



SabMatic^{sarl}
Electronic Power Technology

ELD-V6

Emergency Landing Device for Elevators

Its a device guarantees the return of the cabinet to the nearest floor & reopening the door in rope lift system, in the event of main power failure.



TECHNICAL SPECIFICATIONS

MODEL	ELD-15K	ELD-25K
MOTOR CAPACITY	15HP/11KW	25HP/18.5KW
INPUT DC VOLTAGE	60V DC	
INPUT AC VOLTAGE	220V AC	
OUTPUT INVERTER VOLTAGE	54V AC 3 PHASE	
OUTPUT CURRENT	30 Amps	50 Amps
OUTPUT FREQUENCY	3 to 6 Hz (Auto torque)	
OUTPUT VOLTAGE FOR OPERATOR	125V / 220V / 380V	
BATTERY CHARGER	Switching Floating Type	
BATTERY TYPE	Sealed LEAD-ACID Maintenance Free	
DIMENSION (WxHxD)mm	450x600x200	



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A complete Backup solution for rope lift system

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INTRODUCTION

The ELD device guarantees the return of the Cabinet to the nearest floor and the reopening of the doors in rope lift system, in the event of mains power failure. Also in case of power problem with the lift itself. It can be installed with any type of control panel, it functions with sealed lead acid batteries and does not require any maintenance.

How it works?

The ELD device comes into operation a few seconds after main power failure occurs.

If the lift is a floor, ELD simply open the cabinet door.

If the lift is blocked between two floors ELD turns the motor in the direction that requires the least expenditure of current and brings the car to the floor level.

At this point door reopening is commanded. When this operation has been completed, ELD cuts out automatically.

MAIN FEATURES

- LCD or LED controlled supervision [REV 6]
- Smart real time sensor for direction control
- Multi-LED board indicator for easy maintenance low battery protection system.
- Isolated outputs for board security
- Reverse polarity protection
- Overload management system for heavy loads
- Completely microprocessed [response time<1 microsecond]
- Fast programming for easy adaptation:
 - Start timer
 - Door timer
 - General timer (time out)

A- POWER CONNECTION

1- Battery Connection Terminals

The ELD is powered by 5 batteries 12V serial connection VDC

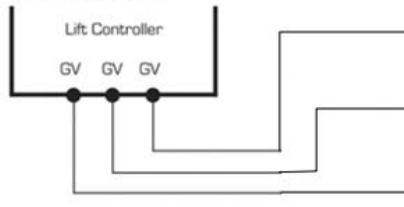


ELD Connectors



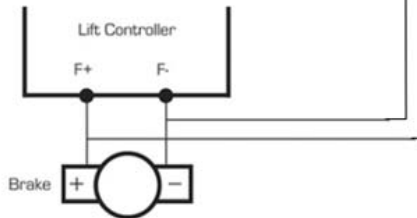
2- Lift Motor

The three phase to the lift motor high speed must be connected parallel connection G.V. G.V. G.V.



3- Mechanical Brake

The output terminals of the lift controller that were connected to the mechanical brake coil must be connected parallel connection to the F- F+ in the ELD.



4- Battery Charger

The battery charger circuit single-phase power supply must be connected to N [Neutral] P [Phase] terminals. The voltage value range is from 110V to 250V auto select.

