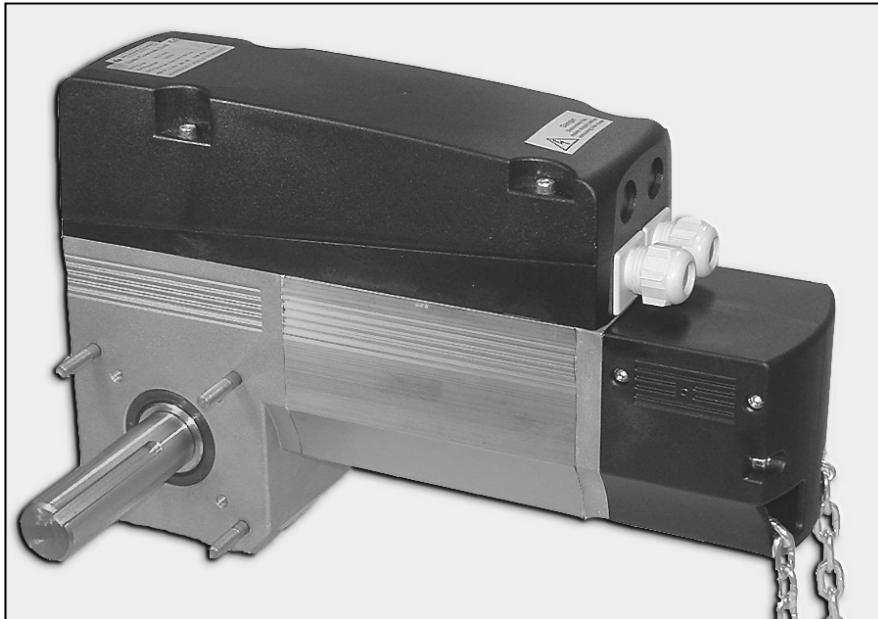


INSTALLATION INSTRUCTIONS

100 EB SERIES



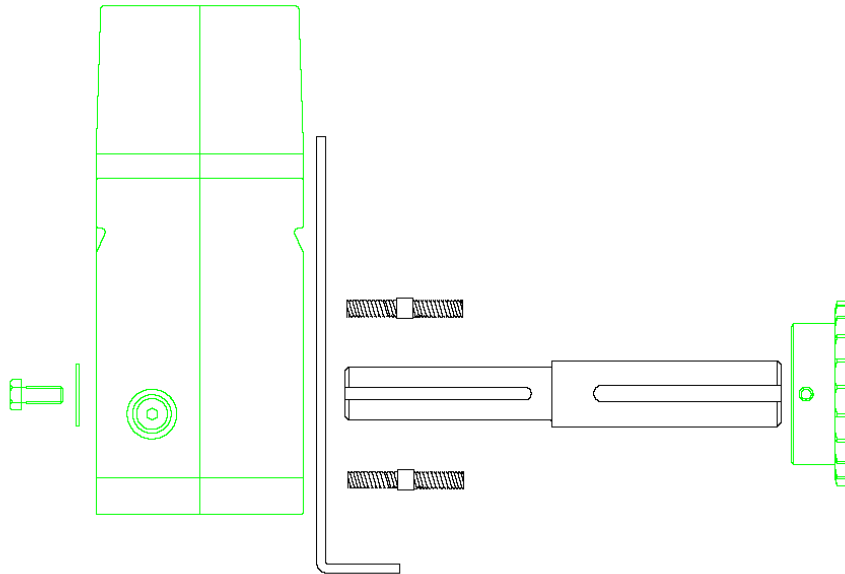
Technical Information

DATA	100 EB SERIES
Power (kW)	0.55 @ 400 VAC
Torque (Nm)	120 @ 400 VAC
Output Speed (r.p.m.)	22
Number of Turns	33.5
I.P. Rating	54
Current (Amps)	1.9
Power Supply	400V/3ph/50Hz

Drawing No:-	LC-2507	Page No:-	1 of 8
Revision No:	K	Revision Date:	07/06/07

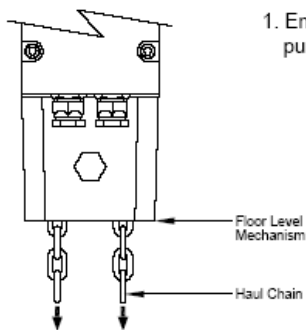
DOOR OPERATOR 100EB

1. Remove the plastic caps (if fitted) from hollow shaft of the operator.
2. Fix the torque plate using the 4-off M8x20 bolts and 4-off M8 spring washers.



