

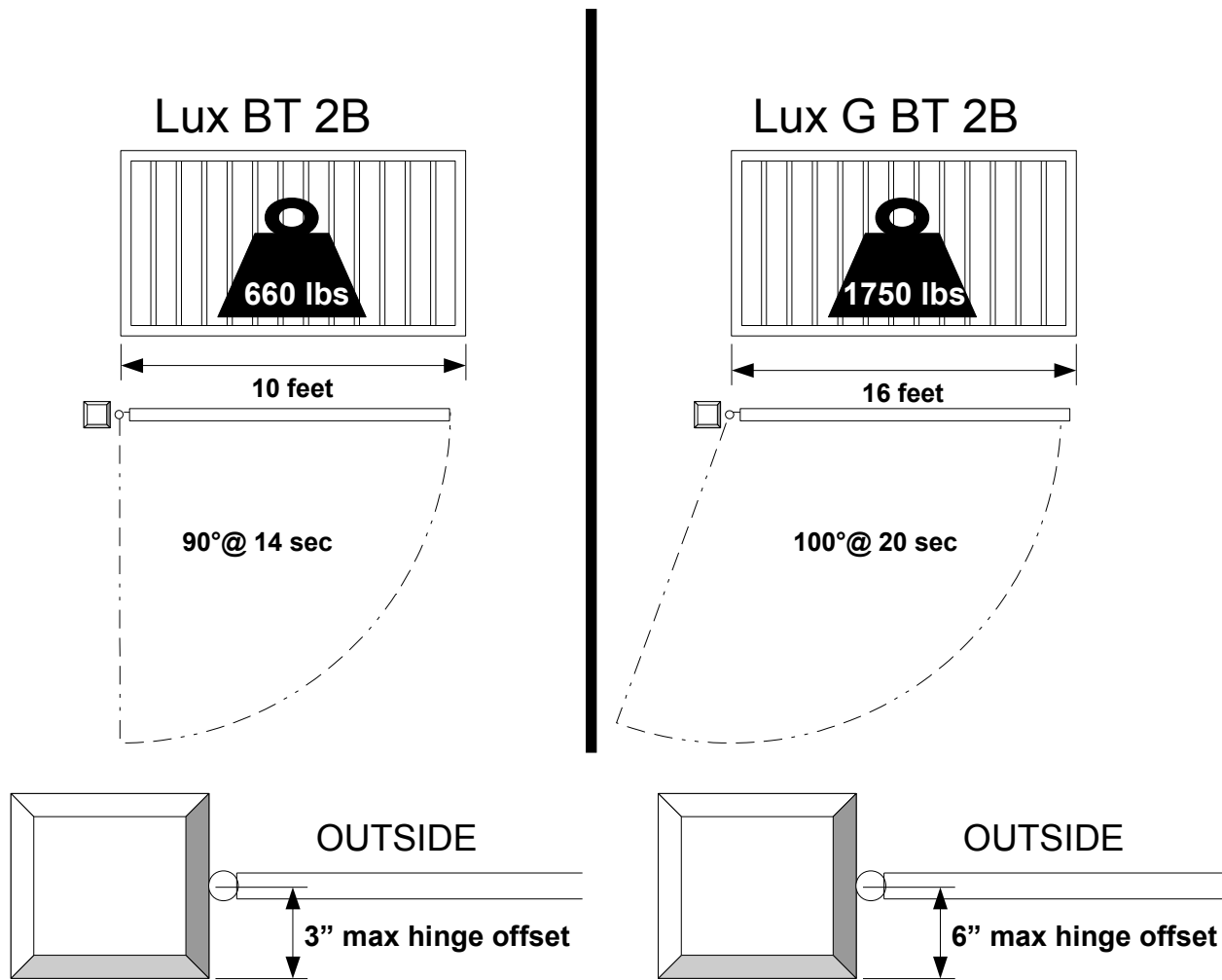
LUX BT 2B & LUX G BT 2B

With the **Libra C-LX controller**

Characteristics and Quick Installation Procedure



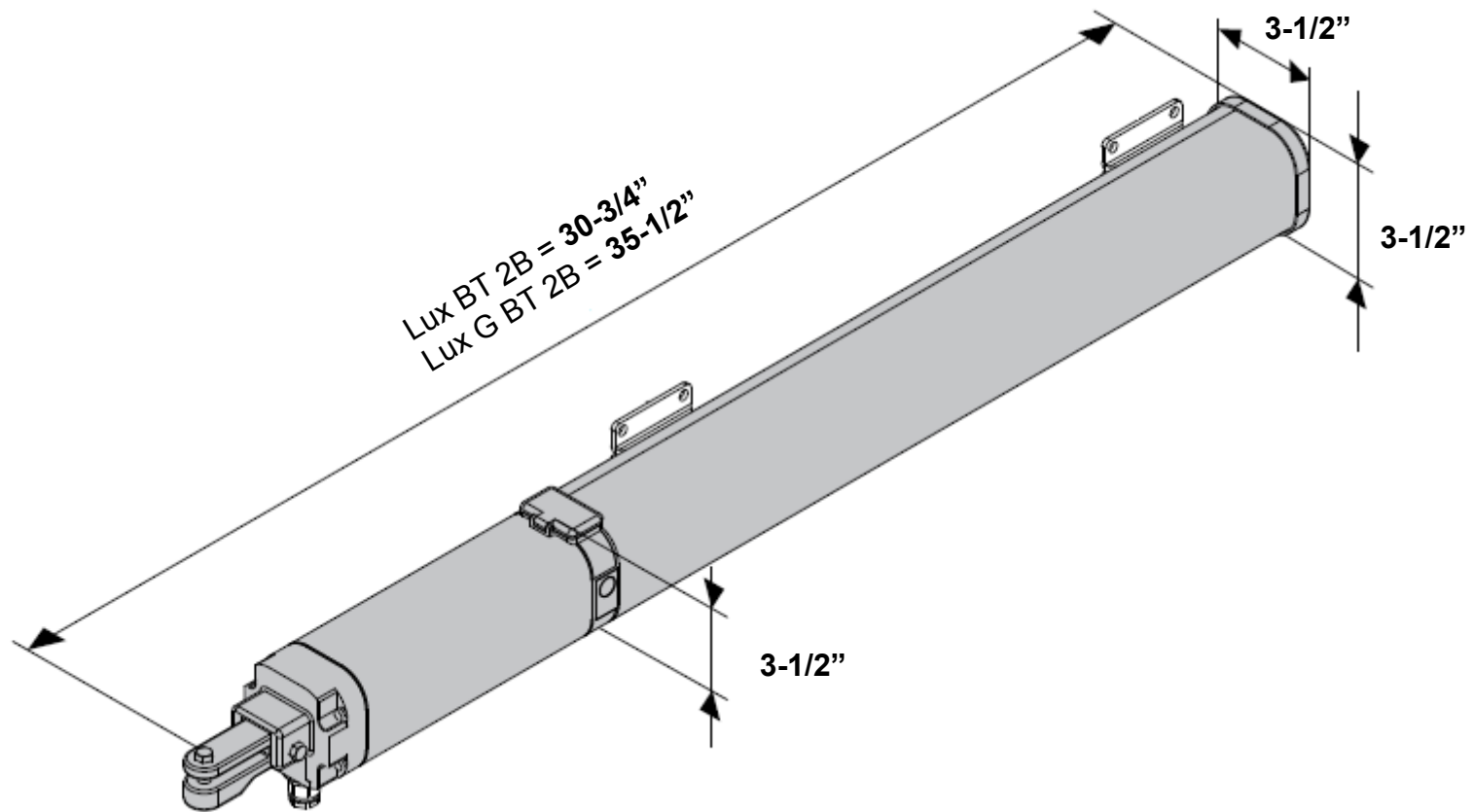
LOAD CAPACITIES AND APPLICATIONS



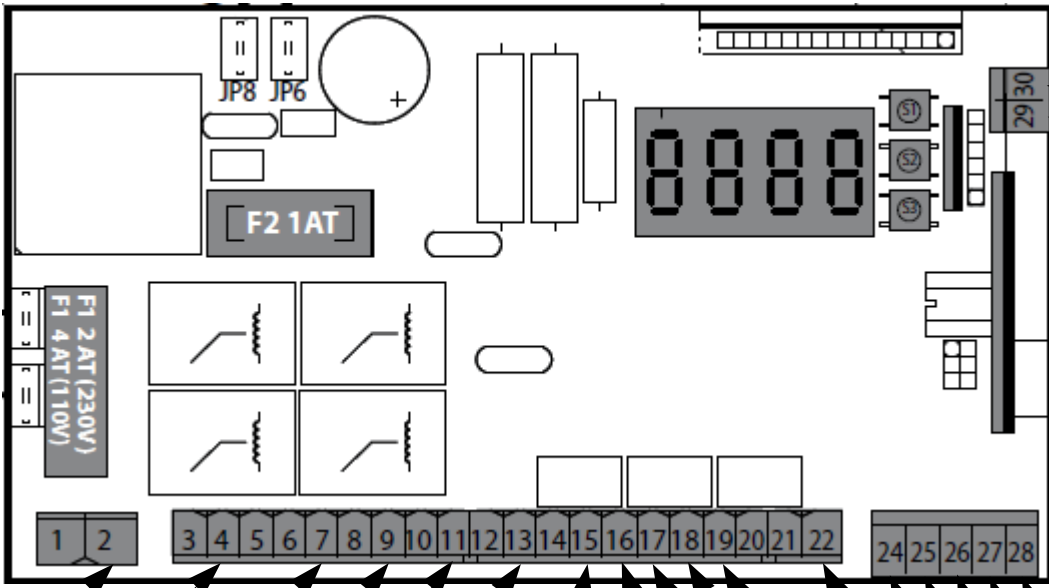
The Lux BT actuators are high capacity, medium/high cycle operators intended for residential and commercial applications. It is designed to be installed directly to the gate post up to 6" wide on the Lux BT 2B, and 12" wide on the Lux G BT 2B when the hinge is centered on the post. For wider post or column mounts, it is required to move the gate hinge closer to the actuator, no farther than 3" on the BT 2B, and 6" on the G BT 2B from the inner edge of the post or column.



PHYSICAL CHARACTERISTICS



LIBRA C-LX TERMINAL BLOCK CONNECTIONS



24 - ANTENNA GROUND (shielding)
 23 - EXTERNAL ANTENNA

1 & 2 - LINE Incoming 120VAC 60Hz

3, 4 & 5 - MOTOR 1 (dual gate operation) connections. Terminal 3 is motor power +, 4 is motor power -, and 5 is encoder input

6, 7 & 8 - MOTOR 2 (single gate operation) connections. Terminal 6 is motor power +, 7 is motor power -, and 8 is encoder input.

9 & 10 provide 24VAC output **when** the motors are **running**. Normally used to power lock relay

11 & 12 provide 24 VAC for accessory power (limited to 180mA).

WARNING:
 Terminals 9 through 14 will switch to 24VDC output when the system is running under battery back up.

13 & 14 provide 24VAC at all time except when the gates reach its close limits or the stop button is pressed

15 - COMMON (+)

16 - START input. It will start a cycle, open or close depending on the last operation or limit activation.

17- STOP command input (normally closed). Upon activation, the gates immediately stop.

18 - PHOTO input (normally closed). Photobeam sensors or other obstruction sensing devices connect to this terminal. If triggered during the close cycle the gate reverses. If triggered during the open cycle the gate stops. The controller can be configured to ignore this input during the open cycle.

28 - BAR FAULT input. Supervision circuit for contact sensors.

27 - BAR input (normally closed). Connection for contact obstruction devices such as safety edges

26 - CLOSE input.

25 - OPEN input.

24 - COMMON (+)


21 & 22 - RECEIVER 2ND CH normally open output.

20 - PED input. Partially opens MOTOR 2

19 - FAULT input. Supervision circuit for photo beam sensors.

