LiftMaster®

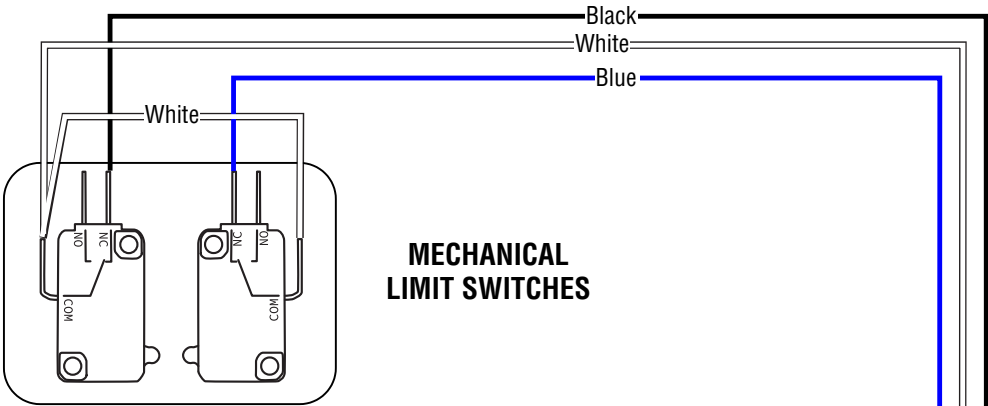## ⚠ WARNING

To reduce the risk of INJURY or DEATH:
- DISCONNECT power and battery BEFORE installing or servicing operator.
- Replace ONLY with fuse of same type and rating.
- To be compliant with UL325 and industry safety guidelines, qualified monitored external entrapment protection devices such as photoelectric sensors or edge sensors are required to be installed with this operator at each entrapment zone. Use ONLY LiftMaster approved entrapment protection devices (refer to the accessory page of manual).
- See manual prior to servicing regarding maintenance and required safety testing.

DISPLAY DURING OPERATION

| | Opening | | Open | | Closing | | Closed | | Mid-Stop |

MECHANICAL LIMIT SWITCHES

Black / White / Blue / White

SETTINGS MENU

To enter Advanced Settings, press and hold the P button for 5 seconds.

P — 5 sec. — S2

The operator will display the first setting menu (AP).

Use the +/- buttons to navigate to the desired function setting menu...

+ S3 / **–**

... then press the P button to enter the function setting menu.

P — S2

The operator will flash the current setting option:

To select a different setting, use the + / - buttons.

+ S3 / **–**

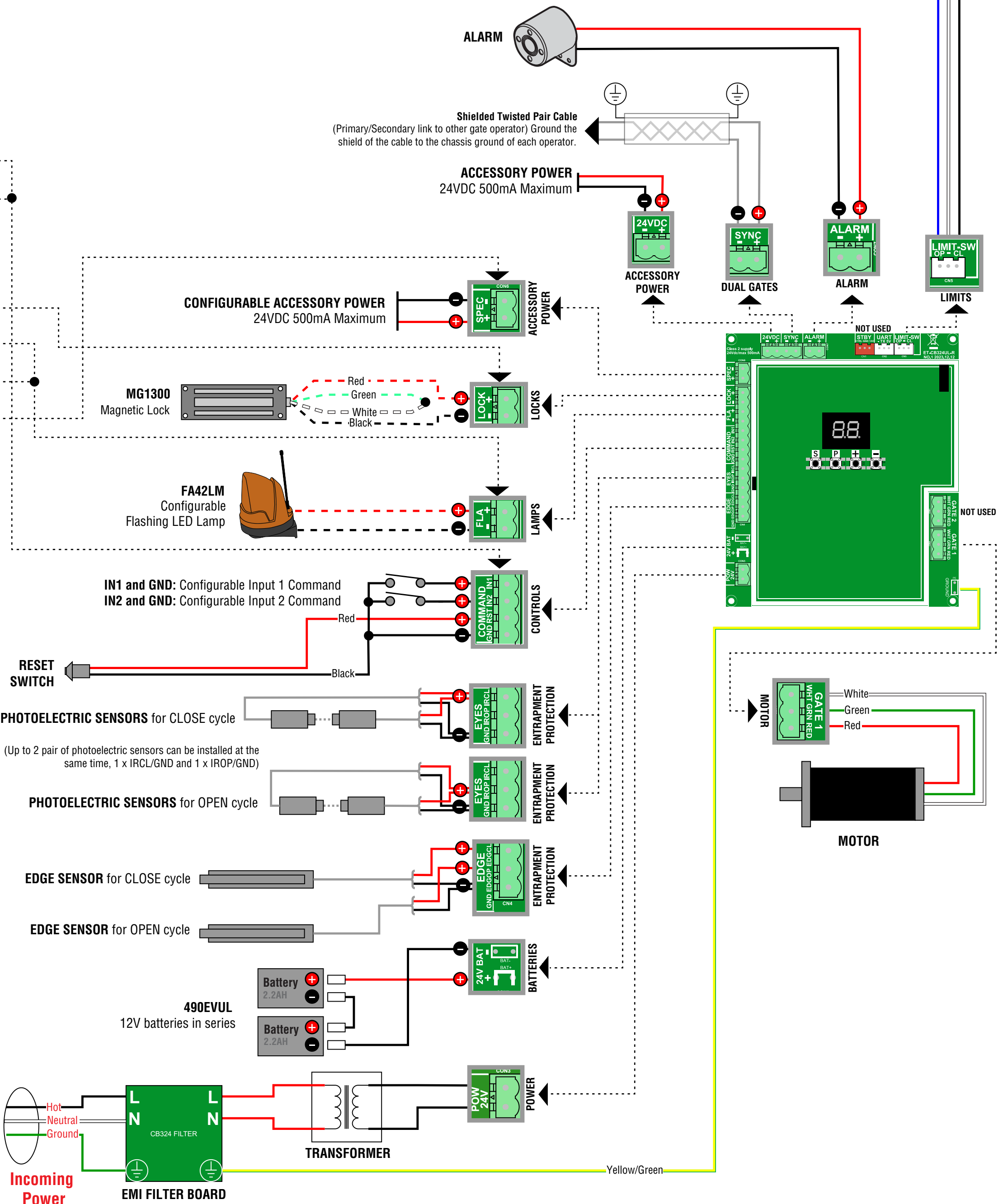Press and release the P button to select the setting.

