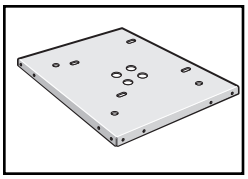
ACCESSORIES

Miscellaneous



Post-mounting plate

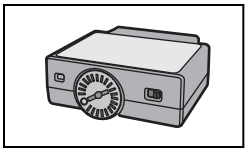
For post-mounting models CSL24UL, CSW24UL, CSW200UL, SL3000UL, HDSL24UL, HDFSL24UL, and HDSW24UL commercial gate operators. Posts not included.

Model MPEL

Remote antenna extension kit

The remote antenna extension kit allows the antenna to be remotely installed.

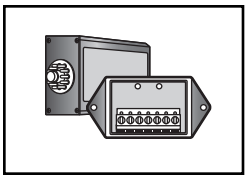
Model 86LM



Plug-in loop detector

Low power. Conveniently plugs into existing control board. Not to be used as entrapment protection.

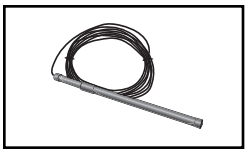
Model LOOPDETLM



Loop Detector

Low power loop detectors mounted and wired separately inside control box. LiftMaster low power accessory. Not to be used as entrapment protection.

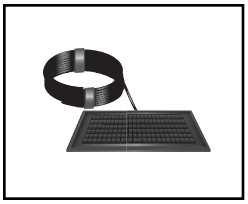
Model LD7LP



Vehicle sensing probe

The vehicle sensing probe is buried in the ground and can detect a car as it approaches and will then open the gate.

Model CP3



Solar panel kit

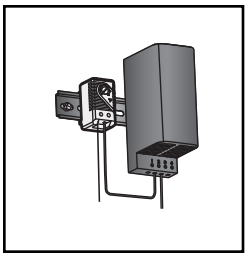
This kit is to replace or add a solar panel to the operator application. 60W maximum for 24 Vdc operators and 30W maximum for 12 Vdc operators. Requires a 33AH battery harness.

Models SP10W12V (10 Watt, 12V) and SP20W12V (20 Watt, 12V)

Magnetic gate lock

Outdoor magnetic lock, transformer, junction box, mounting plate and hardware. Not for use with Solar Applications. Must be powered separately.

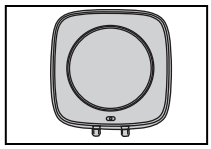
Model MG1300



Heater

The heater keeps the gearbox and batteries at a suitable temperature when the outside temperature is below -4°F (-20°C). The thermostat MUST be set between 45°F and 60°F (7°C and 15.5°C) to ensure proper gate operation. The heater can be powered by 110 to 250 Vac.

Model HTR



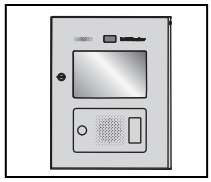
Long range RFID reader

Model LMSC1000

LiftMaster® Internet Gateway

Internet enabled accessory which connects your gate operator to your WiFi network and allows you to monitor and control gate operators and lighting accessories enabled by myQ® technology.

Model 828LM

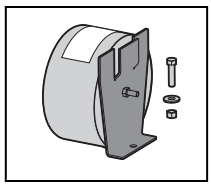


myQ® Business™ connected access protocol - high capacity

Model CAPXL

Warning sign

Model 40-39235



Transformer kit

Changes input voltage (208/240/480/575 Vac) to an output voltage of 120 Vac. Rated 208/240/480/575 Vac, 4.8/4.2/2.1/1.7 A, 60 Hz, 1 PH

Model 3PHCONV

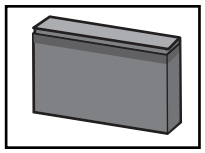
Transformer kit is NOT compatible with 33AH batteries.

Solenoid lock harness kit

Model K77-37972

Batteries

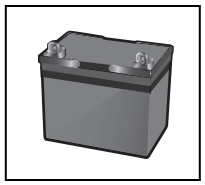
Gate access system batteries replace or upgrade the gate operator batteries. Two identical 12 Vdc batteries are required for each gate operator. Do not mix 7AH and 33AH batteries within a gate operator.



7AH batteries

Standard 7 AMP-Hour Battery, 12 Vdc, to replace original batteries provided with operator. Reuse existing harnesses.

Models 29-NP712 (1) and K74-30762 (2)

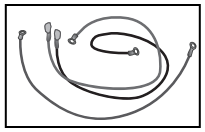


33AH batteries

Upgrade 33 AMP-Hour Battery, 12 Vdc. Ideal for solar applications and extended battery backup. Two required.

Model A12330SGLPK

33AH batteries are NOT compatible if transformer kit model 3PHCONV is installed.