WARNING! Fixing the drive sprocket at the end of the shaft may cause excessive loading on the shaft.

Floor Level Mechanism (FLM)



1. Engage the Floor Level Mechanism to manually raise/lower the door by pulling down on the haul chain (interlock activates automatically).

WARNING! When using manual override always ensure power to the door control is isolated to prevent accidental switch on. In the event of any problem contact your installer.

Note:- This unit **MUST** be mounted vertically in this orientation

WARNING

DO NOT USE HAULING CHAIN TO TENSION DOOR SPRINGS

Standard Installation Instructions

WARNING! Ensure power to the operator is **OFF** before removing terminal box cover.

1. Check that the power supply is suitable -

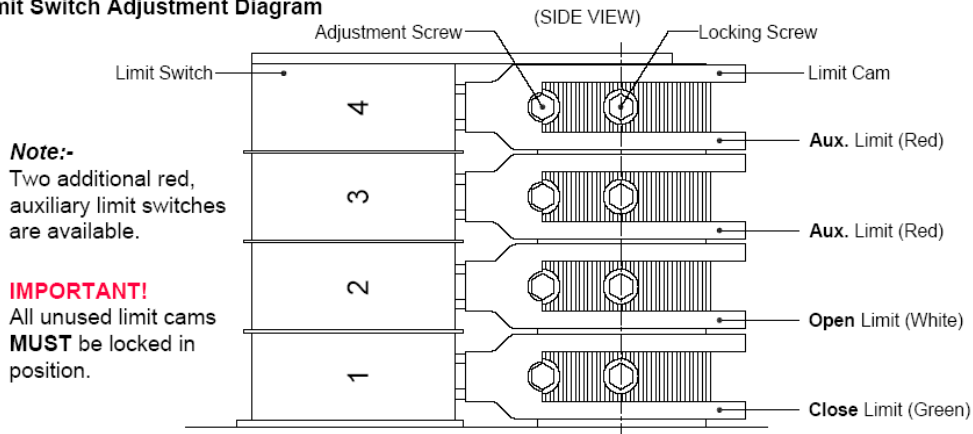
400V/3ph/50Hz protected by a Triple Pole 'C' Type MCB rated at 3 Amps or, preferably, a Manual Motor Starter rated at 1.6/2.5 Amps and terminated in a 3ph Red Industrial Socket.

2. Mount the operator on the door and secure in position.
3. Set the Limit Switches.

How to Set the Limit Switches

- a. Remove the terminal box cover from the operator (Limit Switches are supplied Unset).
- b. Manually wind the door in the close direction, noting the direction of travel of the 'Green' cam, until the desired closed position is reached.
- c. Loosen the locking screw on the limit cam and rotate the cam in the required direction. For fine adjustment use the adjustment screw. Secure in position via the locking screw.
- d. Repeat Steps b) and c) for the open direction of travel using the 'White' cam instead.

Limit Switch Adjustment Diagram



Auxiliary Limit Switches

Limit Switch connections **MUST** be made directly onto the required switch & terminated using appropriate female red insulated spade crimps to suit 0.5-1.5mm cable.

Note:- Limit Switches may be wired either N/O or N/C as required.

4. Manually operate the door into the mid-position.
5. Apply Power - If the door travels in the wrong direction, be prepared to stop the door quickly, then...

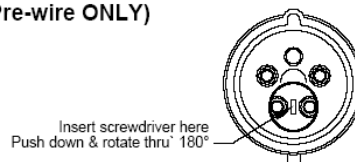
For 400VAC: Interchange two of the incoming supply phases with each other...

Alternatively, if fitted, see 3ph Red Industrial Plug instructions below.