P — S2

Press and hold the P button for 5 seconds to exit the setting menu and go back to the main display.

P — 5 sec.

Diagnostic Codes

CODE COLOR KEY:
- 🟨 LiftMaster System
- 🟧 Installed System
- 🟩 Informational
- 🟥 External Entrapment Protection
- ⬛ Inherent Entrapment Protection

DISPLAY	FUNCTION
	Application
	Direction Motor 1
	Limit Learning
	Transmitter
	Input 1 Command
	Input 2 Command
	Partial Command
	Timer To Close (TTC)
	E-lock
	Flashing Light
	Pre-Flashing
	SPECIAL Contact
	START Speed
	Maintenance Counter
	Force Motor 1 in Open
	Force Motor 1 in Close
	Speed Motors in OPEN
	Speed Motors in CLOSE
	SOFT-STOP Speed
	Factory Default
	Finish and Exit

CODE	MEANING	SOLUTION
E0	AP is set to 00	Check if AP is set to 00. If yes, change to correct application setting.
E1	1. IRCL is not connected, or wire is cut open. 2. IRCL wire is shorten or reverse connected. 3. IRCL is not aligned or blocked for a moment.	1. Check if IRCL is not connected, or wire is cut open. 2. Check IRCL connection, change wires if needed. 3. Align IRCL transmitter and receiver to make sure both LED is on, instead of blinking. Make sure there is nothing hanging on gate that may cause IR blocking in short time.
E2	1. IROP is not connected, or wire is cut open. 2. IROP wire is shorten or reverse connected. 3. IROP is not aligned or blocked for a moment.	1. Check if IROP is not connected, or wire is cut open. 2. Check IROP connection, change wires if needed. 3. Align IROP transmitter and receiver to make sure both LED is on, instead of blinking. Make sure there is nothing hanging on gate that may cause IR blocking in short time.
E3	1. EDGCL safety edge is not connected with 8.2kohm resistor. 2. EDGCL safety edge wire is shorten. 3. EDGCL safety edge is pressed.	1. Check if safety edge is connected with 8.2kohm resistor, and if the resistor is cut off. 2. Check safety edge wires and replace new wire if needed. 3. Check if safety edge is pressed.
E4	1. EDGOP safety edge is not connected with 8.2kohm resistor. 2. EDGOP safety edge wire is shorten. 3. EDGOP safety edge is pressed.	1. Check if safety edge is connected with 8.2kohm resistor, and if the resistor is cut off. 2. Check safety edge wires and replace new wire if needed. 3. Check if safety edge is pressed.
E5	1. STOP switch is open. 2. STOP switch is not connected.	1. Check if STOP switch is open or damaged. 2. Check if STOP switch is disconnected. If yes, then reconnect STOP switch or add a short wire for the switch connectors.
E6	Limit switch is not connected or wrong connection.	Check if limit switch is connected correctly. If not, fix the connection.
E7	PCBA amplifier for motor 1 fail	Close main switch power 20s and reset to check if PCBA recovers. If not, change PCBA.
E9	PCBA memory mistake	Close main switch power 20s and reset to check if PCBA recovers. If not, change PCBA.
F1	Motor 1 is blocked or bonded.	Check and remove obstruction. Clean gate.
F3	Motor 1 stall or RPM sensor is damaged.	Check if motor 1 stall or RPM sensor is damaged.
F5	ESARM fail	Close main switch power 20s and reset to check if PCBA recovers. If not, change PCBA.
F6	1. Battery Voltage < 22V: Connected with AC power, battery voltage is lower than 22V during closing. 2. Battery Voltage < 24.8V: Connected only with battery power, battery voltage is lower than 24.8V during closing.	Charge battery.
F7	NTC on PCBA is open or shorten.	Close main switch power 20s and reset to check if PCBA recovers. If not, change PCBA.
F8	Sync connector is short circuited.	Check if Sync wiring
F9	AP menu is reset to factory default.	Relearn limits.
LE	Press S button during limit learning.	Relearn limits
AL	Double entrapment detected.	1. Press Reset Switch or Stop Command. 2. Wait 5 minutes for timeout.