Harness kit

For 33AH battery applications.

Model K42-0102-000

WARRANTY

LiftMaster 7 year residential / 5 year commercial Limited Warranty

LiftMaster ("Seller") warrants to the first purchaser of this product, for the structure in which this product is originally installed, that it is free from defect in materials and/or workmanship for a period of 7 year residential installation / 5 year commercial installation from the date of purchase [and that the HDSL24UL is free from defect in materials and/or workmanship for a period of 7 year residential installation / 5 year commercial installation from the date of purchase]. The proper operation of this product is dependent on your compliance with the instructions regarding installation, operation, maintenance and testing. Failure to comply strictly with those instructions will void this limited warranty in its entirety.

If, during the limited warranty period, this product appears to contain a defect covered by this limited warranty, call **1-800-528-2806**, toll free, before dismantling this product. Then send this product, pre-paid and insured, to our service center for warranty repair. You will be advised of shipping instructions when you call. Please include a brief description of the problem and a dated proof-of-purchase receipt with any product returned for warranty repair. Products returned to Seller for warranty repair, which upon receipt by Seller are confirmed to be defective and covered by this limited warranty, will be repaired or replaced (at Seller's sole option) at no cost to you and returned pre-paid. Parts will be repaired or replaced with new or factory-rebuilt parts at Seller's sole option.

ALL IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE 7 YEAR RESIDENTIAL / 5 YEAR COMMERCIAL LIMITED WARRANTY PERIOD SET FORTH ABOVE [EXCEPT THE IMPLIED WARRANTIES WITH RESPECT TO THE HDSL24UL, WHICH ARE LIMITED IN DURATION TO THE 7 YEAR RESIDENTIAL / 5 YEAR COMMERCIAL LIMITED WARRANTY PERIOD FOR THE HDSL24UL, AND NO IMPLIED WARRANTIES WILL EXIST OR APPLY AFTER SUCH PERIOD. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. THIS LIMITED WARRANTY DOES NOT COVER DAMAGE CAUSED BY IMPROPER INSTALLATION, OPERATION OR CARE (INCLUDING, BUT NOT LIMITED TO ABUSE, MISUSE, FAILURE TO PROVIDE REASONABLE AND NECESSARY MAINTENANCE, UNAUTHORIZED REPAIRS OR ANY ALTERATIONS TO THIS PRODUCT), LABOR CHARGES FOR REINSTALLING A REPAIRED OR REPLACED UNIT, OR REPLACEMENT OF BATTERIES.

THIS LIMITED WARRANTY DOES NOT COVER ANY PROBLEMS WITH, OR RELATING TO, THE GATE OR GATE HARDWARE, INCLUDING BUT NOT LIMITED TO THE GATE SPRINGS, GATE ROLLERS, GATE ALIGNMENT OR HINGES. THIS LIMITED WARRANTY ALSO DOES NOT COVER ANY PROBLEMS CAUSED BY INTERFERENCE. ANY SERVICE CALL THAT DETERMINES THE PROBLEM HAS BEEN CAUSED BY ANY OF THESE ITEMS COULD RESULT IN A FEE TO YOU.

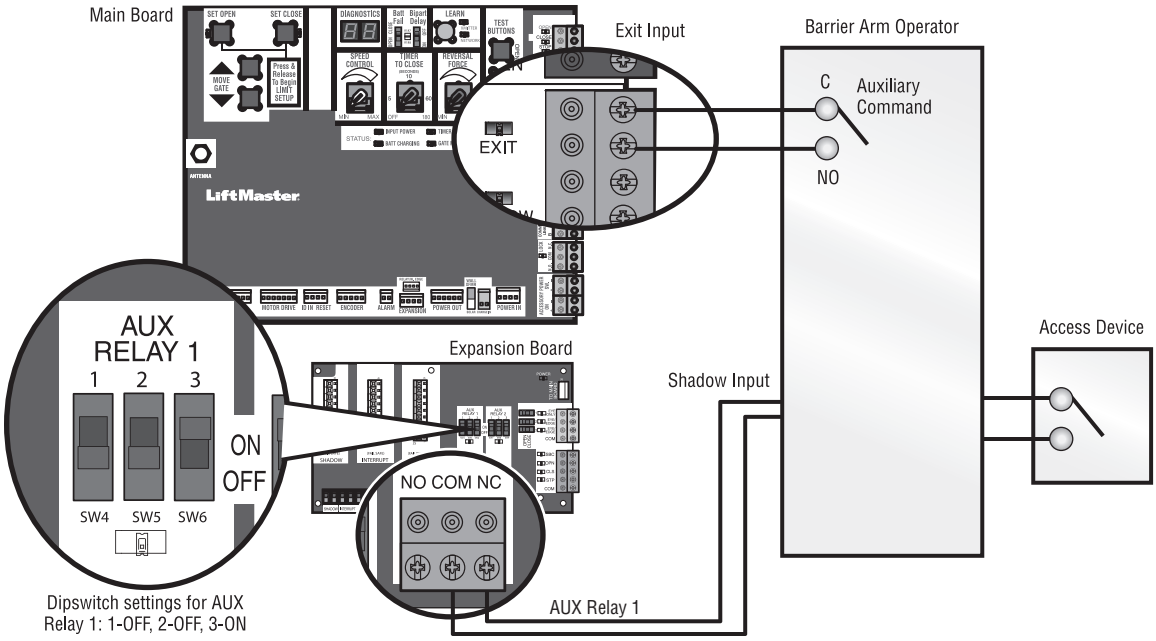
UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES ARISING IN CONNECTION WITH USE, OR INABILITY TO USE, THIS PRODUCT. IN NO EVENT SHALL SELLER'S LIABILITY FOR BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE OR STRICT LIABILITY EXCEED THE COST OF THE PRODUCT COVERED HEREBY. NO PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT.

