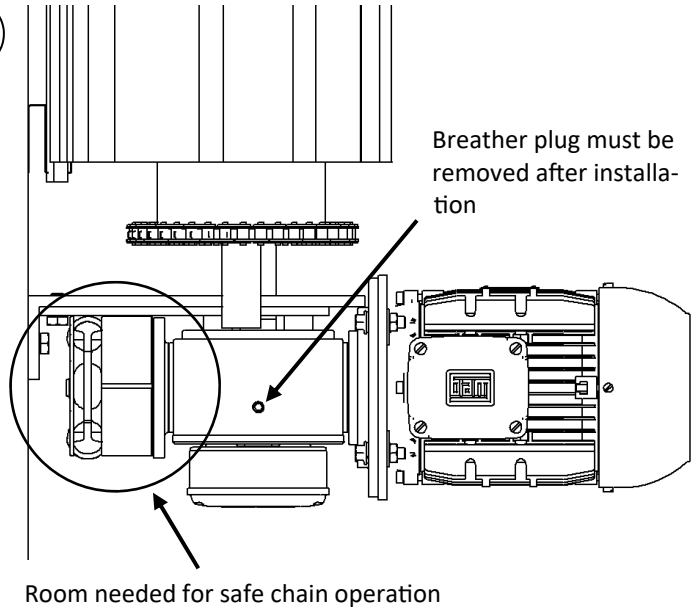
Clear path for manual chain to hang downward (refer pg 6 image no. 5)

INSTALLATION

Mounting the Unit (continued)



3



Side room to imposing structures (see left)

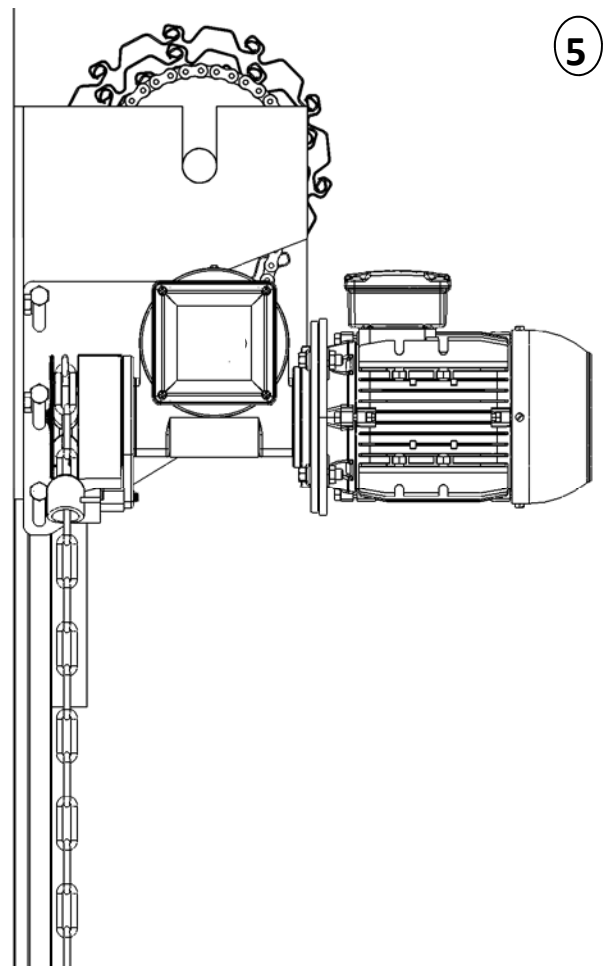
Note: The operator limit housing requires adequate clearance to allow setting of limit cams during installation. 150mm is the minimum recommended clearance between wall and lid.

The drive sprocket must be aligned with the door sprocket, and locked using 2 x M8 hi-tensile grub screws tightened to min 20Nm. Grub screws must be set between 90° and 120° apart, with one grub screw lying over the drive key.

Chain tension should be set between 10-20kgs, ensuring both sides of the linkage are taught. Where practicable, use the weight of the operator as a preload, then tighten mounting bolts. ½' x 1 ¼' fasteners should be between to 80-90Nm min.

Ensure the mounting position allows the hand chain to hang free of obstructions (see right)

Ensure hand chain is not twisted when making the join!