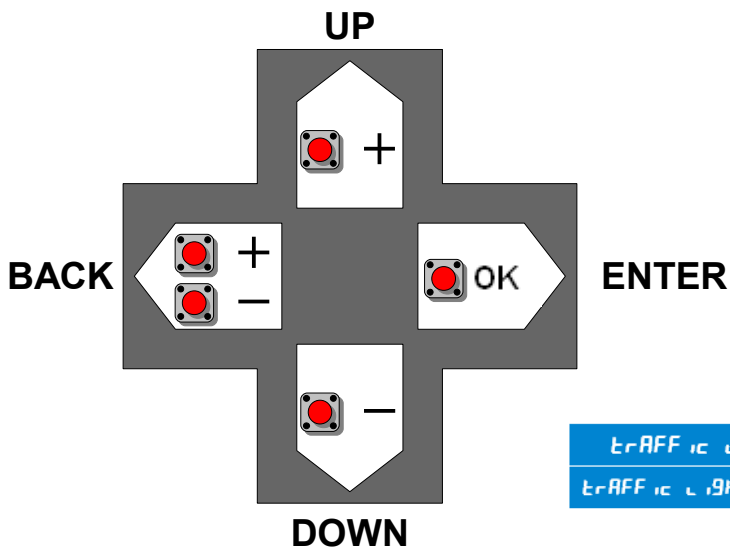


PROGRAMMING MENU FLOWCHART

Press  OK twice to enter programming

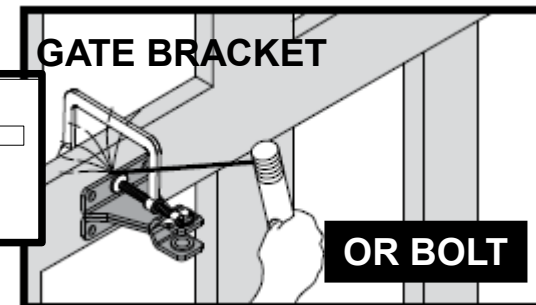
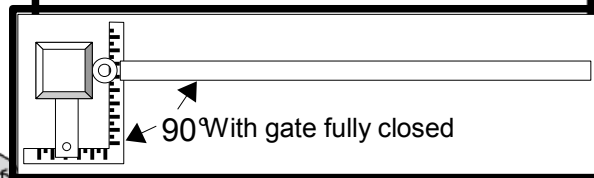
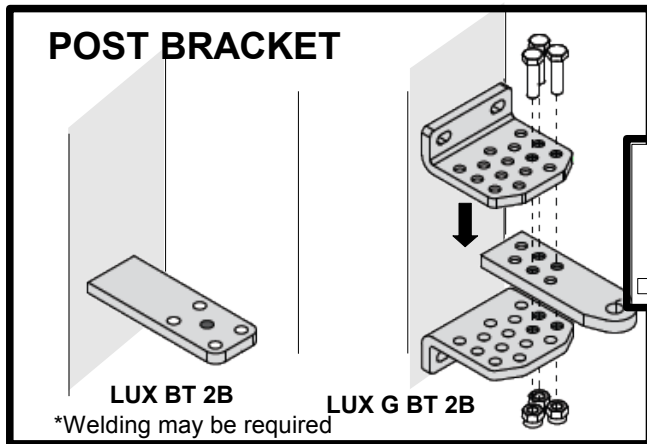
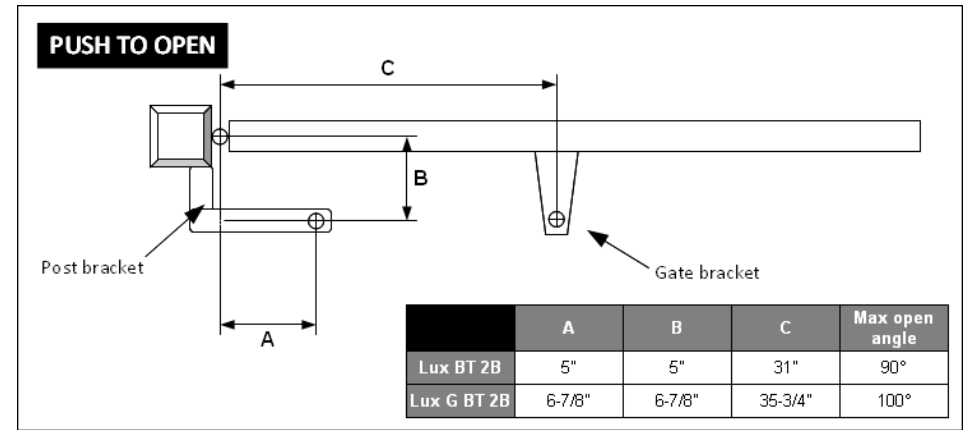
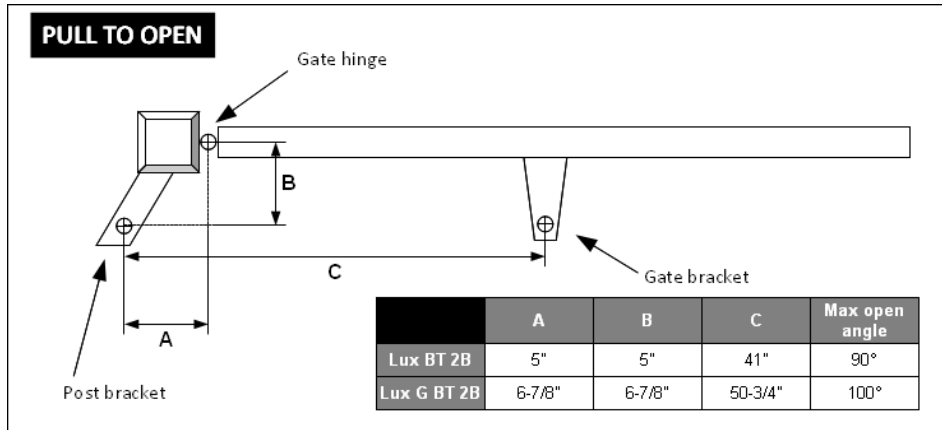
MAIN		PARAMETERS			LOGIC			RADIO		
PARAM	PARAM	TCR	TCA	Timer to close	TCR	TCA	Timer to close	Add Start	ADD START	Radio learn START
LOGIC	LOGIC	OPEN DELAY TIME	OPEN DELAY TIME	Motor 2 open delay time	IBL OPEN	IBL OPEN	Ignore START on open	Add 2ch	ADD 2CH	Radio learn 2 nd channel
RADIO	RADIO	CLS DELAY TIME	CLS DELAY TIME	Motor 1 close delay time	IBL TCA	IBL TCA	Ignore START on TCA	READ	READ	Radio identify
LANGUAGE	LANGUAGE	CLEAR T	CLEAR T	NOT USED	RAM BLOW C.OP	RAM BLOW C.OP	Push before open*	ERASE 64	ERASE 64	Erase memory
DEFAULT	DEFAULT	MOTOR 1 TORQUE	MOTOR 1 TORQUE	Motor 1 torque	RAM BLOW C.CL	RAM BLOW C.CL	Push before close*	RX CODE	RX CODE	Display receiver code
AUTOSET	AUTOSET	MOTOR 2 TORQUE	MOTOR 2 TORQUE	Motor 2 torque	2 STEP	2 STEP	Instant reverse in both directions	WK	WK	NOT USED
LSW ADJ	LSW ADJ	SLOW SPEED	SLOW SPEED	Slowdown speed	3 STEP	3 STEP	Instant reverse on closing			
		OP SPEED	OP SPEED	Opening speed	PRE-ALARM	PRE-ALARM	Terminals 9 and 10 energizes before cycle			
		CL SPEED	CL SPEED	Closing speed	BLOC PERSIST	BLOC PERSIST	Hourly push*			
		DIST.SLOWD	DIST.SLOWD	Slowdown distance	HOLD-TO-RUN	HOLD-TO-RUN	Constant input to run			
		AP.PAR2	AP.PAR2	Partial opening	PHOTOC.OPEN	PHOTOC.OPEN	Ignore PHOTO (18) input during opening			
		ZONE	ZONE	NOT USED	FAST CLS	FAST CLS	Close immediately after PHOTO clears			
					TEST PHOT	TEST PHOT	Supervise PHOTO			
					TEST BAR	TEST BAR	Supervise BAR			
					MASTER	MASTER	NOT USED			
					FIXED CODE	FIXED CODE	Disable rolling code			
					RADIO PROG	RADIO PROG	Enable Quick Remote Programming			
					1 MOT.ON	1 MOT.ON	Single gate operation			
					SCA-2CH	SCA-2CH	Receiver 2 nd channel			
					CHANGE MOT	CHANGE MOT	Push to open			
					PRESS.SWC	PRESS.SWC	Closing extra push*			
					TRAFFIC LIGHT PREFLASHING	TRAFFIC LIGHT PREFLASHING	NOT USED			
					TRAFFIC LIGHT RED LAMP ALWAYS ON	TRAFFIC LIGHT RED LAMP ALWAYS ON	NOT USED			

* Requires physical stops



MOUNTING BRACKETS

First determine the location of the post bracket according to the proper geometry (dimensions A and B). A carpenter's square is a great tool for a more accurate measurement. Remember to use a fully closed gate leaf as your reference to the angle of the square. It must be perpendicular (90°) to the gate leaf. Securely attach the post bracket to the post.