Some states do not allow the exclusion or limitation of consequential, incidental or special damages, so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SAMS Wiring with Relays Not Energized

SAMS Operation

To keep vehicles from rushing the gate, the barrier arm stays in closed position until the gate reaches fully open position then the barrier arm is released to open and allow vehicles to pass.



Dual Gate Settings

NOTE: *We recommend that all accessories and board configurations are set on the primary operator.*

Main control board

FEATURE	PRIMARY OPERATOR	SECONDARY OPERATOR
Timer-to-Close	Set the TTC dial to desired setting	OFF
Bi-Part Delay Switch	Synchronized Close: ON	Synchronized Close: ON
Speed	Set the speed control dial on each operator to the desired setting, see page 24 for more details	

Expansion board

FEATURE	PRIMARY OPERATOR	SECONDARY OPERATOR
QUICK CLOSE Switch	ON	OFF
ANTI-TAIL Switch	ON	OFF
LOW BATT Switch	Battery Fail OPEN: OPEN Battery Fail CLOSE: CLOSE	Battery Fail OPEN: OPEN Battery Fail CLOSE: CLOSE
AC FAIL OPEN/BATT Switch	OPEN	OPEN

Accessories

ACCESSORY	PRIMARY OPERATOR	SECONDARY OPERATOR
Remote Controls	Program remote controls 1 to 50 to the primary operator.	Program remote controls 51 to 100 to the secondary operator
LiftMaster Internet Gateway	Program to primary operator.	
Garage and Gate Monitor	Program to primary operator.	

Limit Setup with a Remote Control

To set the limits using a remote control, first you will need a 3-button remote control that has been programmed for OPEN, CLOSE, and STOP. Refer to the *Programming* section.

Initial Limits and Force Adjustment

For dual gate applications the limits will have to be set for each operator. The gate MUST be attached to the operator before setting the limits and force.

Ensure the gate is closed.

1. Press and release the SET OPEN and SET CLOSE buttons simultaneously to enter limit setting mode.
2. Press and hold the OPEN or CLOSE button on the remote control until the gate reaches the desired open position. The gate can be jogged back and forth using the OPEN and CLOSE buttons on the remote control.
3. Once the gate is in the desired open position, press and release the STOP button on the remote control.
4. Press and release the OPEN button on the remote control again to set the open limit.
5. Press and hold the CLOSE or OPEN button on the remote control until the gate reaches the desired close position. The gate can be jogged back and forth using the OPEN and CLOSE buttons on the remote control.
6. Once the gate is in the desired close position, press and release the STOP button on the remote control.
7. Press and release the CLOSE button on the remote control again to set the close limit.
8. Cycle the gate open and close. This automatically sets the force.

When limits are set properly the operator will automatically exit limit setting mode.

Refer to the *Adjustment* section and follow the instructions for *Speed Control*, *Fine Tune the Force*, and *Obstruction Test*.

Adjust the limits

If the limits have already been set the operator will exit the limit setting mode after resetting each limit.

Set the Close Limit Only

1. Press and release the SET OPEN and SET CLOSE buttons simultaneously to enter limit setting mode.
2. Press and hold the CLOSE button on the remote control until the gate reaches the desired close position. The gate can be jogged back and forth using the OPEN and CLOSE buttons on the remote control.
3. Once the gate is in the desired close position, press and release the STOP button on the remote control.
4. Press and release the CLOSE button on the remote control again to set the close limit.