5

INSTALLATION

CAUTION

When Securing the Heavy Duty Operator with the 4 x ½' x 1 ¼' long fasteners (based on a 12mm mounting plate) and spring washers provided, it is critical to ensure that the applied torque is between 80-90Nm. When mounting through thicker sections, ensure a minimum of 20mm of screw thread is engaged with the female thread. Use of incorrect fasteners or torque may cause serious product damage and/or personal injury. When fixing through a slotted plate, ensure that the slots are no wider than 14mm as a spring washer may not be adequate in outside diameter to support the hexagon head.

CAUTION

The operator **must**:

- be connected via an approved electrical isolation device
- be connected via a suitable circuit breaker that disconnects all live conductors
- be connected in accordance with the wiring rules of the country in which it is installed
- not have control enclosures left open for extended periods (excess dust will void warranty)

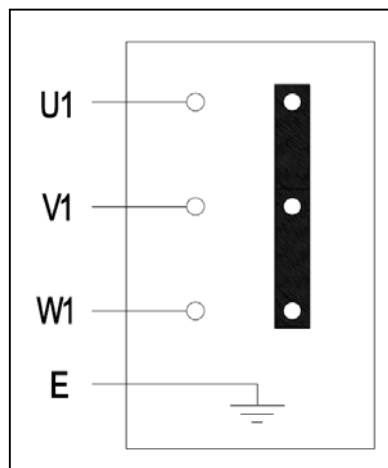
It is recommended to run all cable through non-flexible conduit and use appropriate conduit entries.

However if a flexible cable and cable gland are used, additional cable ties / strain relief must be fitted inside the enclosures to prevent the cable from slipping.

Electrical Connections

Motor connection

3 phase



COMPATIBLE LOGIC CONTROL

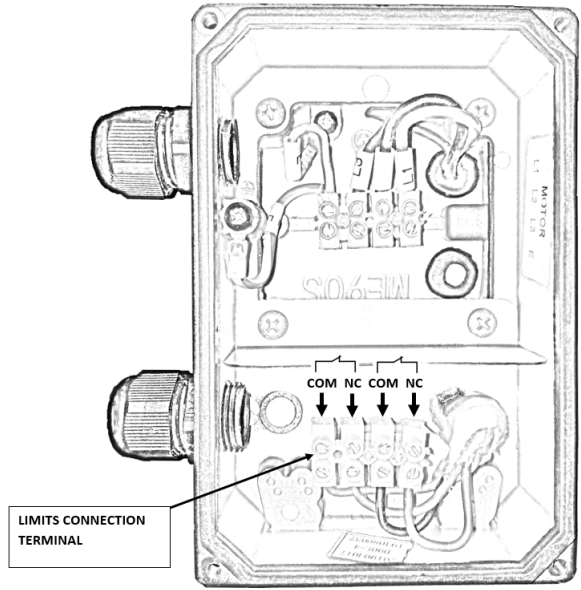
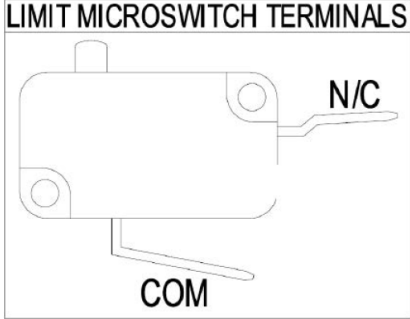
For compliant installations we recommend using the Liftmaster GLMe2HS controller.

For connection details and user instructions refer to the GLMe2HS manual.

INSTALLATION

Limit Switch Connection

Limit switches are pre-wired to the motor terminal box for easy access. The limit switches must be connected to the controller via the NORMALL CLOSED (N/C) and COMMON (COM) terminals located inside this motor terminal box as shown.



SETUP AND ADJUSTMENT

The limit cams are located in the limit enclosure box shown.

WARNING:

- ISOLATE MAINS POWER BEFORE SETTING LIMITS
- AVOID CRAMMING WIRES INTO LIMIT ENCLOSURE AS IT MAY AFFECT CAM MOVEMENT

Limit setting procedure

1. Manually position the door in the centre of the opening.
2. Position one cam to depress a switch and the other so that it is well clear of the switch (note which switch it is that you have depressed).