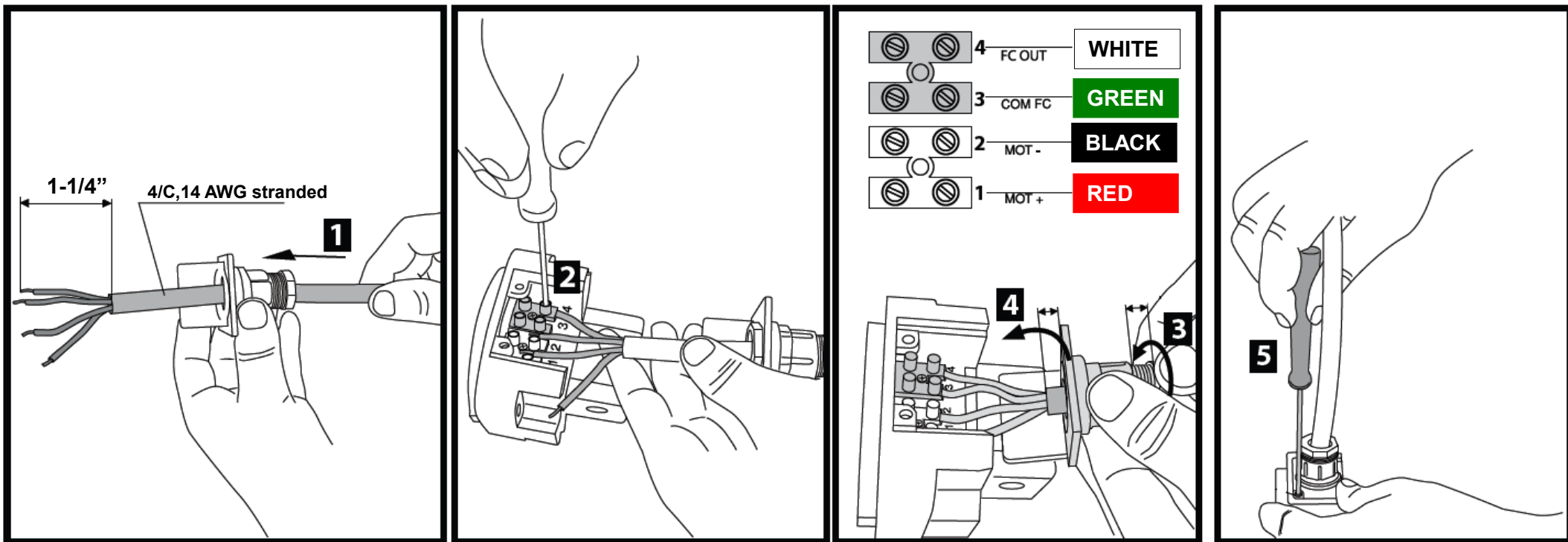


Next determine the location of the gate bracket according to the proper geometry (dimension C) and attach to gate (weld or bolt).



WIRING THE ACTUATOR

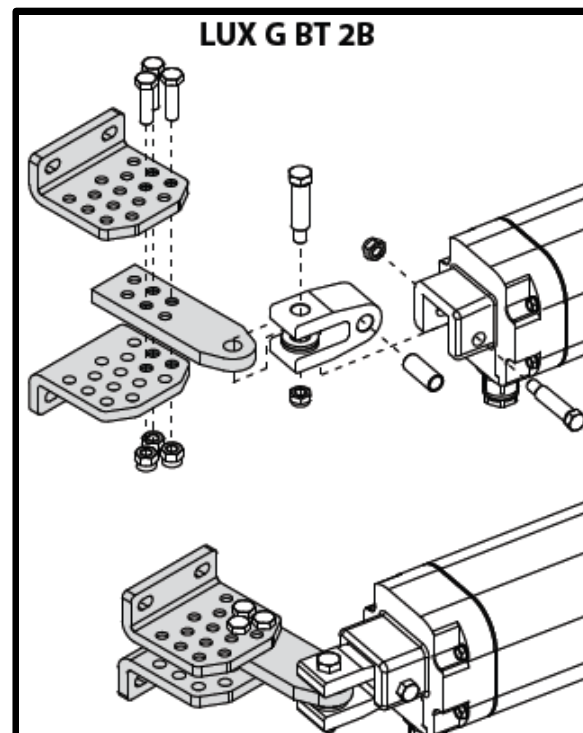
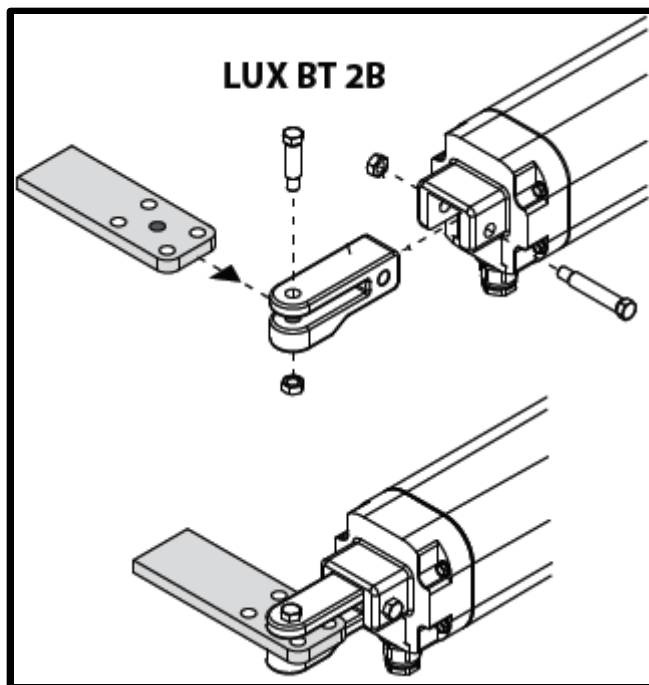
Before continuing with the installation of the actuator to the post bracket, connect the actuator wires on the back of the actuator body.