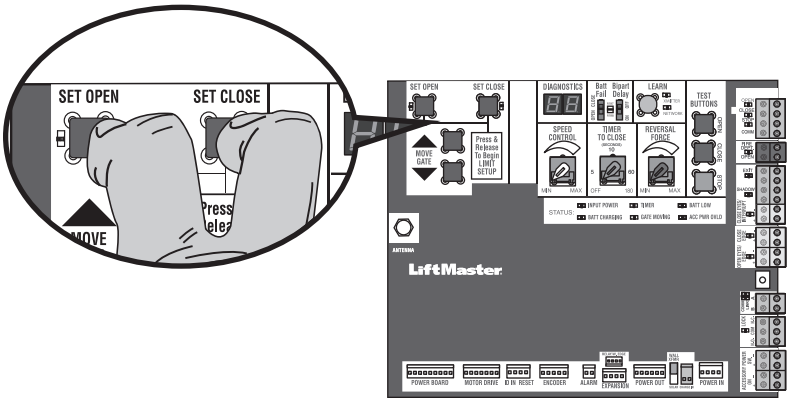
When the close limit is set properly the operator will automatically exit limit setting mode.

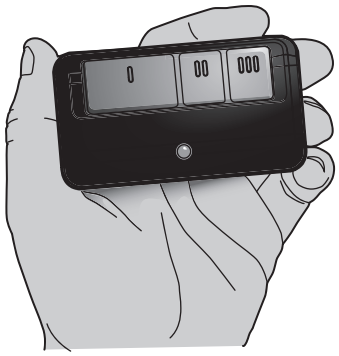
Set the Open Limit Only

1. Press and release the SET OPEN and SET CLOSE buttons simultaneously to enter limit setting mode.
2. Press and hold the OPEN button on the remote control until the gate reaches the desired open position. The gate can be jogged back and forth using the OPEN and CLOSE buttons on the remote control.
3. Once the gate is in the desired open position, press and release the STOP button on the remote control.
4. Press and release the OPEN button on the remote control again to set the open limit.

When the open limit is set properly the operator will automatically exit limit setting mode.

Perform the obstruction test after every limit, speed, and force setting adjustment see page 25.