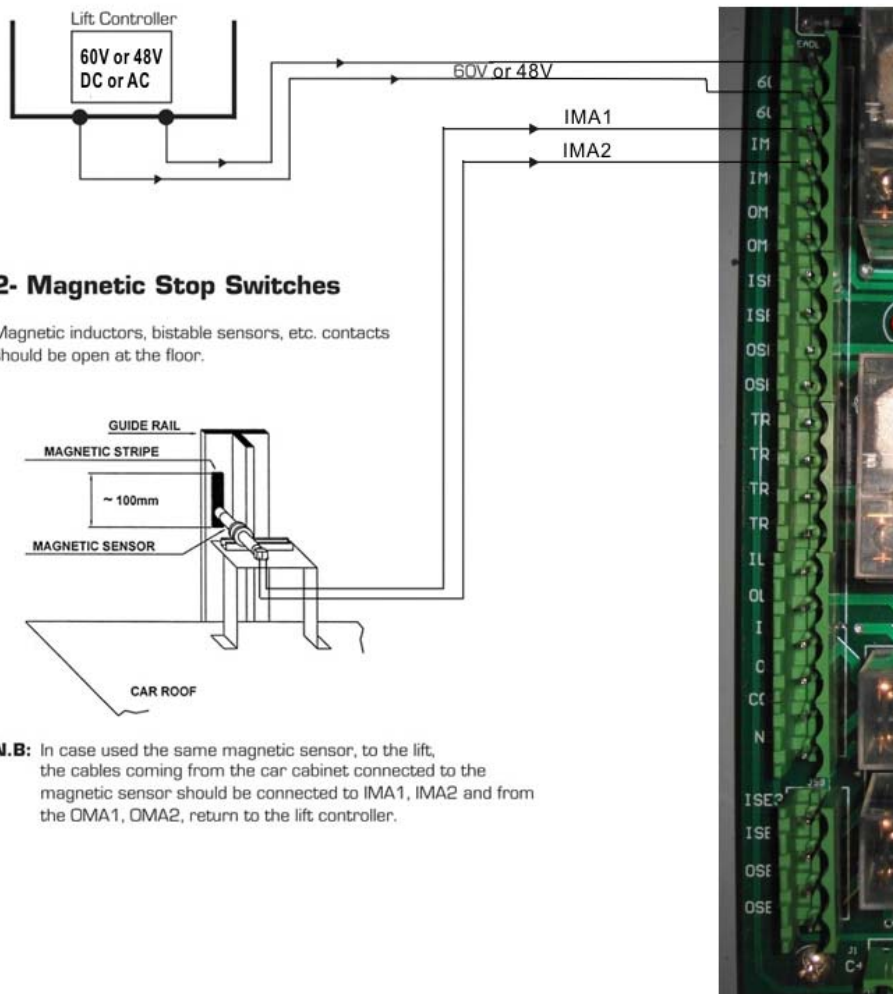


B- CONNECTION TO THE CONTROL PCB

1- Main Voltage Failure Sensor (60V or 48V)

The emergency cycle operated by the ELD begins after delay time selected by POT1 after a voltage failure at the 60v or 48v input to the ELD from the lift controller.

ELD Connectors on PCB



2- Magnetic Stop Switches

Magnetic inductors, bistable sensors, etc. contacts should be open at the floor.

N.B: In case used the same magnetic sensor, to the lift, the cables coming from the car cabinet connected to the magnetic sensor should be connected to IMA1, IMA2 and from the DMA1, DMA2, return to the lift controller.

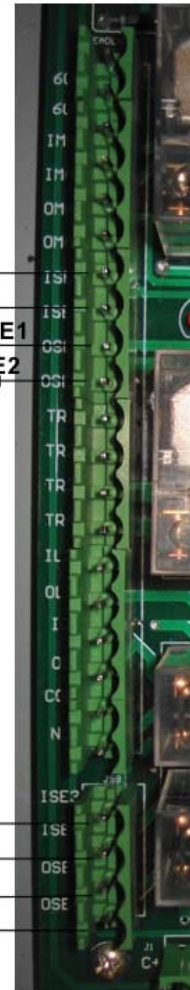
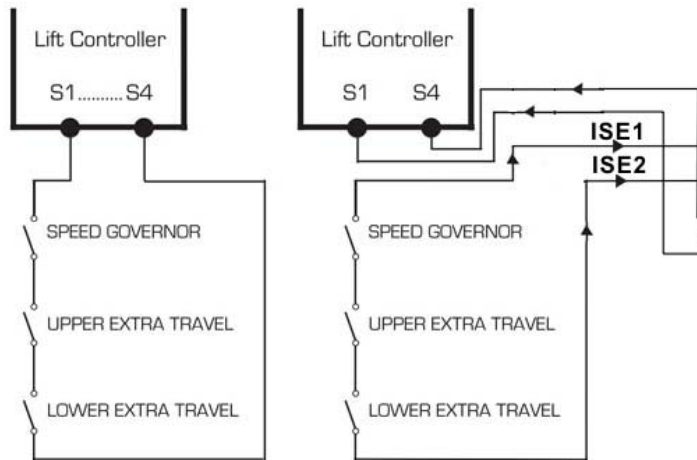
B- CONNECTION TO THE CONTROL PCB