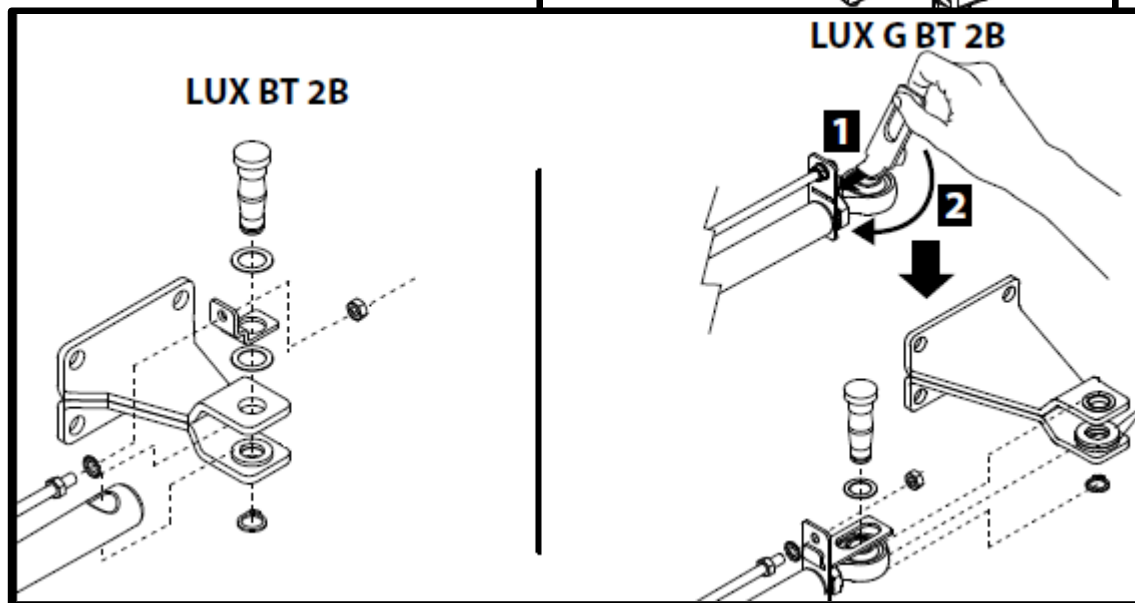
INSTALLING THE ACTUATOR

Attach the actuator to the post and gate brackets as illustrated.

POST BRACKET

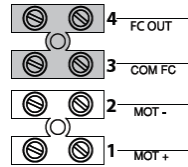


GATE BRACKET



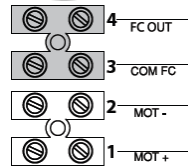
MOTOR CONNECTIONS

DUAL MOTOR OPERATION

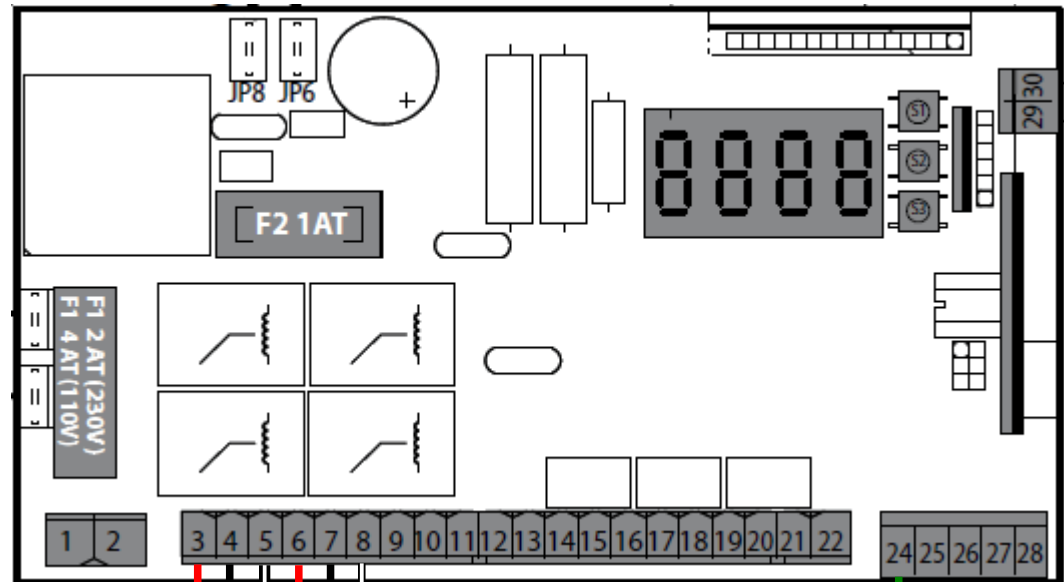


WHITE 5
GREEN 24
BLACK 4
RED 3

SINGLE MOTOR OPERATION



WHITE 8
GREEN 24
BLACK 7
RED 6










14 AWG 4 CONDUCTOR CABLE

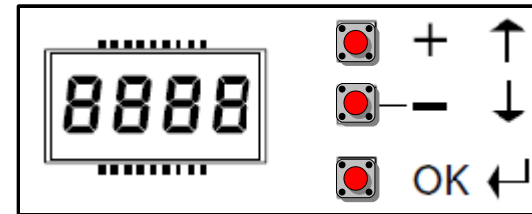


SINGLE OR DUAL GATE OPERATION

The Libra C-LX is defaulted to operate 2 actuators. To operate a single actuator the controller must be program to ignore one actuator.

For single gate operation press:




-  OK **2 times** (enter programming) **PRG**
-  - Scrolls down to **LOGIC** **LOGIC**
-  OK To enter the **LOGIC** sub menu **ERR**
-  - **18 times** to scroll down to **1 MOT ON** selection **1 MOT ON**
-  OK To select **1 MOT ON OFF** **OFF**
-  + To change the value to **ON** **ON**
-  OK To accept **PROG** **PROG**

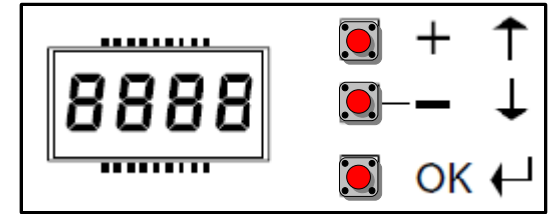


SETTING THE OPEN STROKE LIMITS

1 Initiate process

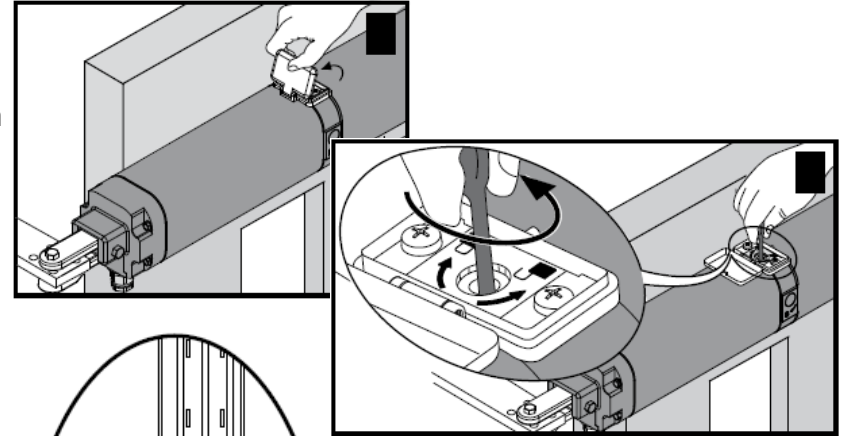
At the control board press:

-  **OK** 2 times (enter programming) *PAR-AR*
-  **-** 6 times (limit adjustment) *LS ADJUST*
-  **OK** To start limit adjustment



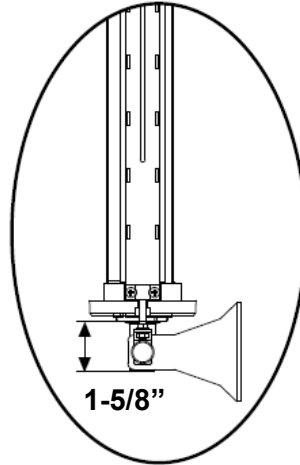
2 Set the actuator(s) to manual operation

Enable the manual operation by using the triangular key on the valve located on the top of the actuator and turn counterclockwise until valve comes to a stop.

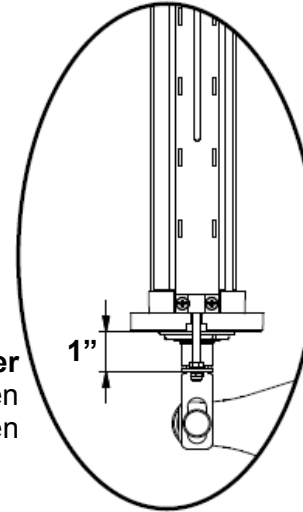


3 Fully open the gate(s)

Lux BT 2B: Make sure that the actuator has a minimum of 1-5/8" of exposed rod when the gate is fully open



Lux G BT 2B: Make sure that the **encoder** has a minimum of 1" of exposed rod when the gate is fully open



4 Set the open limits

With the gate fully open, wait for the display to show *OP12* (OPM2 – Open motor 2) and press  **OK** to set MOTOR 2 open limit.

For single gate operation skip to **SETTING THE CLOSE STROKE LIMIT**

With the gate fully open, wait for the display to show *OP11* (OPM1 – Open motor 1) and press  **OK** to set MOTOR1 open limit.

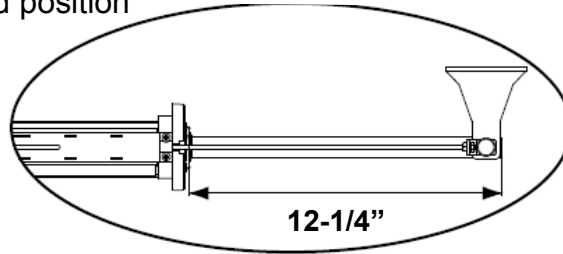


SETTING THE CLOSE STROKE LIMITS

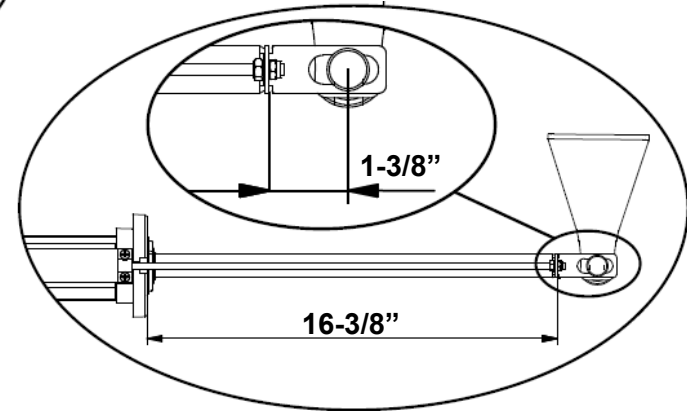
5 Fully close the gate(s)

Push the gate or gates to their fully closed position

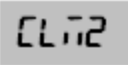

Lux BT 2B: Make sure that the actuator's rod does not extend over 12-1/4"






Lux G BT 2B: Make sure that the **encoder's** rod does not extend over 16-3/8"



6 Set the close limit(s)

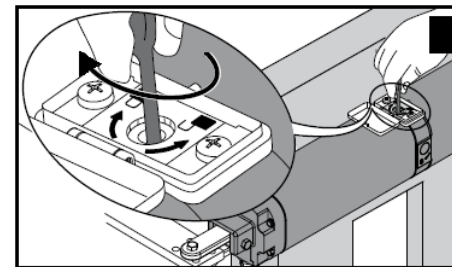
With the gate fully closed, wait for the display to show  (CLM2 – Close motor 2) and press  OK to set MOTOR 2 close limit.
For single gate operation skip the next step.

With the gate fully closed, wait for the display to show  (CLM1 – Close motor 1) and press  OK to set MOTOR1 close limit.

An OK indication should show on the screen. Press  OK and then press  +  - at the same time to exit programming.

7 Re-engage automated operation


Close manual operation valve (Turn clockwise until it stops)




PROGRAMMING THE REMOTES

1 Initiate process

At the control board press:

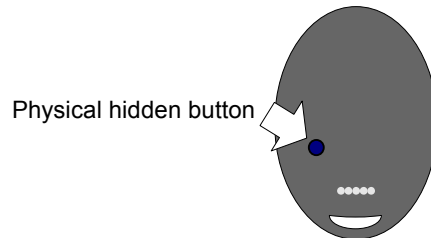
 OK **2 times** (enter programming) `PARA`

 **2 times** Radio selection `Rad id`

 OK **2 times** To begin the radio learn `HIDDEN button`

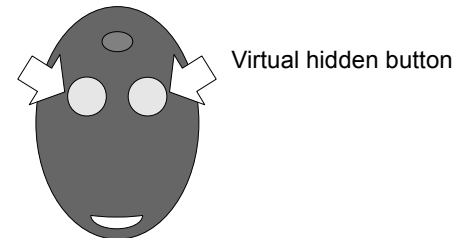
2 Press and hold the hidden button

The Mitto radio transmitter, may have a physical hidden button on the back. If no button is visible on the back, pressing and holding the top two buttons on the front of the transmitter will trigger a virtual hidden button.




BACK OF TRANSMITTER

OR



FRONT OF TRANSMITTER

Press and hold the hidden button UNTIL THE SCREEN DISPLAYS `RELEASE`



If `Ho` is displayed then press  OK and retry.

