

7. If fitted, check shoot-bolt safety circuit is working correctly. Turn power off and temporarily insert a link wire between connections 3 -> 4 on the same terminal block in the bottom left-hand side of the contactor box.
8. Checking limit switch operation;
Step 1: Turn power off and temporarily insert a link wires between connections 7 -> 8, and 9 -> 10 the same terminal block in the bottom left-hand side of the contactor box.

Warning; This will bypass the limit switch operation completely, and the door will not automatically turn off at the upper & lower positions, the door can only be stopped by pressing the 'stop' button. Failure to stop the door at the upper/lower positions may result in motor and bracket damage.

If the door now functions proceed to step 2 as there is a problem with the limit switches.

Step 2: Turn the power off and check the limit switch found in the black box at the top of the motor have not slipped. The cams should open the microswitches at the top and bottom of the door's travel to turn-off the motor. Particular items to check are;

- Black plastic gearwheel slipping on the grey boss attached to the hexagonal shaft.
- Cams are secured in position with the lock nuts.
- Operating chain has not seized due to corrosion and/or is not too tight.

It is recommended that should any of the above be damaged, replacement parts are purchased, Repairing the items are not recommended.

9. Checking if motor or motor cable has developed short circuit. Test the motor windings by removing the cover off the terminal block found on the side of the motor body (drawing 2.0) and disconnect the 3 wires coming from the limit box. Put a meter across each of the 3 studs in turn and Earth. There should be an open circuit, (i.e. no continuity), if there is continuity the motor windings are shorting out. Check for damaged cables or loose joints; carefully inspect the full run of the cable back to the contactor box, especially inside the limit switch box.
10. Turn the power off and double check all electrical connections are screwed down tight including the contacts inside the limit switch housing found on top of the motor.

Door operates slowly, intermittently or only in one direction

1. Check none of the lifting cables are trapped, especially around the area of the top pulleys.
2. If installation uses a 3 phase motor check all of the three phases are live, note that a motor will operate with two phases but will be slower under load and will have a rough sound.

Warning; Prolonged use of a motor with only 2 phases will damage the motor and is not covered by warranty.

3. Turn the power off and double check all electrical connections are screwed down tight including the contacts inside the limit switch housing found on top of the motor.

Units with single Contactor Box modified with ‘Delta-com’ containing Open, Closed and Stop Buttons on left-hand side and PCB radio card on right-hand side

Door operates with buttons on lid only

1. Re-new battery in radio handset
2. Check the 9 dipswitch settings in the handset are the same as the radio card on PCB. In the handset the dipswitch is located above the battery. On the PCB radio board they are on the small card at the top (drawing 3.0).

Door does not operate after working normally

1. All points 1 to 9 listed above, all following points relate to the PCB radio card.
2. If red LED in top right-hand quarter of PCB (drawing 3.0) is not illuminated the board has no power.
 - Check 5 Amp fuse in bottom left-hand quarter of PCB.
 - Check the neutral wire is connected to the terminal marked ‘neutral’ in the bottom left hand corner of the PCB. Check continuity of the neutral wire through the contactor box back to the main fuse-box in the building.

Note; PCB operates at 220V, i.e. connected between one of the 3 phases and neutral

- As a final check connect an independent 220V supply to the terminals marked ‘live’ and ‘neutral’ in the bottom left hand corner of the PCB.
3. Check settings on PCB.
 - Run time adjustment; dip switches in top right-hand corner of PCB and should be set to the following, as detailed in drawing 3.0.

Switch 1	Switch 2	Switch 3	Switch 4
Off	Off	On	On

- Optional features; dip switches in top left-hand quarter of PCB and should be set the following, as detailed in drawing 3.0

Dip Switch Position	Setting
Top	OFF
Middle	NO
Bottom	OFF

Units with SE 3.60 Controller, identifiable by the smooth ‘touch-pad’ buttons on the top LH side. Usually supplied with radio card and transmitter.

Door operates with buttons on lid only

1. Re-new battery in radio handset
2. Check the 9 dipswitch settings in the handset are the same as the radio card on PCB. In the handset the dipswitches are located above the battery. Inside the contactor box the dipswitches are located the radio card in the bottom right-hand quarter of the PCB (item SM1 on drawing 4.0).

Door does not operate after working normally; items are listed in order of increasing complexity

1. Thermal Trip: Motor is protected from overheating via a temperature sensitive switch which will cut-in after approximately 6 to 8 minutes of continuous use from cold. If this occurs leave the unit for a minimum of 5 minutes to cool down. The protective circuit will re-set itself.
2. Check the setting of the three mode-switches inside the contactor box. These are located on the top right-hand quarter of the PCB (item S1 on drawing 4.0). All three switches should be down in the ‘off’ position.
3. Check incoming power lines are live, if 380 volt check all phases are live. The supply voltage tolerance for these motors is 200V to 250V for single phase; 360V to 440V for 3 phase
4. **For 380v 3-phase motors only;** Check continuity on the neutral wire, any break in this will cause the control gear to cease functioning; Control gear operates at ~220V, i.e. it picks up the power between one of the phases & neutral.
5. Check hand crank is not inserted/hooked into bottom of motor and the red/black safety paddle switch is covering the area where the hand crank is engaged.
6. Check current overload switch has not tripped. This trip will be found above the ‘Close’ contactor (see drawing 4.0), which is found in the top left-hand quarter of the PCB. The overload switch will trip if either;
 - The door has jammed against an obstruction and stalled the motor.
 - The overload setting was incorrect when supplied.
 - The motor has developed a short circuit.

To reset the trip fully depress the red/blue button found on top of the ‘Stop’ relay until a click is heard (see drawing 1.0A to 1.0C for the three different makes of relays), these drawings also confirm correct information on switch settings and wiring details. The correct current overload settings are as follows;

Motor type, can be located on terminal block on side of motor body	Current setting
W1000, 220V, 550W	5.5 to 8.5 Amp
D1000, 380V, 740W	2.5 to 4.0 Amp
D1000/2, 380V, 1500W	2.5 to 4.0 Amp

When the motor is working, operate the door to check the cause of the trip switch opening, if it continues to trip check that the motor and motor cable for short circuit as detailed in point 11.

7. Check motor safety circuits are working correctly. Turn the power off and temporarily insert a link wire between connections 1 -> 2 on the terminal strip found in the bottom right-hand side of the contactor box.
8. If fitted, check shoot-bolt safety circuit is working correctly. Turn power off and temporarily insert a link wire between connections 3 -> 4 on the same terminal block in the bottom right-hand side of the contactor box.
9. Ensure there is a link wire between terminals 5 -> 6 on the same terminal block in the bottom right-hand side of the contactor box.

10. Checking limit switch operation;

Step 1: Turn power off and temporarily insert a link wires between connections 7 -> 8, and 9 -> 10 the same terminal block in the bottom left-hand side of the contactor box.

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11. Checking if motor or motor cable has developed short circuit. Test the motor windings by removing the cover off the terminal block found on the side of the motor body (drawing 2.0) and disconnect the 3 wires coming from the limit box. Put a meter across each of the 3 studs in turn and Earth. There should be an open circuit, (i.e. no continuity), if there is continuity the motor windings are shorting out. Check for damaged cables or loose joints; carefully inspect the full run of the cable back to the contactor box, especially inside the limit switch box.
12. Turn the power off and double check all electrical connections are screwed down tight including the contacts inside the limit switch housing found on top of the motor.

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