3- Safety Contacts: point 1

(ISE1, ISE2, OSE1, OSE2)

Terminals ISE1, ISE2, OSE1, OSE2 are used to transfer the safety series contacts from the lift controller to the ELD. These connections are extremely important as the safety series contacts must be under the ELD.

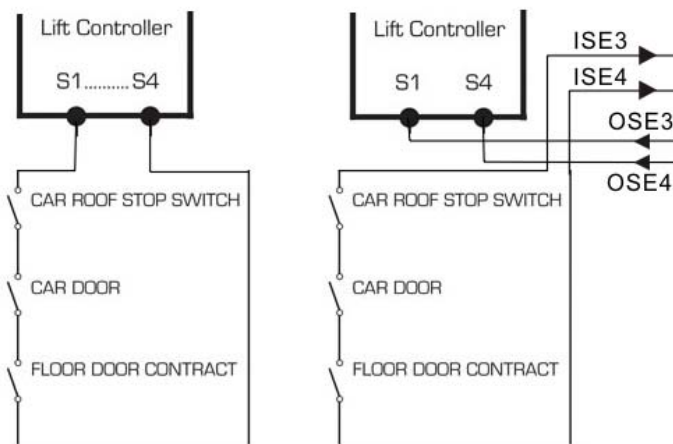
ELD Connectors on PCB



3- Safety Contacts: point 2

(ISE3, ISE4, OSE3, OSE4)

Same connection as point 1



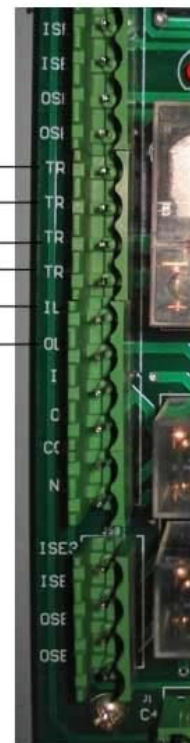
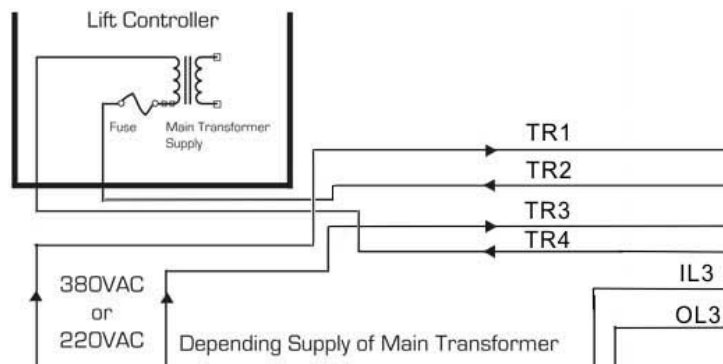
B- CONNECTION TO THE CONTROL PCB

4- Connection Supply Transformer in Lift Controller

These connections are **extremely important** as the supply for the main transformer in the lift controller must be supplied via ELD.

To let each unit (LIFT CONTROLLER & ELD) function separately, all function must be inhibited if one of these units still working.