3-Button Remote Control programmed for OPEN, CLOSE, and STOP

Wiring Diagram

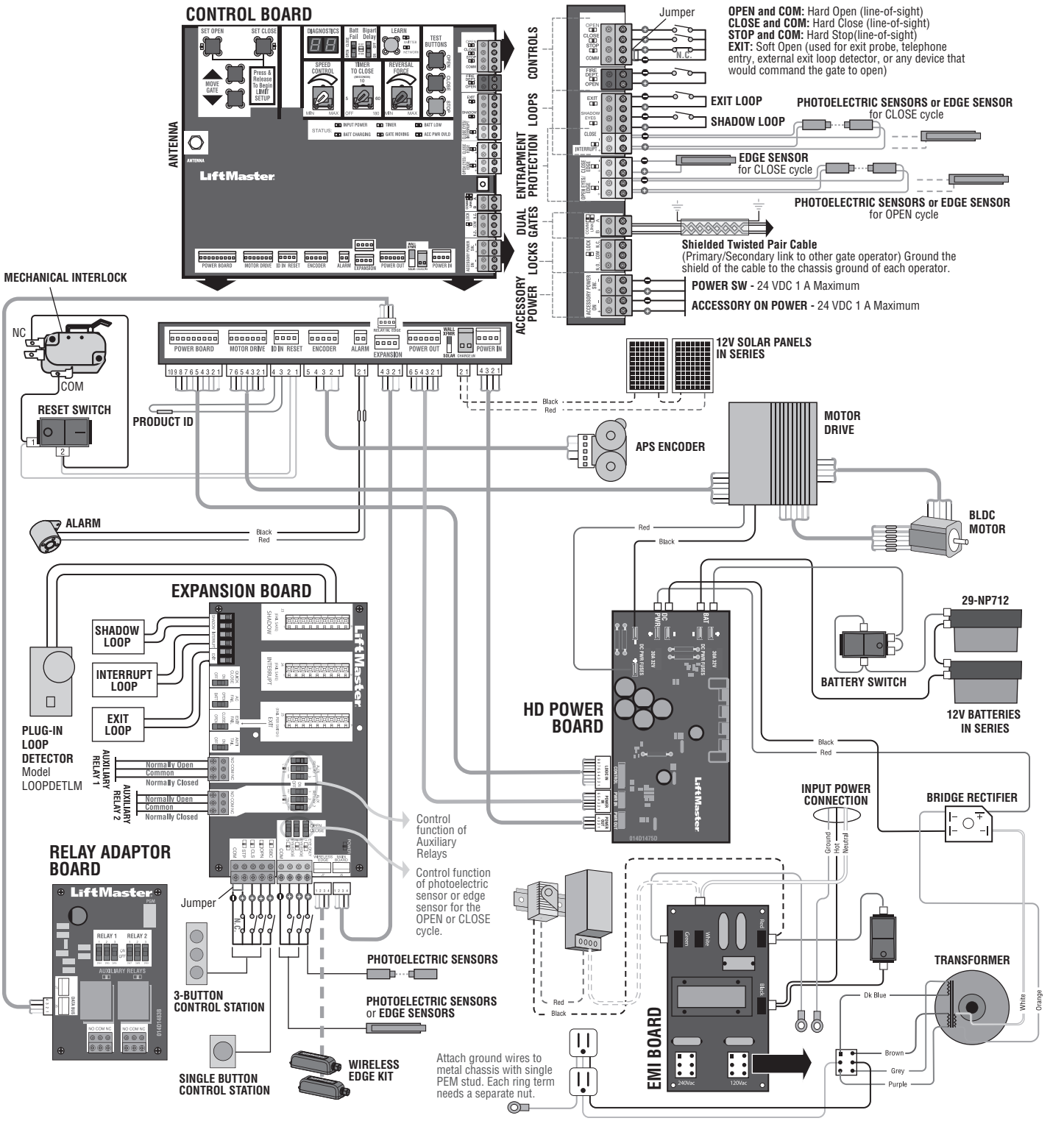
⚠ WARNING

To protect against fire and electrocution:

- DISCONNECT power (AC or solar and battery) BEFORE installing or servicing operator.

For continued protection against fire:

- Replace ONLY with fuse of same type and rating.



Diagnostic Codes Table

Some codes are saved in the code history and some are not. If a code is not saved it will briefly appear on the display as it occurs, then disappear.

LiftMaster System | Installed System | Informational | External Entrapment Protection | Inherent Entrapment Protection

Code	Meaning	Solution	Saved
31	Control board has experienced an internal failure.	Disconnect all power, wait 15 seconds, then reconnect power (reboot). If issue continues, replace main control board.	NO
34	Absolute Position Encoder error, not getting position information from encoder	Check APE assembly and wiring connections. Replace the APE assembly if necessary.	YES
35	Max-run-time exceeded error	Check for an obstruction, then reprogram the limits.	YES
36	Product ID error	Was the control board just replaced? If so, erase limits, enter limit setup mode and set limits. If not, disconnect all power, wait 15 seconds, then reconnect power before changing product ID harness.	YES
37	Product ID failure	Unplug product ID harness then plug back in. Disconnect all power, wait 15 seconds, then reconnect power before replacing product ID harness.	YES
38	Hard stop limit (Arm 1)	Limit may be set too tightly against a non-resilient hard stop (re-adjust limit). Operator may be at end of travel (re-adjust mounting).	NO
40	Battery overvoltage	Too much voltage on the battery. Check harness. Make sure there is NOT a 24V battery on a 12V system.	YES
41	Battery overcurrent	Possible short of the battery charge harness. Check harness. Make sure you do NOT have a 12V battery on a 24V system.	YES
42	No battery at boot up	Check battery connections and installation. Replace batteries if depleted to less than 20V on a 24V system or less than 10V on a 12V system. Make sure there is NOT a single 12V battery on a 24V system.	YES
43	Exit loop error	Failure or missing loop (SHORT or OPEN - LiftMaster Plug-in Loop Detector only). Check loop wiring throughout connection. May be a short in the loop, or an open connection in the loop.	YES
44	Shadow loop error		
45	Interrupt loop error		
46	Wireless edge battery low	Replace batteries in wireless edge.	YES
47	Motor Drive Fault	Check motor drive connections. Disconnect all power, wait 15 seconds, then reconnect power (reboot). If issue persists, replace motor.	YES
48	Hall Sensor Fault	Check motor and motor drive connections. Disconnect all power, wait 15 seconds, then reconnect power (reboot). If issue persists, replace motor.	YES
50	Gate overspeed detected	Make sure the gate is installed on a level surface and not on an excessive grade.	YES
53	Brownout occurred	AC/DC board supply dipped below allowable level. Review power supply and wiring. If rebooting, ensure enough time for discharge of power to force a fresh boot.	YES
54	Wireless second operator communication error	Check the second operator for power. If OFF, restore power and try to run the system. If powered, deactivate the wireless feature and then re-learn the second operator.	YES
60	Minimum number of monitored entrapment protection devices not installed.	Review monitored entrapment protection device connections. Slide gate operators require a minimum of two external safety devices; one in the close and one in the open direction.	NO
61	CLOSE EYE/INTERRUPT held more than 3 minutes	Check wired input on main control board; check for alignment or obstruction.	YES
62	CLOSE EDGE held more than 3 minutes		
63	OPEN EYE/EDGE held more than 3 minutes		