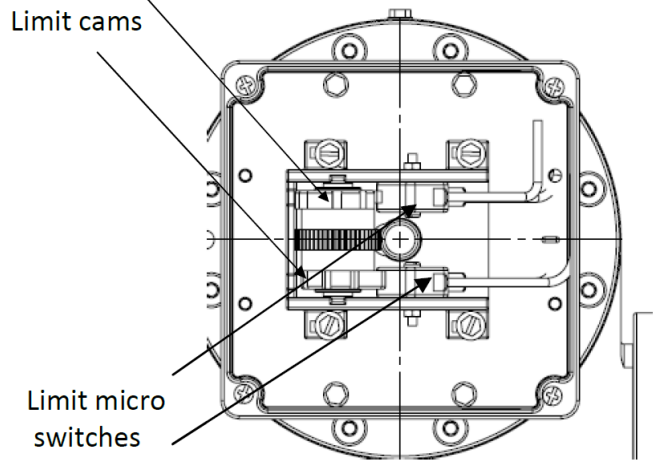
For controls with up and down functions:

- Supply power and activate control in the upward direction.
- If the door travels up, then the limit switch which is engaged by the cam is the CLOSED limit.
- If the door doesn't move it is at the OPEN limit
- Continue to Step 3 below .

For single button controls:

- Supply power and push the button.
- If the door travels up, then the limit switch which is engaged by the cam is the CLOSED limit.
- If the door travels down, then the limit switch which is engaged by the cam is the OPEN limit.
- Continue to Step 3 below

3. Isolate power and adjust the limit cams to depress the switches when the shutter reaches its OPEN and CLOSED positions.
4. Supply power and cycles the door between the OPEN and CLOSED positions. Adjust cam position if necessary.



WARNING

Limits are extremely sensitive, a small cam movement may correspond to a large amount of shutter travel

Automatic Chain Engagement Mechanism (ACEM)

The patented ACEM features allows the use of the hand chain in the event of a power failure. Simply pull on the hand chain in either direction to operate the door manually.

Warning! Ensure power is isolated when using this feature.

The ACEM label (see right) must be fixed in close proximity to the controller e.g. on the door track.



MAINTENANCE

Monthly

- Check chain alignment and tension. *Adjust if required* *
- Check PE / IR beam/s and bump edge functionality where applicable

Quarterly

- Check tightness of fixing bolts and (sprocket) grub screws. *Adjust if required* * refer page 6
- Check correct electrical operation
- Check manual operation via hand chain
- Lubricate the drive chain *
- Check door balance. *Adjust if required* *
- Conduct door maintenance in accordance with door manufactures guidelines. This will include door balance *

* SERVICE MUST BE CARRIED OUT BY A QUALIFIED TECHNICIAN

Notes

مراجعة رموز السلامة وكلمات التنبيه

تم تصميم واختبار جهاز فتح الأبواب التجاري هذا لتقديم خدمة آمنة بشرط أن يتم تركيبه وتشغيله وصيانته واختباره بالتوافق الدقيق مع التعليمات والتحذيرات الموجودة في هذا الكتيب.

عندما ترى رموز السلامة وكلمات التنبيه هذه في الصفحات التالية، فهي تنبّهك باحتمالية الإصابة الخطيرة أو الموت إذا لم تمتثل للتحذيرات التي تصاحبها. قد يأتي الخطر من شيء ميكانيكي أو من الصدمة الكهربائية.

WARNING

Mechanical

WARNING

Electrical

عندما ترى كلمة التنبيه هذه موجودة في الصفحات التالية، فهي تنبّهك باحتمالية حدوث ضرر لبابك التجاري و/أو جهاز فتح الأبواب التجاري إذا لم تمتثل لعبارات التنبيه التي تصاحبها.