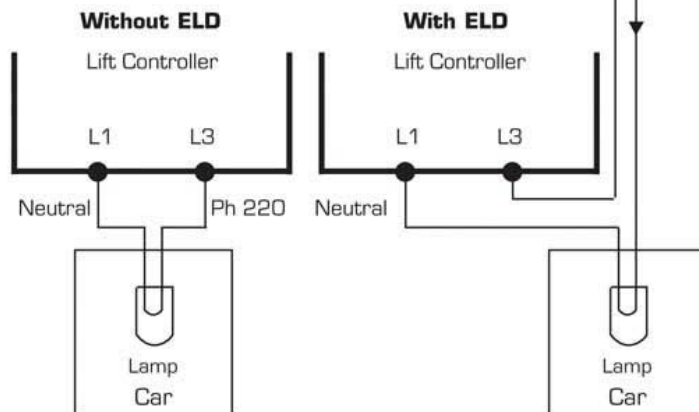
ELD Connectors on PCB



5- Car Lamp (I L3, OL3)

The lift controller out put terminals that were connected to the car lamp terminals must be connected to I L3 in ELD.

Terminal OL3 should be connected to the car lamp terminal. The voltage available at the OL3 is 220V and the neutral is common with the lift controller's.

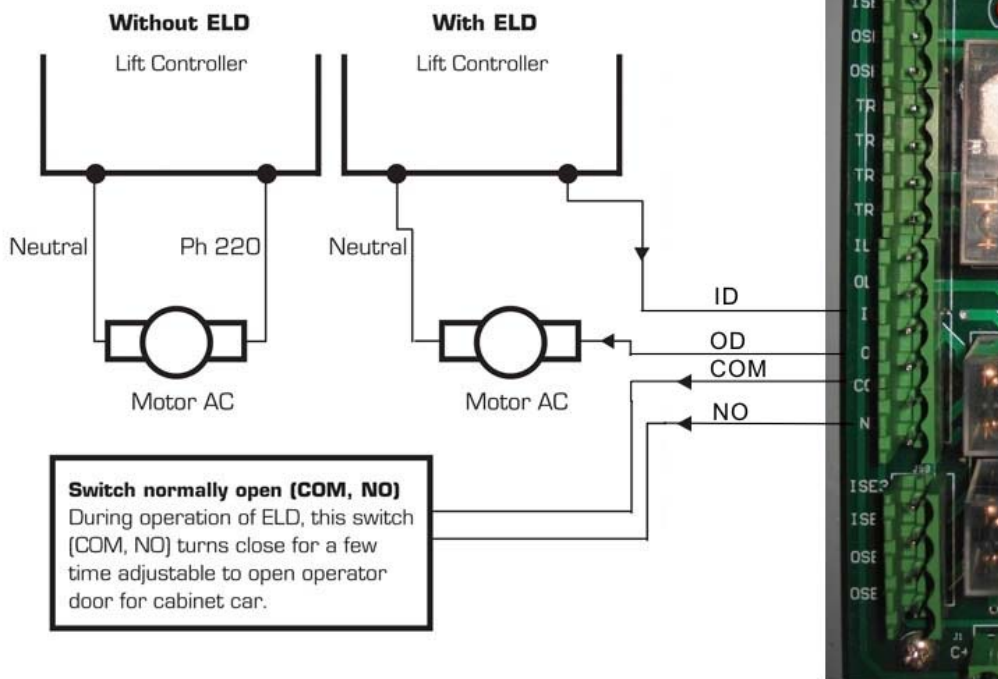


B- CONNECTION TO THE CONTROL PCB

**6- Supply for Door Motor
Single Ph 220V (I D, OD)**

The lift controller out put terminals that were connected to the door motor terminals must be connected to I D in ELD. Terminal OD should be connected to the door motor terminal. The voltage available at the OD is 220V and the neutral is common with the lift controller's.