APPENDIX

Code	Meaning	Solution	Saved
64	CLOSE EYE/INTERRUPT held more than 3 minutes	Check wired input on expansion board; check for alignment or obstruction.	YES
65	CLOSE EYE/EDGE held more than 3 minutes		
66	OPEN EYE/EDGE held more than 3 minutes		
67	Wireless edge triggered more than 3 minutes	Check wired input for wiring issue or obstruction.	YES
68	Wireless edge loss of monitoring	Check wireless edge inputs.	YES
69	Wireless edge triggered	IF an obstruction occurred, no action required. If an obstruction did NOT occur, check inputs and wiring.	NO
70	CLOSE EYE/INTERRUPT triggered, causing reversal, preventing close, or resetting TTC	IF an obstruction occurred, no action required. If an obstruction did NOT occur, check alignment, inputs, and wiring on main control board	NO
71	CLOSE EDGE triggered, causing reversal, NO preventing close, or canceling TTC		
72	OPEN EYE/EDGE triggered, causing reversal or preventing opening		
73	CLOSE EYE/INTERRUPT triggered, causing reversal, preventing close, or resetting TTC	IF an obstruction occurred, no action required. If an obstruction did NOT occur, check alignment, inputs, and wiring on expansion board.	NO
74	CLOSE EYE/EDGE triggered, causing reversal and preventing close or canceling TTC		
75	OPEN EYE/EDGE triggered, causing reversal or preventing opening		
80	Close input (EYE/EDGE) communication fault from other operator	Check inputs and communication method between operators, either wired bus or radio. Ensure operator is powered. May have to erase the wireless communication and reprogram the two operators.	YES
81	Open input (EYE/EDGE) communication fault from other operator		
82	Close input (EYE/EDGE) communication fault (expansion board)	Check the connections between the main board and the expansion board.	YES
83	Open input (EYE/EDGE) communication fault (expansion board)		
84	Non-monitored device detected on the wireless safety system	Non-monitored contact closure devices are not supported. Make sure connected devices are monitored. Check edges for proper orientation and resistive end cap connection.	YES
91	Force reversal (Operator 1)	Check for obstruction. If no obstruction, check that the mechanical assembly is engaged and free to move. See *Limit, Speed and Force Adjustment* page 23.	YES
93	RPM / STALL reversal (Operator 1)	Check for obstruction. If no obstruction, check the operator wiring and that the mechanical assembly is engaged and free to move. Replace APE assembly.	YES
95	Motor start failure	Operator attempted to run, no response from motor drive assembly. Check connector and harness. If connected properly and still not working, replace motor and/or motor drive.	YES
96	Power board fault	Check connections to power board. Power cycle and retry. Replace power board if issue persists.	YES
99	Normal operation	No action required	YES

Swing and Slide Gate Operator UL 325 and ASTM F2200 Site Planning Safety Checklist

Please Print

Name: **Phone:**

Address:

City/State/ZIP: **Email:**

Satisfactory	Needs Repair/Replacement

Gate Safety Check — Simple steps to quickly determine if an End User's gate operator is safe.

UL 325 Standard			
Component:	**Result** (Circle)	**Comments:**	**Figures (On Back)**
1. Gate Operator is approved to current UL 325 standards (check operator label)	Pass / Fail		
2. Proper gate warning signs attached to both sides of gate area	Pass / Fail		1,4
3. All entrapment zones protected by 2 safety devices/obstruction tested			1,4
Close Side (circle two) Photo Eye Reversing Edge Inherent Reverse	Pass / Fail		
Open Side (circle two) Photo Eye Reversing Edge Inherent Reverse	Pass / Fail		
Other Entrapment Zones	Pass / Fail		
*Entrapment Zone: The location where an object can be caught or held in a position that increases the risk of injury			

Gate Construction Evaluation: Gate Constructed with Safety in mind. ASTM F2200 Standards are followed

Component:	Result (Circle)	Comments:	Figures (On Back)
All Gates			
Gates have smooth bottom edges, no protrusions exceed 1/2" beyond base of gate	Pass / Fail		5
All access controls at least 6 ft. from gate	Pass / Fail		1,4
Barbed tape (razor wire) at least 8 ft. above grade	Pass / Fail		
Barbed wire at least 6 ft. above grade	Pass / Fail		
Separate pedestrian gate – out of reach of a moving gate – vehicular gate is for automotive traffic only	Pass / Fail		1,4
Gate does not move on its own if disconnected from operator	Pass / Fail		
Gates prevented from falling over if disconnected from supporting hardware	Pass / Fail		
SWING			
Distance from pivot point to column edge is less than 4 in. or external entrapment protection is provided	Pass / Fail		4
Distance from open gate to wall, column, or other fixed object is greater than 16 in. or external entrapment protection is provided	Pass / Fail		4
SLIDE			
Roller covers on weight bearing exposed rollers 8 ft., or less, above grade	Pass / Fail		1
Meshing installed up to 6 ft. above grade if pickets spaced equal to or greater than 2 1/4 in. apart	Pass / Fail		3
Gap between gate and fence post less than 2 1/4 in. & gap protected with safety device	Pass / Fail		2
Positive stops at both fully open and fully closed positions	Pass / Fail		1
Receiver guides recessed behind receiver post for receiver guides less than 8 ft.	Pass / Fail		
Other:	Pass / Fail		