3ph Phase Reversing Industrial Plug (Red) - If fitted (415VAC Pre-wire ONLY)

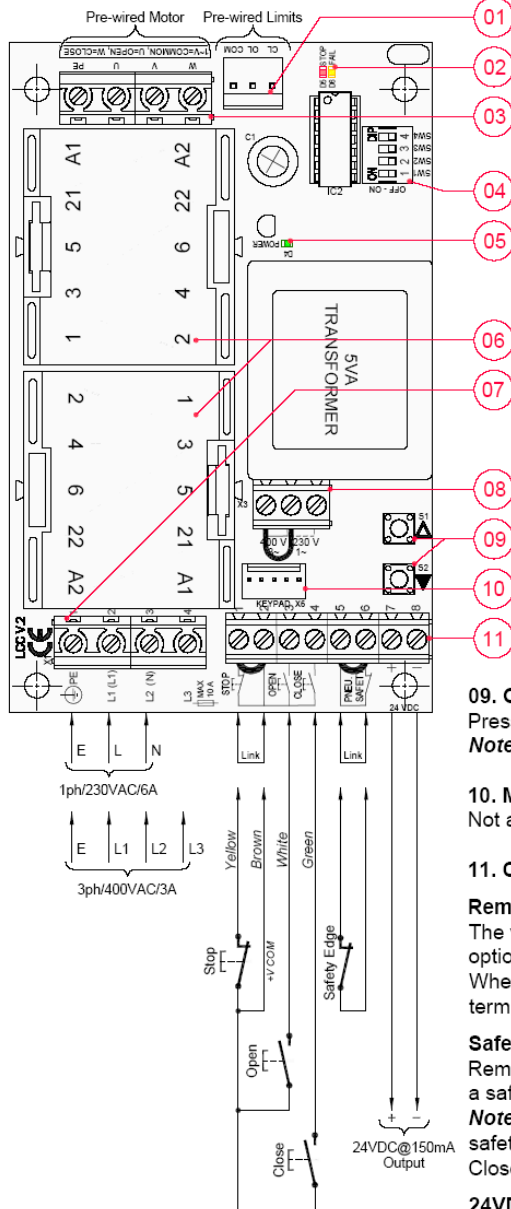
To change the operator rotation direction:-

1. Disconnect the plug from the socket.
2. Place a large, flat bladed screwdriver into the slot provided.
3. Press down and rotate the pins through 180°.
4. Reconnect the plug back into the socket.



Built-On Starter (B.O.S.)
Model: LCC V.2 Stock Code: 40-5210

Control Board Layout



Key	Description	Reference
01	Limit Connector	-
02	Circuit board Status L.E.D.'s	Page 09
03	Motor Terminals	-
04	Dip Switches	Page 09
05	Circuit board Power L.E.D.	Page 09
06	Open & Close Contactors	-
07	Mains Supply	See below
08	Input Voltage Selection Link	See below
09	Test Buttons	See below
10	Membrane Keypad Connector	See below
11	Control Connections	See below

07. Mains Supply

Connect appropriate supply, as shown.
 i.e. 230VAC@6A or 400VAC@3A

IMPORTANT!

08. Input Voltage Selection Link

Ensure that the correct voltage link is fitted.
 i.e. 230VAC or 400VAC (Default)

09. Open & Close Test Buttons

Press to Open/Close the door whilst setting the limits.
Note:- Ensure the door travels in correct direction.

10. Membrane Keypad Connector

Not applicable for this operator configuration.

11. Control Connections

Remote Pushbutton

The wire colours illustrated are those used on the optional pre-cabled pushbutton (Stock Code: 37-3020). Where a Stop button is fitted, remove the link between terminals '1' & '2' and replace with the Stop switch.

Safety Edge

Remove the link between terminals '5' & '6' and connect a safety edge system.

Note:- To comply with current regulations, a monitored safety edge system **MUST** be used, otherwise Deadman Close should be selected.

24VDC Output

A 24VDC@150mA auxiliary output is available at terminals '7' & '8' for auxiliary equipment.