ELD Connectors on PCB



INDICATION AND CONTROL

Various LED are to be used for faster maintenance and ELD management. The board contains 13 indicating LED, 5 TRIMMERS and 5 dip switches.

For further explanation refer to table 1 page 18.

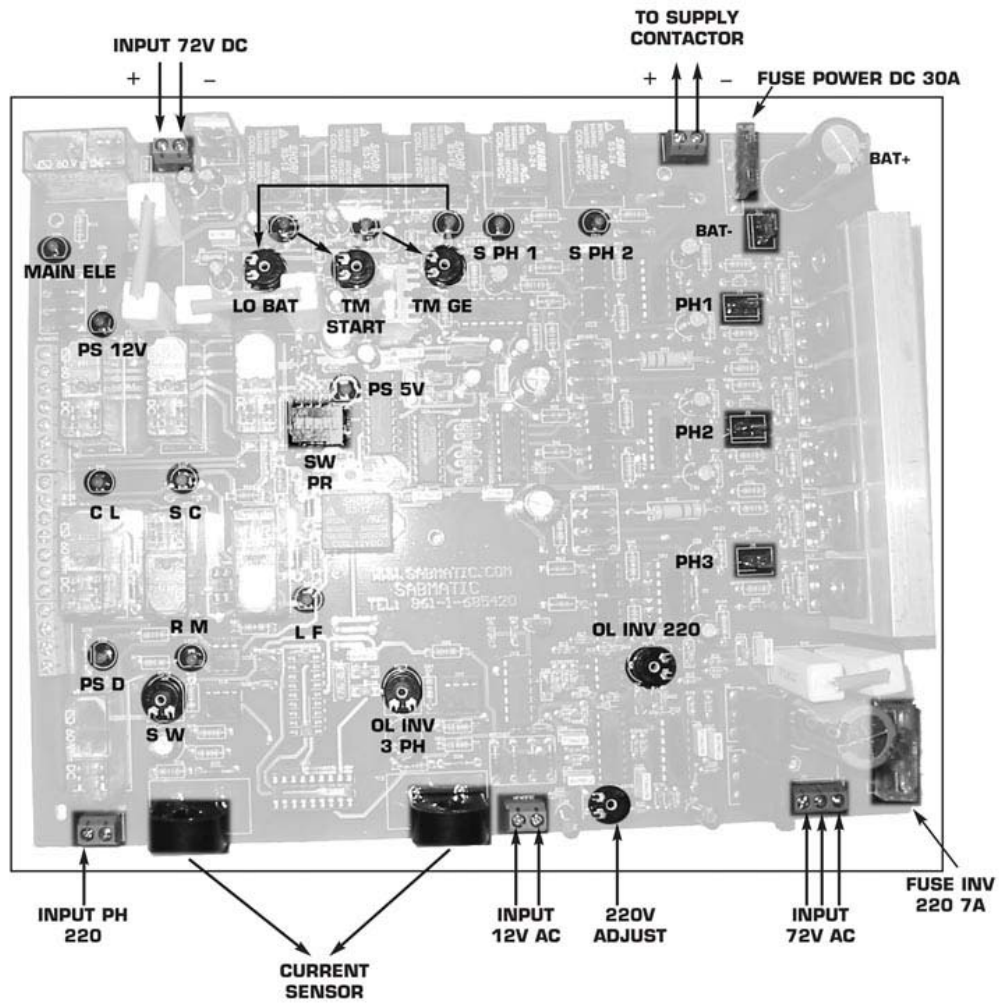




Table 1: Panel Configuration and Indicators

Mains ELE	Presence of city power
PS 12V	Board power supply + 12V OK
C L	Cabinet 220V lamp activated
S C	Security Contact is close - Security Contact open LED off
PS D	Door opening of the car lift is activated
R M	In case high current LED (RM) is ON, if low current LED (RM) is OFF
L F	Cabinet landing at Floor
PS 5V	Processor Program and Power Supply 5V OK
TM Start	Adjust Time Start for the device after main failure
TM GE	Adjust Time required for all the operation device
LO BAT	Low battery indicator
S PH1	If on phase 1-2 are ok (in the event of phase failure power is off)
S PH2	If on phases 1-3 are ok
OL INV 220	Adjust overload for inverter 220
OL INV 3PH	Adjust overload for inverter 3PH
S W	Adjust Way Select consume the low current
220V ADJUST	Adjust Output inverter 220V
PH1, PH2, PH3	Output power inverter 3PH