Please Print

First & Last Name of Dealer: **First & Last Name of Installer:**

Name of Dealership: **Phone:**

Dealership Address (Street Address/City/State/Zip)**:**

Dealer Signature: **Installer Signature:**

Customer Signature:

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300 Windsor Drive, Oak Brook, IL 60523
LMSPCLSWSL 12/19

LiftMaster

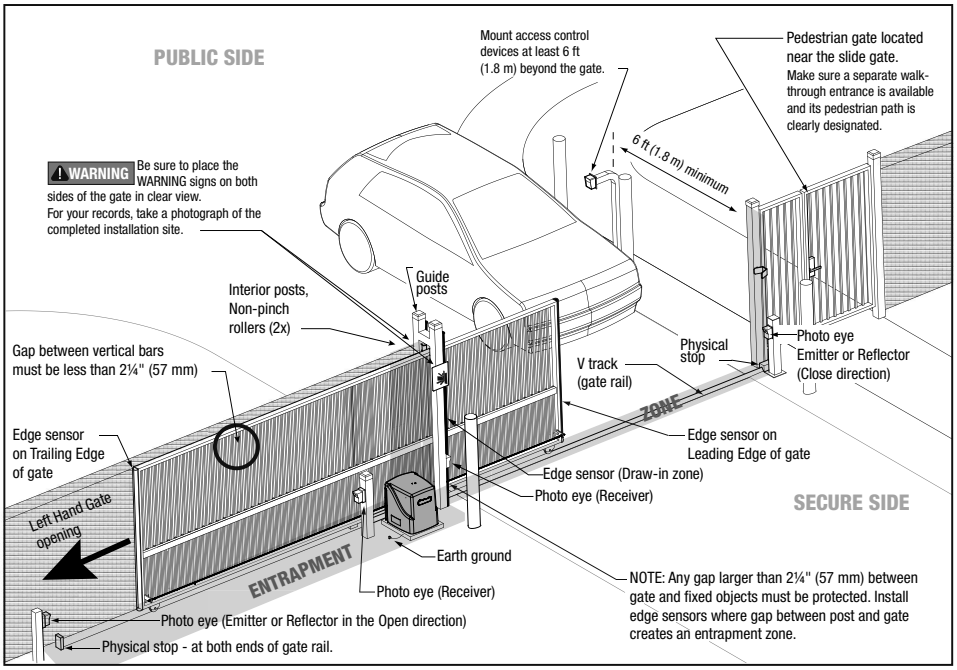
GETTING STARTED WITH SWING AND SLIDE GATE OPERATORS.

Always design, install and maintain safe gate access systems in accordance with UL 325 & ASTM F2200 standards.

- Only install the operator on gates used for vehicular traffic.
- A separate pedestrian entry/exit must be clearly visible to promote pedestrian usage and located so pedestrians do not come in contact with the vehicular gate while it is moving.
- Install two independent† entrapment protection devices protecting each entrapment zone.
- Pickets of a slide gate must be designed or screened to prevent persons from reaching through, or passing through a gate.
- Every Installation is unique. It is the responsibility of the installer to ensure all entrapment zones are protected with a minimum of two independent† entrapment protection devices.
- A slide gate operator will only operate with a minimum of two independent monitored entrapment protection devices installed in each direction, two in the open direction and two in the closed direction†.
- A swing gate operator will only operate with a minimum of two independent monitored entrapment protection devices installed in either the open or closed direction. If no entrapment zone exists in the other direction, only one means of entrapment protection is required in that direction†.

†Independent the same type of device shall not be utilized for both entrapment protection devices.

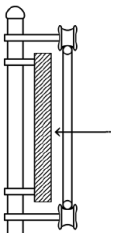
SLIDE GATE SITE LAYOUT GUIDELINES FIGURE 1



SLIDE GATE SPACING GUIDELINES FIGURE 2

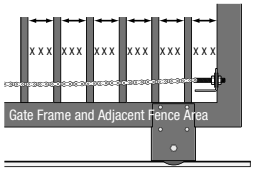
Slide Gate Gaps

A gap, measured in the horizontal plane parallel to the roadway, between a fixed stationary object nearest the roadway (such as a gate support post) and the gate frame when the gate is in either the fully open position or the fully closed position, shall not exceed 2 ¼ in.. Exception: All other fixed stationary objects greater than 16 in. from the gate frame shall not be required to comply with this section. Any gap must be protected. Install safety device to protect entrapment zone.