Built-On Starter (B.O.S.) *Continued*

02 & 05. L.E.D. Functions

L.E.D.	Tag	Status	Description	Action
Green	-	ON	24VDC Supply Healthy	N/A
		OFF	No 24VDC Supply	Check Mains Supply Remove Load from '7' & '8'
Red	STOP	ON	Stop Circuit(s) Open Open & Close Limits made simultaneously	Check '1' & '2' Check Limits & Interlock Circuit
		OFF	O.K.	N/A
Yellow	FAIL	ON*	Safety Devices are Open Circuit	Check '5' & '6'
		OFF	O.K.	N/A

* ON When Close pushbutton is pressed.

04. Dip Switches

Sw.1 & Sw.2: Door Operating Mode

Sw.1	Sw.2	Mode
OFF	OFF	Deadman Open, Deadman Close
OFF	ON	Deadman Open, Impulse Close
ON	OFF	Impulse Open, Deadman Close
ON	ON	Impulse Open, Impulse Close

Sw.3: Variable Auto-Close Timer

(Adjustable between 1-240 seconds)

To set the Variable Auto-Close

1. Set Dip Sw.3 ON & run the door to the Fully Open position.
2. Press & hold the 'Open' & 'Close' buttons for 5s.
3. The Red, 'STOP' L.E.D. will flash to indicate learning mode.
4. Press the 'Close' button once the required time has elapsed. The new Auto-close time has been set.

Note:- If the starter is left in learn mode, the Auto-close time will default to 15s (Factory pre-set).

Sw.3	Mode
OFF	Auto-Close Disabled
ON	Auto-Close Enabled

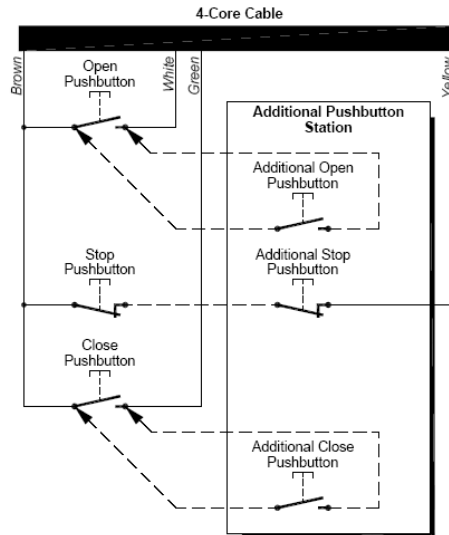
Sw.4: Afterrun/Safety Edge Monitoring

This function uses the Close limit (set 50mm from the floor) as a safety edge override limit. When the Closed limit is activated the operator electronically overruns this limit (max. of 0.3s) until a signal from the safety edge is received. If no safety edge signal is received, the 'Safety Fail' L.E.D. will flash and the door will fail to Deadman Mode. To reset, simply close the door fully until a safety edge signal is received.

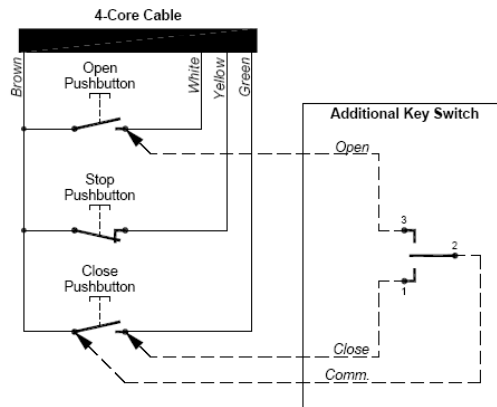
Sw.4	Mode
OFF	Afterrun/Safety edge Monitoring Disabled
ON	Afterrun/Safety edge Monitoring Enabled

Additional Connections

Additional Pushbutton Station



Additional Key Switch Connections



Integral Safety Circuit

The safety circuit combines the thermal trip and, for operators with manual override, the interlock switch.

Thermal Trip

The thermal trip is a heat sensitive switch embedded into the motor windings, which will operate should the motor be overloaded.

Note:- This switch is not a substitute for a suitably rated Circuit Breaker.

Manual Override Interlock Switch

The Manual Override Interlock isolates the control circuit to prevent electrical operation when the door is being used manually.