

## SOME IMPORTANT POINTS

1. Instead of 0-9-12 TAPING TRANSFORMER, Use 0-9 and 0-12 TAPING TRANSFORMER. If possible use separate two TRANSFORMERS for 9V and 12V.
2. 12V DC from RECTIFIER with 2200uf, 35V capacitor (2 for G+4, 3 for G+10) and 9V AC to be given to MICROPROCESSOR CARD.
3. All input are 12VDC (+ve) and all output are 12VDC (-ve wire from microprocessor card).
4. LED, DISPLAY AND RELAY can be connected at output. LEDS and DISPLAY should be connected through resistor only. 12V DC RELAY can be connected directly. 48V, 110V, 230V, 414V coil contactor can be connected through 12V RELAY.
5. 230V, 110V should not be connected on PROCESSOR CARD at any pin/any output.
6. For all DISPLAY, LED, RELAY, REED, PUSHBUTTON; positive 12V DC is COMMON.
7. Though frequent power getting ON/OFF, LCD DISPLAY-STOP/HANG, but lift will work properly. MICROPROCESSOR will not HANG/STOP.
8. For entering in PROGRAM MODE, any REED SWITCH should not be ON. Disconnect positive common wire of reed switch or bring cabin in between two floors for entering in to program mode.

## DISPLAY ON LCD

### **SERIAL NUMBER OF CONTROLLER**

**SR.NO. = 94A4XX101**

There will be unique serial number for all controllers which will appear on the LCD at the time of power on for some time period.

### **FLOOR NUMBER AND TARGET FLOOR**

**FLOOR=01 CALL=02**

During normal operation, LCD will show us current floor number and floor number of next stoppage.

## STATUS ON DISPLAY

The controller will show us status of the lift continuously which is very helpful to us for fault finding. Various status displays along with description are as follows.

- **STATUS = BRAKE ON**

Indicates brake timer is running. At this time up/down contactor, cabin light, RAM will be ON. COMMON COLLECTOR should be OFF.

- **STATUS = CAR OPEN**

Indicates door is open. Common contactor, UP/DOWN contactor, Brake, RAM will be OFF.

- **STATUS = DOOR OPEN**  
Indicates door is open. Common contactor, UP/DOWN contactor, Brake, RAM will be OFF.
- **STATUS = DOWN**  
Indicates lift is going down. Common contactor, down contactor, RAM, Brake will be ON. Up contactor should be OFF.
- **STATUS = FIRE**  
Indicates lift is in fire mode. Only car buttons will be accessible. Landing calls will not be accepted.
- **STATUS = HALT**  
Indicates halt timer is on. After completion of this time period, lift may process for other pending calls.
- **STATUS = INSPECTION**  
Indicates lift is in inspection/inching/testing mode.
- **STATUS = MEMORY ERROR**  
Indicates that program memory is corrupted. After 10 seconds, controller will load default parameter and starts normal working. We have to re-program all parameters for proper working.

- **STATUS = NO TARGET**  
Lift is not doing anything and waiting for a call.
- **STATUS = OVER RUN**  
Controller could not get new floor within pre-defined time period. Floor cutting sensor (REED SWITCH) may not be working properly. Using display FLOOR= CALL= and location of car, we can judge about the floor where reed switch is not working properly. Power OFF & ON is only the way to come out from this error.
- **STATUS = RAM OFF**  
Indicates that RAM OFF timer is ON. Common contactor, UP/DOWN contactor, Brake should be OFF. RAM will be ON.
- **STATUS = RAM ON**  
Indicates that RAM ON timer is ON. Common contactor, UP/DOWN contactor, Brake should be OFF. RAM will be ON.
- **STATUS = REVERSE**  
Indicates that lift has traveled in reverse direction. Please power-OFF. Accident or reverse phasing can be the cause of this thing.

- **STATUS = SLOW UP**  
Indicates lift is going up in slow speed. Common contactor, UP contactor, RAM, Brake, Slow relay will be ON. Down contactor should be OFF.
- **STATUS = SLOW DOWN**  
Indicates lift is going down in slow speed. Common contactor, down contactor, RAM, Brake, Slow relay will be ON. UP contactor should be OFF.
- **STATUS = STOP**  
Indicates lift is stopped using STOP button. By pressing any call button, lift may start travelling if STOP signals not coming continuously.
- **STATUS = TWO REED**  
Indicates two floor cutting sensor are sensed together. Please check reed switches and replace it if shorted. Power OFF and ON is only alternate to come out from this error message.
- **STATUS = UP**  
Indicates lift is going up. Common contactor, Up contactor, RAM, Brake will be ON. Down contactor should be OFF.
- **STATUS = WALL OPEN**  
Indicates landing door is open. Common contactor, UP/DOWN contactor, Brake will be OFF.