E.L.D. Emergency Landing Device for Elevators

ELD Microcontroller Version

A Complete Back-Up Solution for Rope Lift Systems

- ◆ Smart CPU Control
- ◆ Automatic option for up or down of elevator (adjusted by CPU, according to small current to decide.), auto-open elevator door once arrived the selected level.
- ◆ The fan and lamp of elevator auto-turn on once power off.
- ◆ Easy to install



TECHNICAL SPECIFICATIONS

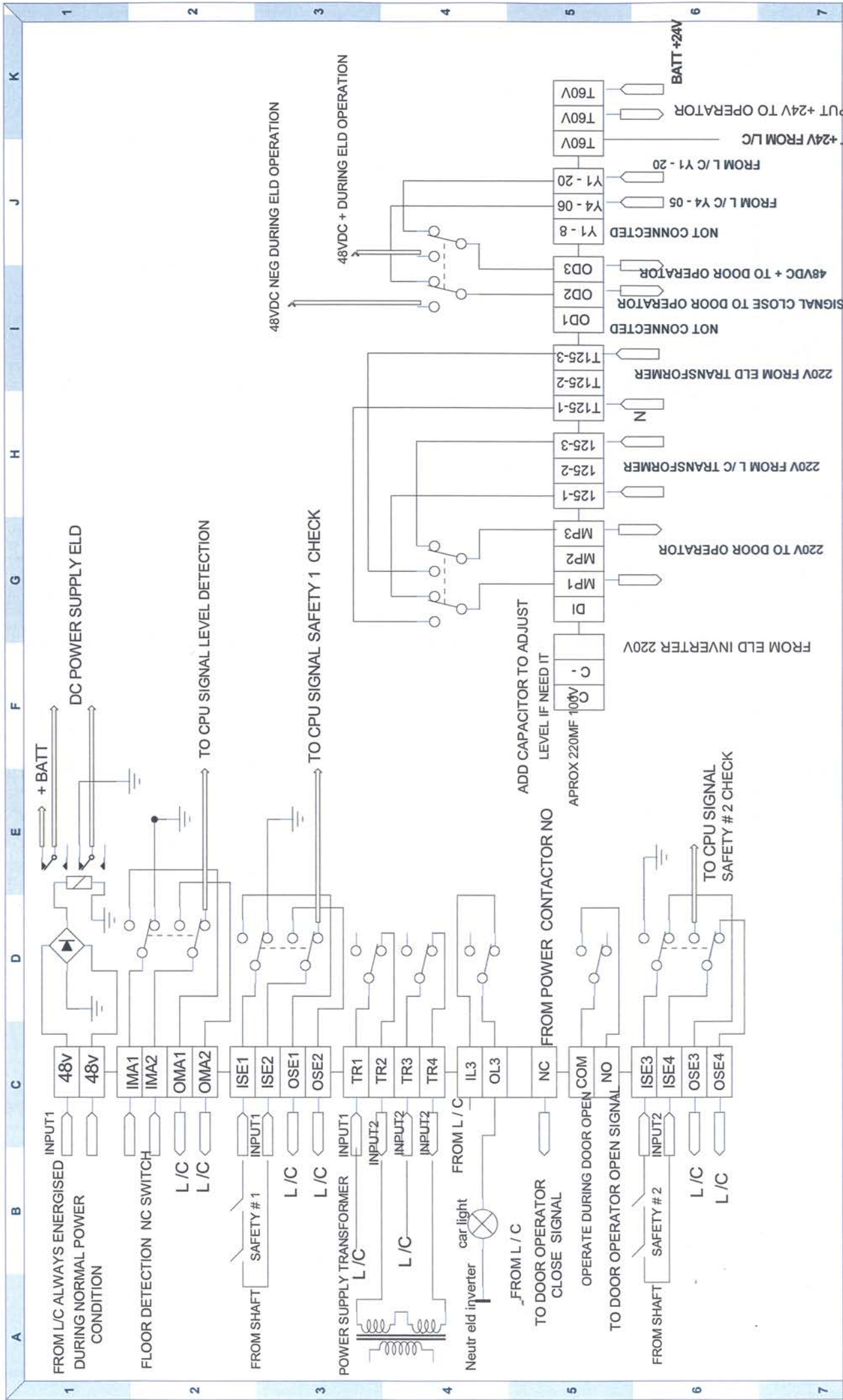
MODEL	ELD-15K	ELD-25K
CAPACITY	15KW	25KW
INPUT		
Voltage DC	60Vdc	
Voltage AC	220Vac / 110Vac	
Voltage Control AC/DC	60	
OUTPUT		
Voltage Inverter 3-Phases	54VAC	
Current	24~60A MAX FUSED	
Frequency	5~15HZ FOR ELD	
Waveform	SIMULATED SINE WAVE	
Voltage Inverter 1-Phases	220V(50Hz) / 110V(60Hz)	
Voltage Operator 3-Phases	380V(50Hz)	
Current Operator 3-Phases	3x2,5 Amps Max	
BATTERY CHARGER		
Input Voltage	220VAC FOR CHARGER +/- 40%	
Charger Current	600mA	
Output Voltage	69Vdc	
BATTERIES		
TYPE	LEAD-ACID MAINTENANCE FREE	
DC Bus	12V 7.2AH	12V 24AH
QTY	5 PCS	
RECHARGE TIME TO 90%	WITHIN 4~8 HOURS	
SAFETY APPROVAL	CE	
ENVIRONMENT		
Temperature	0 TO 40 DEG CELCIUS	
Humidity	30 TO 90% (NON CONDENSIN	
DIMENSION (W×H×D) mm	400×600×200	
WEIGHT (NW) KG		
MONOPHASE	34kgs	36kgs
TRIPHASE	38kgs	39kgs