ALARM

Shielded Twisted Pair Cable
(Primary/Secondary link to other gate operator) Ground the shield of the cable to the chassis ground of each operator.

ACCESSORY POWER 24VDC 500mA Maximum

24VDC — ACCESSORY POWER / SYNC — DUAL GATES / ALARM — ALARM / LIMIT-SW OP CL — LIMITS

NOT USED

CONFIGURABLE ACCESSORY POWER 24VDC 500mA Maximum — SPEC — ACCESSORY POWER

MG1300 Magnetic Lock — Red / Green / White / Black — LOCK — LOCKS

FA42LM Configurable Flashing LED Lamp — FLA — LAMPS

IN1 and GND: Configurable Input 1 Command
IN2 and GND: Configurable Input 2 Command — Red — COMMAND — CONTROLS
Black

RESET SWITCH

PHOTOELECTRIC SENSORS for CLOSE cycle — EYES IRCL — ENTRAPMENT PROTECTION

(Up to 2 pair of photoelectric sensors can be installed at the same time, 1 x IRCL/GND and 1 x IROP/GND)

PHOTOELECTRIC SENSORS for OPEN cycle — EYES IROP — ENTRAPMENT PROTECTION

EDGE SENSOR for CLOSE cycle — EDGE — ENTRAPMENT PROTECTION

EDGE SENSOR for OPEN cycle

490EVUL 12V batteries in series — Battery 2.2AH / Battery 2.2AH — 24V BAT — BATTERIES

Incoming Power — Hot / Neutral / Ground — L N / L N — CB324 FILTER — **EMI FILTER BOARD** — TRANSFORMER — POWER

Yellow/Green

MOTOR — White / Green / Red — GATE 1 — **MOTOR**

NOT USED

LED	FUNCTION (refer to page 25 of installation manual for overview of Advanced Settings)	LED	DEFAULT SETTING (refer to Installation Manual for programming)	REF. PAGE IN MANUAL
AP	Application Settings	01	Sliding gate, SL600UL and SL1000UL (default)	21
d1	Direction Motor Settings	01	Motor is installed on left hand side (default)	21
tr	Transmitter Settings	02	Standard Mode: Open – Stop – Close – Stop – Open (default)	25
i1 i2	Input Settings	02	Open – Stop – Close – Stop – Open (default)	26
Pd	Partial Opening	02	2 m opening travel (default)	24, 26
tC	Timer To Close	00	TTC not active (default)	26
EL	E-Lock / Mag-Lock Settings	00	e-lock/mag-lock not installed (default)	26
FL	Flashing Light Settings	00	no flashing lamp installed (default)	27
PF	Pre-Flashing	00	No pre-flashing (default)	27
SP	Special Contact Settings	00	no activation (default)	27
St	Start Speed in Open and Close Directions	00	00 = Deactivated (default) : from 0 to 14 cm/sec in 1 sec	27
Cn	Maintenance Counter	00	No counter (default)	27
F1	Motor Force in OPEN direction	00	Standard force (default) Note: the force required depends on gate weight and is auto-learned during the learning phase.	28
F2	Motor Force in CLOSE direction	00	Standard force (default) Note: the force required depends on gate weight and is auto-learned during the learning phase.	28
S1	Motor Speed in OPEN direction	00	Standard speed (default) 14 cm/sec	28
S2	Motor Speed in CLOSE direction	00	Standard speed (default) 14 cm/sec	28
SF	Soft-Stop Speed	00	Standard speed (default) 7 cm/sec (50% of default standard speed)	29
Fd	Factory Default (resets control board to factory settings)	00	No reset (default)	29