## USAGE ATTENTION

- There is a built-in feature to get attention of service engineer on pre-defined usage.
- We can set a five digit ground floor usage count value (which is password protected) through program mode.
- Whenever usage count value for ground floor becomes equal to this pre-set count value, the lift stops working and LCD will show display “CALL SERVICE MAN”.
- For coming out from this lift lock condition.
- Enter in the program mode and change set count value using proper password.
- If you want to disable this feature (usage attention).
- Set count value = 55555 (any figure more than 50000)
- Because usage count for ground floor cannot go beyond 50000 when it reaches 50000, it gets re-settled and re-starts from 00000

### EXAMPLE:

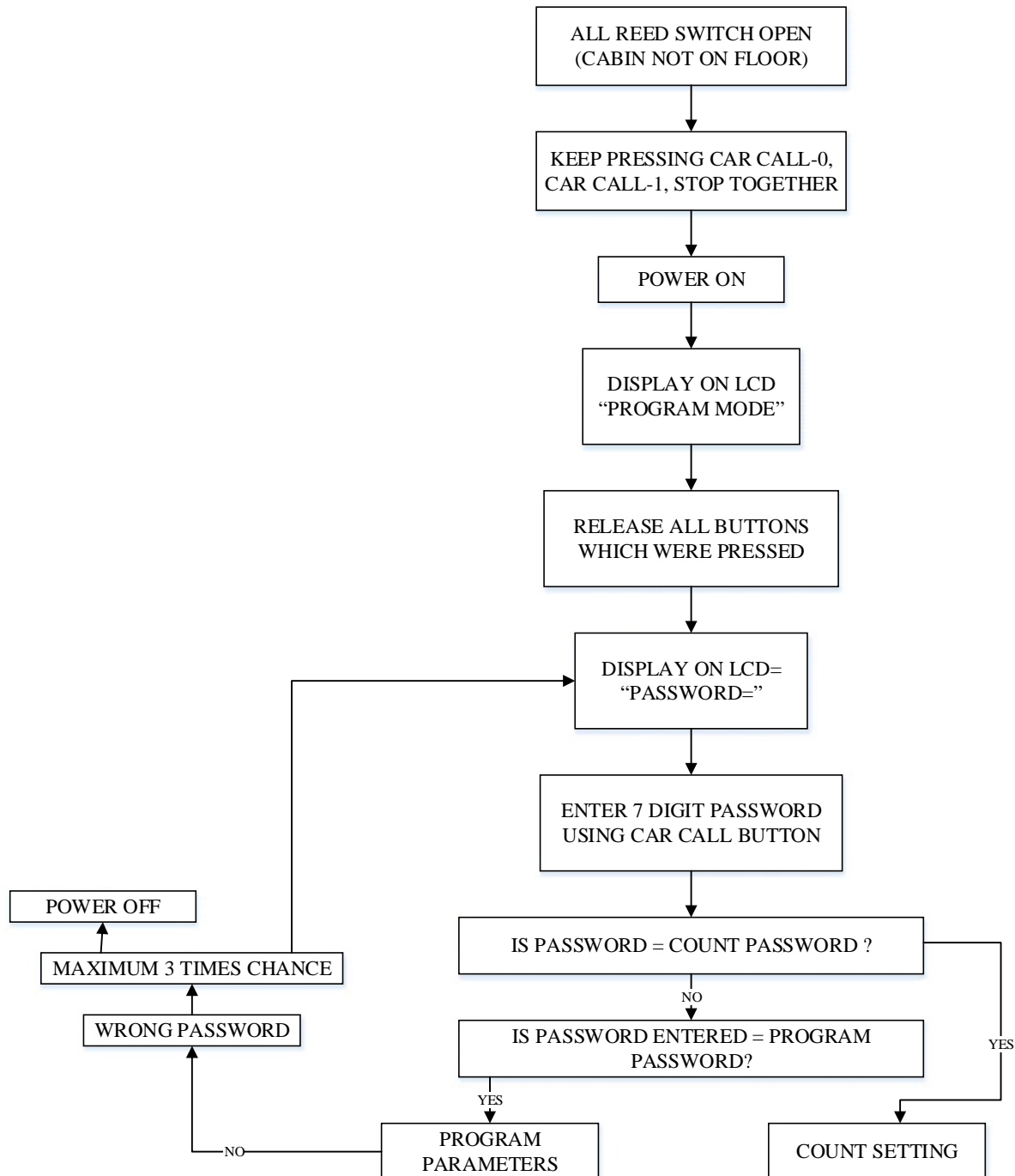
- If you want attention after 1000 times ground floor calls,  
Current usage count for floor 00 = 24130,

Please set COUNT = 25130 through program mode.