DIP SWITCH SETTING

	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5
UP	Manual	4S opening door timer	Continuous STANDARD LIFT	Less then 10HP motor power	Prog ok
DOWN	Automatic for Triphase	7S opening door timer	Discontinuous IMPORTANT FOR HEAVY LIFT	Up to 15HP motor power	---

TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE	ACTION TO MAKE
Batteries not charging while 220AC city power is connected to charger	<ol style="list-style-type: none"> 1. Line cord plug is loose 2. Fuse in capsule is blown 3. Output charger failure 	<ol style="list-style-type: none"> 1. Check the line cord plug 2. Replace fuse 3. Consult a technician
No power on outlet	<ol style="list-style-type: none"> 1. Security is open 2. MAG pin is open 	<ol style="list-style-type: none"> 1. Check security inlet. Pin number 7 & 8 on board connector 2. Check MAG inlet. Pin number 3 & 4 on board connector
ELD is not turning ON	<ol style="list-style-type: none"> 1. Line cord supply is loose 2. Low battery trimmer adjustment 	<ol style="list-style-type: none"> 1. Check line supply cord BAT + and BAT – on PANEL 2. Consult technician [Important]
ELD keeps on restarting	Battery failure	Consult with technician; batteries are needed to changed. Charger may be out of order. [Important]



CONNECTION DIAGRAM FOR VWF 220V DOOR OPERATOR ELEVATOR CONTROLLER

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