3 Press the desired button

The display should read `DESired button`

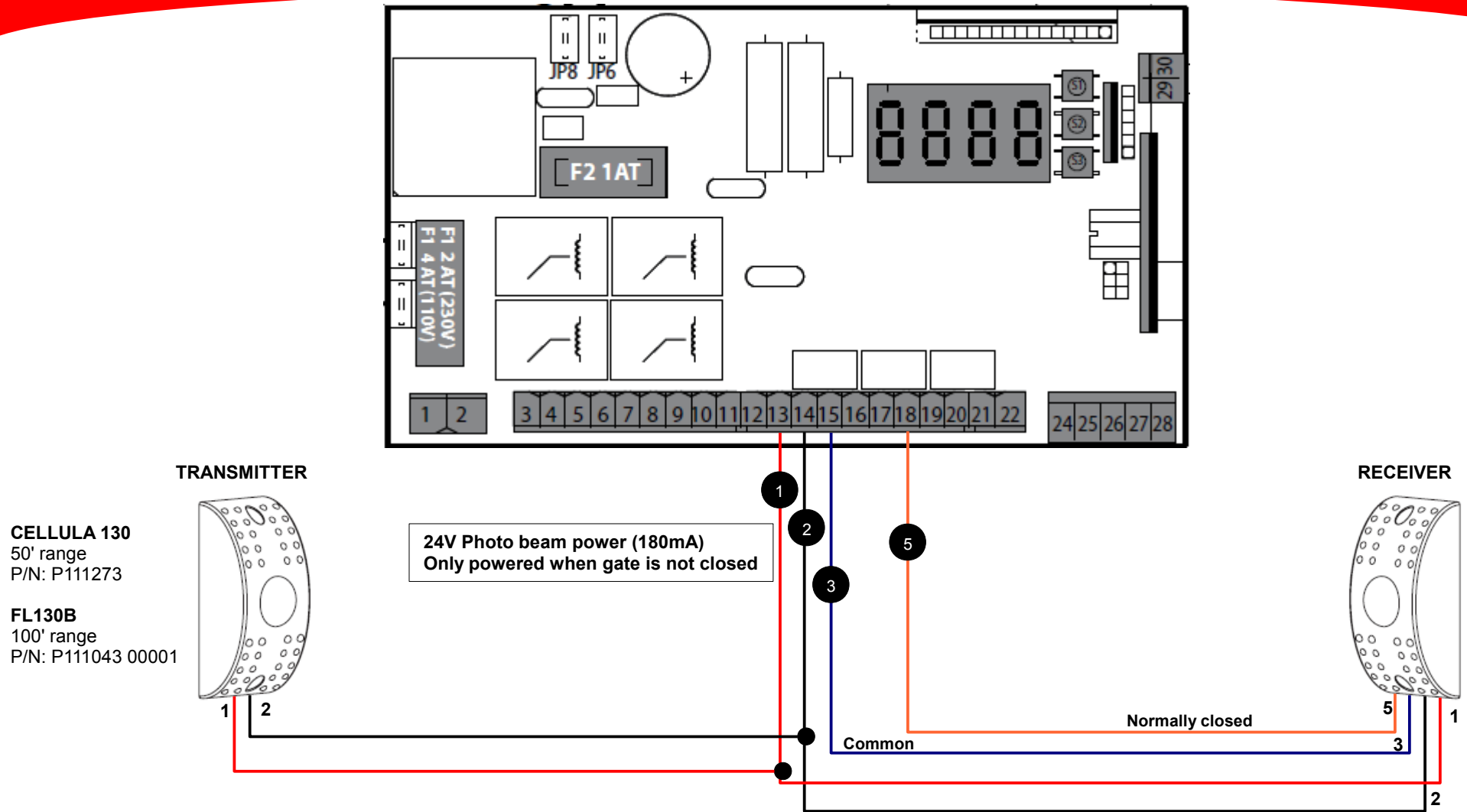
Press the button on the front of the remote which you would like to operate the gate with.

The display should momentarily read **OK** and the number of the remote in the memory of the receiver. `04 01`

You must exit programming to test the remotes. Press:  +  - at the same time twice to exit