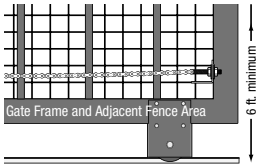


SLIDE GATE OPENINGS GUIDELINES FIGURE 3

Openings of a horizontal slide gate must be smaller than 2 1/4" or else be guarded or screened. These design rules apply to both the moving gate as well as the portion of adjacent fence that the gate covers in the open position. See Illustrations below.

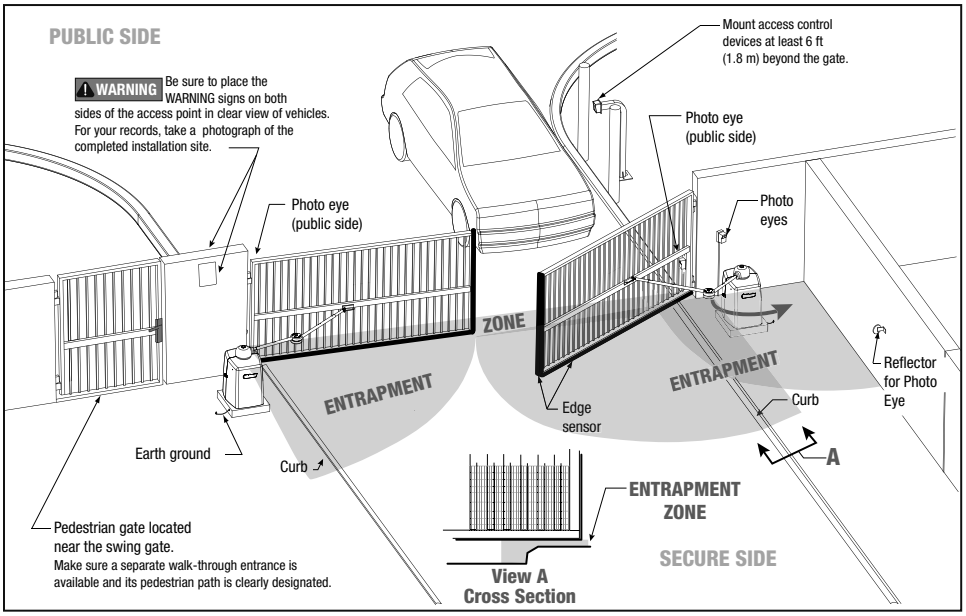


If gaps (xxx) between vertical bars of the gate or fence are less than 2 1/4", no further screening is required.



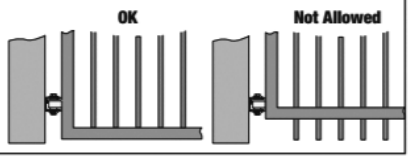
For gaps (xxx) equal to or larger than 2 1/4", a wire mesh screen must be applied to the gate. Wire mesh screen openings must be smaller than 2 1/4". The minimum height of wire mesh screen: 6 ft. above grade.

SWING GATE SITE LAYOUT GUIDELINES FIGURE 4



Base of Swing and Slide Gate FIGURE 5

All Gates must have smooth bottom edges, no protrusions should exist. If gate hardware or sensors protrude, they must have smooth surfaces free of any sharp cutting edges that do not exceed ½ inch beyond the base of the gate.



Definitions

Entrapment: The condition when a person is caught or held in a position that increases the risk of injury.

Slide Gate Entrapment Zones: An entrapment zone exists if at any point during travel, the gap between the moving gate and fixed counter opposing edges or surfaces is less than 406 mm (16") in a location up to 1.8 m (6ft.) above grade.

****Swing Gate Entrapment Zones:** Locations between a moving gate or moving, exposed operator components and a counter opposing edge or surface where entrapment is possible up to 1.8m (6 ft) above grade. Such locations occur if during any point in travel:
a) The gap between the bottom of a moving gate and the ground is greater than 101.6mm (4 in) and less than 406mm (16 in); or
b) The distance between the center line of the pivot and the end of the wall, pillar, or column to which it is mounted when in the open or closed position exceeds 101.6mm (4 in). Any other gap between a moving gate and fixed counter opposing edges or surfaces or other fixed objects is less than 406 mm (16 in) (examples are walls, curbs, berms, or other immovable objects).

The above examples are two of many installation possibilities and are for illustration purposes only.
See device and operator manuals for complete instruction.
Visit DAMSA.com for more information.

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