LUX BT 2B & LUX G BT 2B
With the Libra C-LX controller
Characteristics and Quick Installation Procedure
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.
LUX BT 2B = 30-3/4"
LUX G BT 2B = 35-1/2"
**LIBRA C-LX TERMINAL BLOCK CONNECTIONS**

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.

19 – **FAULT** input. Supervision circuit for photo beam sensors.

20 – **PED** input. Partially opens MOTOR 2

21 & 22 – **RECEIVER 2ND CH** normally open output.

23 – **EXTERNAL ANTENNA**

24 – **ANTENNA GROUND** (shielding)

25 – **OPEN** input.

26 – **CLOSE** input.

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

28 – **BAR FAULT** input. Supervision circuit for contact sensors.

13 & 14 provide 24VAC output when the system is running under battery back up.
Press OK twice to enter programming.

**PARAMETERS**
- **tCa**: Timer to close
- **tCA**: Timer to close
- **pDelay Time**: Motor 2 delay time
- **pDelay Time**: Motor 2 delay time
- **oDelay Time**: Motor 1 delay time
- **oDelay Time**: Motor 1 delay time

**LOGIC**
- **tCa**: Timer to close
- **tCA**: Timer to close

**RADIO**
- **Add START**: Add START
- **ADD START**: Add START
- **READ**: Read
- **Radio ID**: Radio ID
- **ErASE 54**: Erase memory
- **rH code**: Receiver code
- **5H**: Wax

**Main Menu Options**
- **Program**: Program
- **Set Up**: Set Up
- **Menu**: Menu

**Additional Notes**
- *Requires physical stops*
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).
Before continuing with the installation of the actuator to the post bracket, connect the actuator wires on the back of the actuator body.

WIRING THE ACTUATOR

1. 4/C, 14 AWG stranded

2. 1-1/4”

3. WHITE

4. GREEN

5. BLACK

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

**POST BRACKET**

**GATE BRACKET**
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) → **PR**
- **Scrolls down to** LOGIC → **LOGIC**
- **OK** To enter the LOGIC sub menu → **&C**
- **18 times** to scroll down to 1 MOT ON selection → **1 MOT ON**
- **OK** To select 1 MOT ON → **OFF**
- **+** To change the value to ON → **ON**
- **OK** To accept → **Prog**
SETTING THE OPEN STROKE LIMITS

1. **Initiate process**
   - At the control board press:
     - OK 2 times (enter programming)
     - OK 6 times (limit adjustment)
     - 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 **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 **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** (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** (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)
     - — 2 times Radio selection
     - OK 2 times To begin the radio learn

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.

   - Physical hidden button
   - OR
   - Virtual hidden button

   - BACK OF TRANSMITTER
   - FRONT OF TRANSMITTER

   - Press and hold the hidden button UNTIL THE SCREEN DISPLAYS

   - If is displayed then press OK and retry.

3. **Press the desired button**
   - The display should read
   - 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.
   - You must exit programming to test the remotes. Press: + at the same time twice to exit
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.
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

Normally closed (Orange)

Common (Blue)

Positive

Negative

EXTERNAL POWER SUPPLY
FOR MAGNETIC LOCK

24V AC/DC
Double throw
Relay
Part No. KRELAY24V

+ (Red)
- (White)

Common (Blue)
ACCESSORIES

**T-Box**
- 10 channels
- 100 codes
- Wireless keypad
- Backlit

**RB**
- 4 channel, wall mounted remote control

**Clonix 2E**
- 2 programmable channel outdoor receiver
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Technical Assistance: 877-995-8155 (toll free) or 561-995-8155 Extension 6403