## USAGE COUNTING

- The controller keeps record of usage of lift.
- The controller counts how much time call has been attended for each and every floor.
- There are counters for all floors which keep counting calls for that floor up to 50000.
- When count reaches 50000, it gets re-settled and again starts from 00000.
- During normal operation of lift, we can see usage count records on, LCD display in place of display ' FLOOR = XX CALL XX'
- When car (lift cabin) is at ground floor, press (keep pressed) car call button for ground floor and press STOP button.
- Now LCD display will keep showing usage count for all floors.
- The usage count display on LCD does not disturb any normal operation of the lift.
- Power off – on is only the way to get original display on LCD
- NO one can change / re-set usage count after manufacturing the controller.

## FLOW CHART





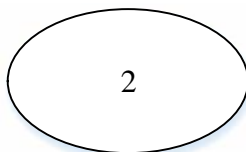
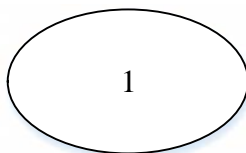
## PROGRAM MODE

Various parameter and timing is user settable which can be set / store using program mode.

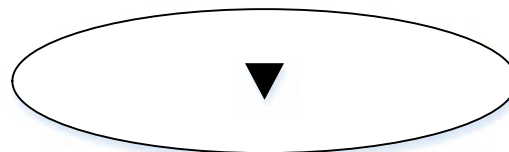
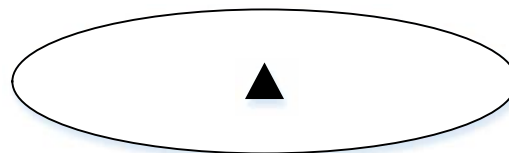
Once you enter in the program mode, cabin push – button ‘STOP’ , ‘0’ AND ‘1’ will be converted/considered as ‘ENTER/SELECT’, ‘DOWN’ and ‘UP’.

Using this three buttons, you can set / read / modify any parameter or timing.

### CABIN BUTTON



### PROGRAM MODE



Keep pressed 'STOP', '0', and '1' cabin push- button (cop) and power-ON the controller. Keep pressed these three buttons until display "PROGRAM MODE" comes on the LCD. Once you release these three buttons, it will ask for password which you have to enter using cabin call push-button.

Like in mobile phones, using 'ENTER/SELECT', 'DOWN' and 'UP' three buttons, you can operate/edit entire menu of the program mode. A blinking cursor on the LCD display will guide you more during editing.

**NOTE:** DURING ENTERING INTO PROGRAM MODE, ALL REED SWITCH SHOULD BE OPEN

## PROGRAMMABLE PARAMETERS/TIMINGS

Following are parameters with description and maximum allowable limit for the same.

### **OPENING = 1 0**

Indicates number of floors. For ground +4, set

OPENING = 05. For one Basement + Ground + 7, set OPENING = 09

### **BASEMENT = 0 2**

Indicates number of basement. The floor number display will be adjusted automatically.

### **RAM ON = 9.9 SEC**

If early RAM = yes (**Using two gate interlock**)

Indicates time in seconds for which RAM becomes on before getting landing interlock. Normally this can be set 1.5 seconds.

If early RAM = No (**Using single gate interlock**)

Indicates time in seconds for which RAM becomes on before brake become on. This is the time between RAM\_ON & BRAKE\_ON.

### **BRAKE= 9.9 SEC**

Indicates time for which Brake should be on before main motor starts.

## **RAM OFF = 9.9 SEC**

Indicates time for will continue ON after main motor and brake stop.

## **RUN = 999.9 SEC**

Indicates main motor over run timing. This is the maximum allowable time to reach/find new floor. If controller does not find new floor within this specified time, the controller will stop BRAKE, RAM, and MAIN MOTOR. This is very use full for main motor protection if final limit does not work properly.

This timer resets and restarts when it gets any new floor cutting sensor signal during main motor running.

Practically this time can be ideal if we set it 2.5 times of travel time between two successive floors.

## **HALT= 999.9 SEC**

This indicates stoppage (halt) timing on a floor if many calls are present at a time.

## **LIGHT= 999.9 SEC**

This indicates time for cabin light/ fan continues to be on after halt timer stops. If you set Halt timer = 5 seconds and Light timer = 10 seconds, cabin power will be cut off after 15 seconds automatically if there is no call pending.

## **CLEAR ON STOP: Y/N**

Indicates whether all pending calls should be cleared or not on pressing STOP button. If we set YES, all calls will be cleared on STOP.

## **EARLY RAM: Y/N**

**NO:** Normal RAM operation. RAM will not be ON if door is open. Connect only one gate interlock signal to the controller on pin 62.

**YES:** RAM will be on before checking landing door interlock signal (pin 63) if cabin door (pin 62) is closed. This time is decided by RAM ON timer.

It will retry 5 times and clear all calls if does not get landing interlock.

## **FULL COLLECTIVE: Y/N**

YES= up& down collective

NO= down collective only

## **V3F ENABLE: Y/N**

If set yes, it mean that two speed mode (V3F) Pin No.3 and 65 will work accordingly.

## **EXIT**

Exit from parameter programming. It is necessary to come out from programming mode through EXIT only. When we select EXIT, it will write change/ modification in the memory.