CAUTION

تعليمات السلامة التالية هامة للغاية، يرجى اتباع جميع التعليمات حيث أن التركيب غير الصحيح قد يؤدي إلى الإصابة الشديدة أو الموت

يجب أن يكون الباب التجاري متوازناً. يجب إصلاح الأبواب العالقة أو المحشورة. تقع الأبواب التجارية وزنبركات الباب والكابلات والبكرات والكتيافات وعتادها تحت ضغط شديد ويمكن أن تسبب الإصابات الشخصية البالغة. لا تحاول فكّها أو تحريكها أو تعديلها. اتصل بخدمة الأبواب التجارية



احتفظ بالملحقات الإضافية بعيداً عن متناول الأطفال. لا تسمح للأطفال باللعب بزر (أزرار) التشغيل أو جهاز (أجهزة) التحكم عن بُعد. قد ينتج عن الاستخدام الخاطئ لجهاز فتح الباب الإصابة الشخصية البالغة التي قد تحدث بسبب إغلاق الباب التجاري. حيث أن الباب قد يسبب إصابات خطيرة عند إغلاقه بدون توافر أجهزة السلامة. يُسمح فقط للأشخاص المدربين باستخدام جهاز فتح الباب.



شغلّ جهاز فتح الباب فقط عندما يكون الباب مرتباً بشكل كامل وخالي من العوائق وأن يكون جهاز فتح الباب قد تم ضبطه بشكل صحيح. يجب ألا يدخل أو يغادر أحد المبنى عندما يكون الباب في وضع الحركة.



يجب أن يقوم أحد فنيي الكهرباء بفصل التيار الكهربائي عن جهاز فتح باب التجاري قبل إجراء أي إصلاحات أو إزالة الأغطية.



يمكن أن تؤدي الرطوبة والماء إلى تلف المكونات الإلكترونية. تأكد أن الرطوبة والماء أو رطوبة التخزين لا يمكنها اختراق الإلكترونيات تحت كل الظروف. ونفس الشيء ينطبق على الفتحات ومداخل الكابلات



عند التشغيل كمفتاح انحيازي، تأكد أن الأشخاص الآخرين بعيدين.



هذا الجهاز ليس مخصصاً لاستخدامه من قبل الأشخاص (بما في ذلك الأطفال) الذين لديهم نقص في القدرات الجسدية أو الحسية أو العقلية، أو تنقصهم الخبرة والدراية، إلا إذا قام شخص بالغ مسؤول عن سلامتهم بالإشراف عليهم أو إرشادهم عن كيفية استخدام الجهاز. يجب مراقبة الأطفال لضمان عدم العبث بالجهاز.



استخدم مشغل الباب التجاري وأجهزة التحكم في الأغراض المخصصة لها. تم تصميم مشغل الباب وأجهزة التحكم لتشغيل المصاريح اللقافة المتوازنة بزبركات والأبواب اللقافة المتوازنة بزبركات والأبواب متوازنة الثقل ثنائية الطي والأبواب ذات الرفع العمودي.



تحذير: تعليمات هامة للسلامة. من المهم لسلامة الأشخاص اتباع جميع التعليمات. **احتفظ** بهذه التعليمات.



من المهم التأكد أن الباب يعمل بسلاسة بشكل دائم. يجب إصلاح الأبواب التي تعلق أو تنحسر على الفور. قم باستدعاء مهني كفؤ لإصلاح الباب، ولا تحاول أبدًا إصلاحه بنفسك.



التشغيل

لتشغيل الباب

اضغط زر أعلى (UP) في جهاز التحكم لفتح الباب، واضغط زر أسفل (DOWN) مع الاستمرار للإغلاق. لتشغيل الباب، انظر تفاصيل جهاز التحكم

التشغيل اليدوي

آلية التعشيق التلقائي للسلسلة (ACEM)

تسمح لك ميزات آلية التعشيق التلقائي للسلسلة (ACEM) الحاصلة على براءة الاختراع باستخدام السلسلة اليدوية في حالة تعطل التيار الكهربائي. ببساطة اسحب سلسلة اليد في أحد الاتجاهين لتشغيل الباب يدويًا.

تحذير! تأكد أن مصدر التيار معزولاً عند استخدام هذه الميزة. قد يؤدي استخدام السلسلة اليدوية خلال تشغيل الباب بالتيار الكهربائي إلى تلف الجهاز أو إصابة المستخدم. تأكد من إغلاق مصدر التيار قبل استخدام السلسلة اليدوية.

يتم وضع ملصق آلية التعشيق التلقائي للسلسلة (ACEM) (انظر على اليسار) بالقرب من جهاز التحكم على سبيل المثال، على مسار الباب.

الصيانة العامة

يرجى اتباع تعليمات بائع الأبواب التجارية في عملية الصيانة.



NOTES