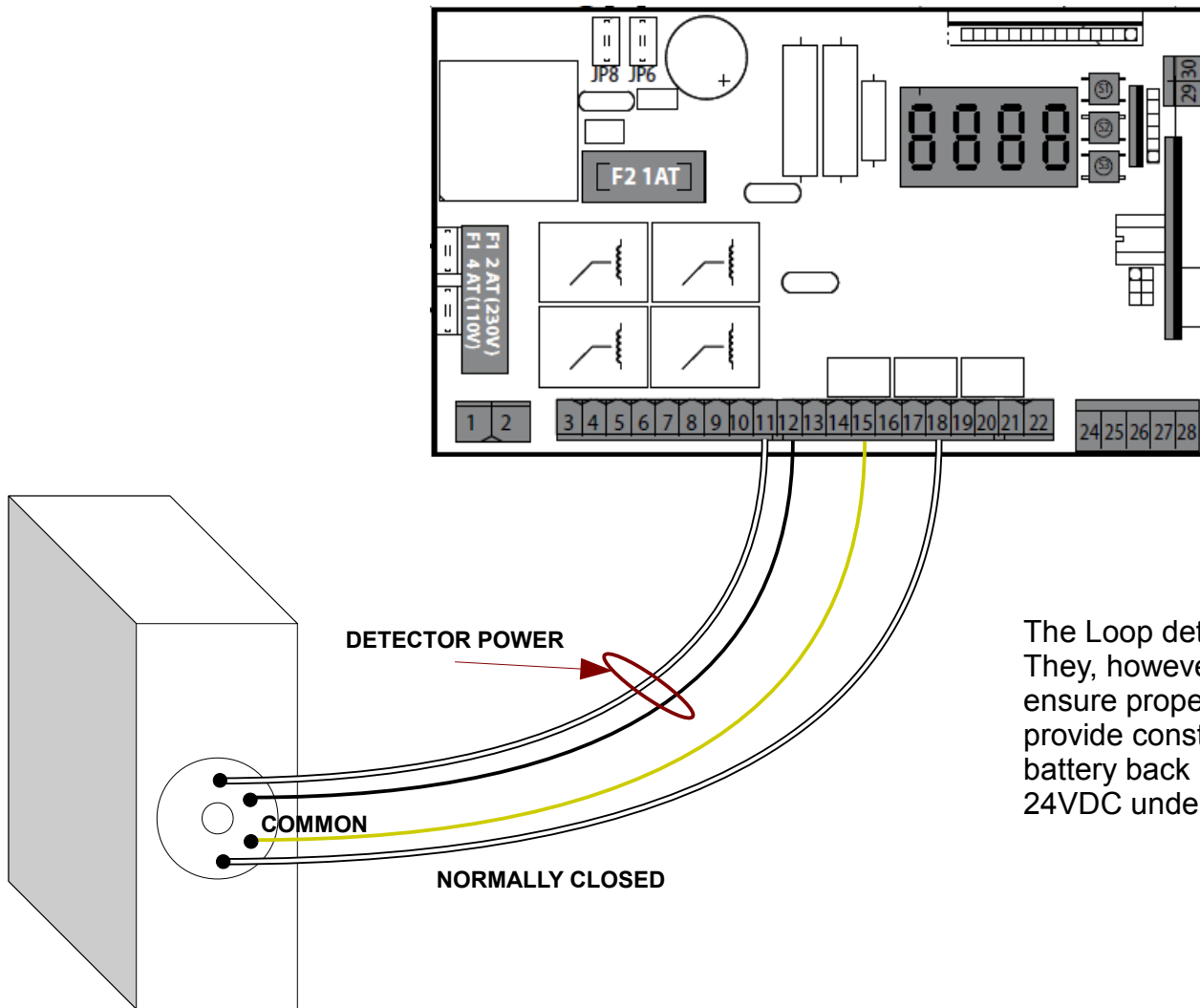
PHOTOBEAM SENSOR CONNECTIONS



Terminals 13 and 14 provide 24V power only when the gate is not closed. This feature not only prolongs the life of the photo beams, but if battery backup is being used, it saves battery power by turning off the photo beams when not needed.



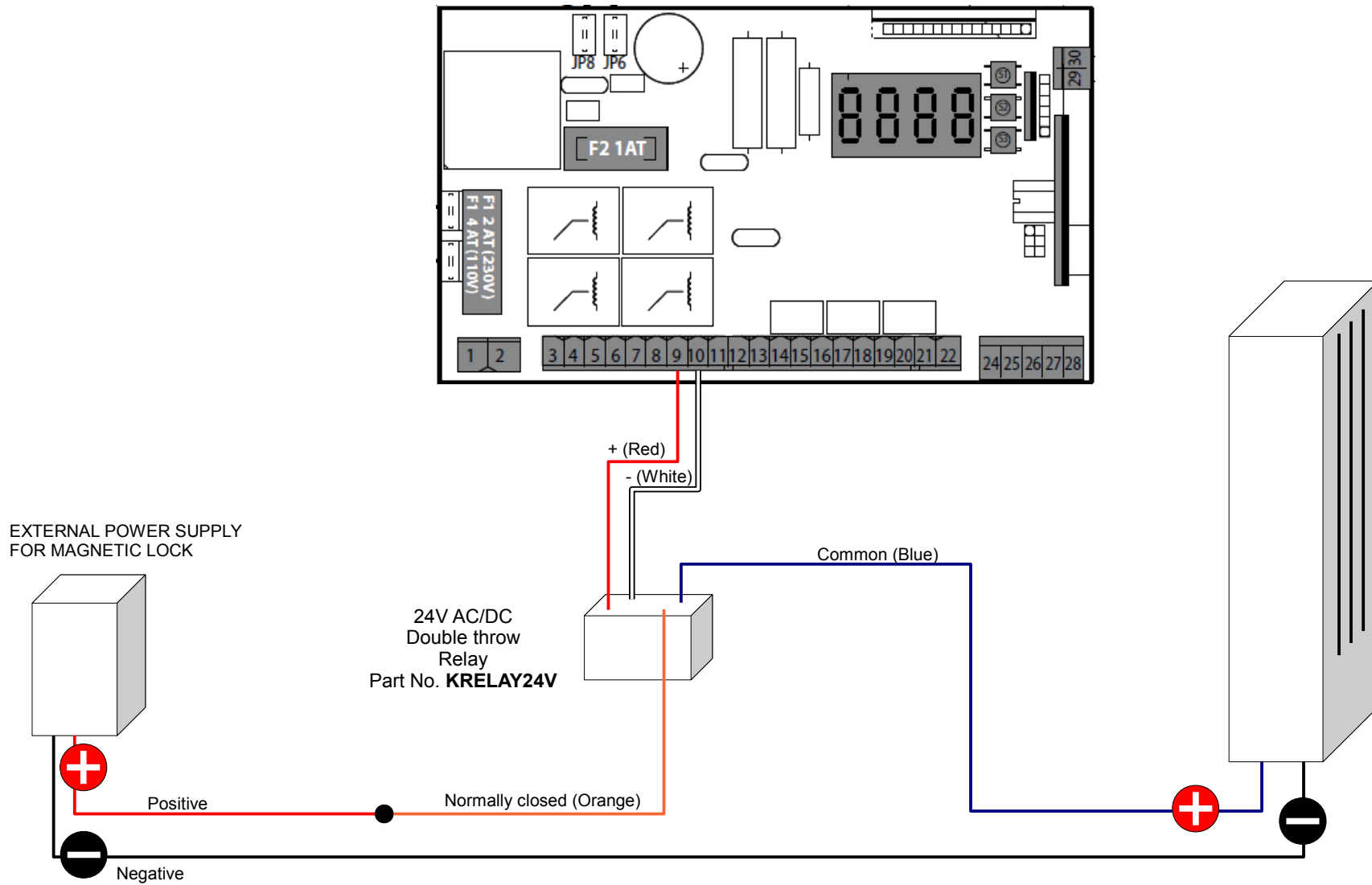
LOOP DETECTOR CONNECTIONS



The Loop detectors are wired to the PHOTO input. They, however, must be powered at all times to ensure proper detection. Terminals 11 & 12 provide constant 24VAC but be aware that if the battery back up is fitted, this output switches to 24VDC under power failure



MAGNETIC LOCK WIRING



ACCESSORIES



T-Box
10 channels
100 codes
Wireless keypad
backlit



RB
4 channel, wall mounted remote control



Clonix 2E
2 programmable channel outdoor receiver



Every day, for more than 25 years, we at BFT, have been making life more comfortable and more secure for millions of people in more than one hundred countries worldwide.

BFT USA, backed by its head office 25 years of experience, has been distributing in North America, quality CSA/UL approved gate operators for over 10 years. Since October 2006, BFT U.S., Inc., a wholly owned subsidiary of BFT S.p.A. of Italy, opened an office in Boca Raton, Florida. From this location where ample stock of all **UL/CSA approved** electromechanical and hydraulic operators is stocked, **we distribute throughout USA, Canada and the Caribbean Islands**. We also provide **technical service and training** as well as developing some local products for the gate market. We carry stock of major products in **Southern California** to service the west coast of the USA.

Since March 2004, BFT is owned by The [SOMFY Group](#), worldwide leader in automation around the home and buildings. Somfy Systems, based in New Jersey, Florida and California, has been present in USA since 1977.

Technical Assistance: 877-995-8155 (toll free) or 561-995-8155 Extension 6403

