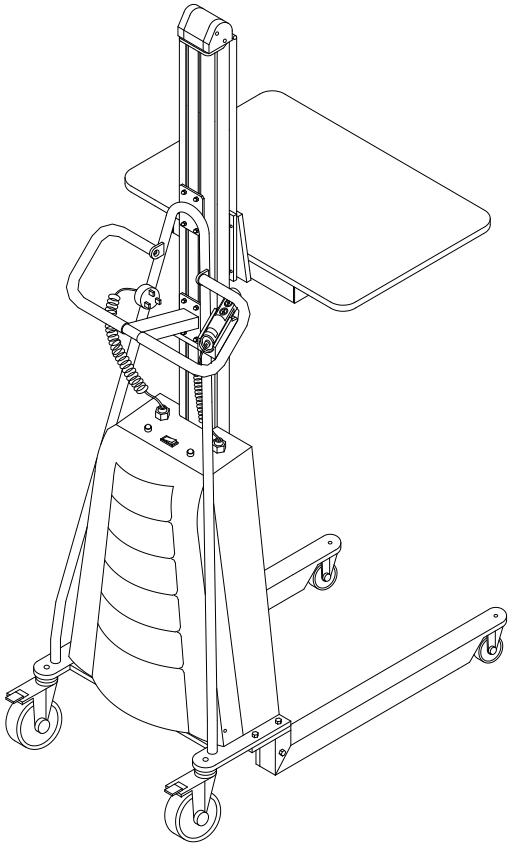
Operation Manual

Single Pole Electric Elevator

Type: E250NS



NOTE: The Owner/Operator must read carefully and understand all the information presented here before operation.

CONTENT

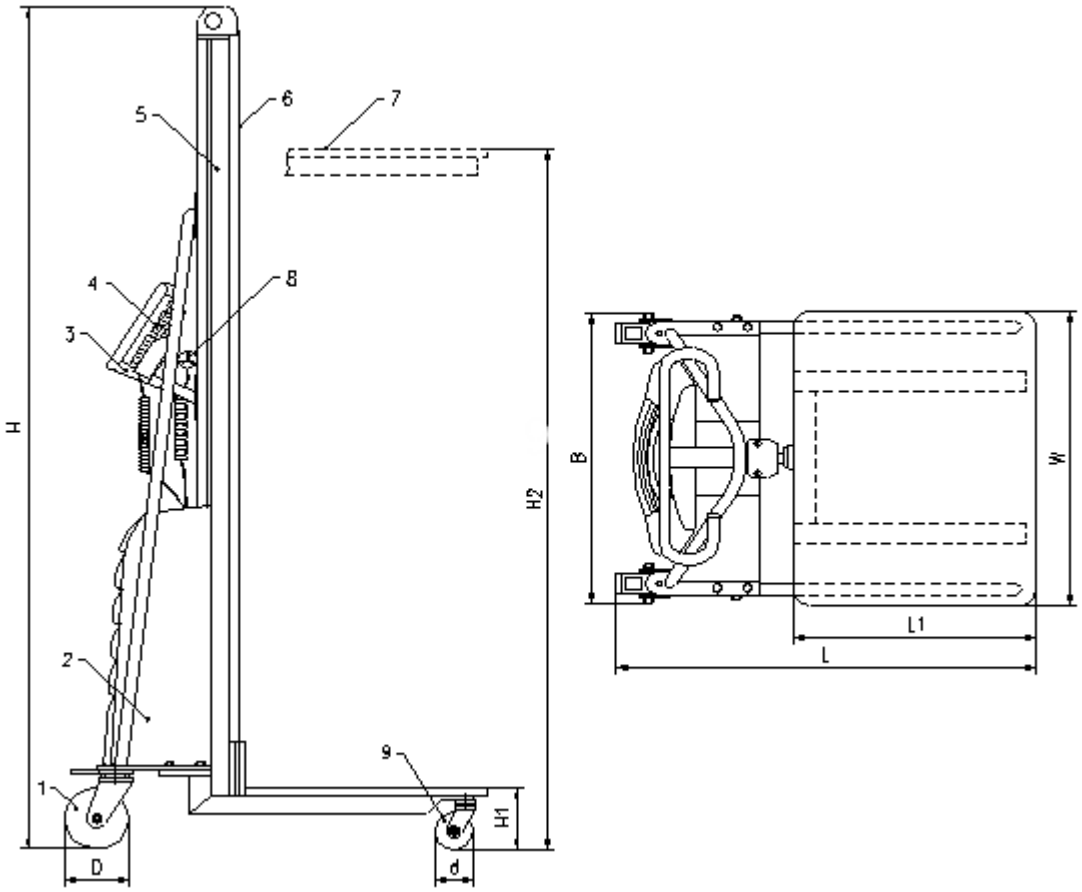
Thank you for your using this series of Elevators

This manual describes right operation method for ensuring safety and the right ways of maintenance, which prolongs the working life of the equipment. The operator must read carefully and understand all the information presented here.

This series of Electric Elevators are easy to handle with, safe and reliable, automatic and labor saving by small but high efficient and maintenance free cell power supplying, reliable small motorized chain driving , high performance panel control; movable electric push buttons control the movements of platform or other accessory upward or downward.

This series of Electric Elevators are mainly used for goods transition, elevation or piling, or taking off and transiting goods at some certain height on plain and smooth floor. The characteristics of pretty appearance, high intensity alloy pole, convenient and movable electric control, automatic and labor saving make the elevators be extensively used in. Especially, the configuration of several accessories and provision grade platform make the elevators be specially applied in transition of small column shaped working pieces, such as in packing material printing factories, super-markets, hotels and etc.

1. Dimensions & Parameter Chart



Model		E250NS
Load Capacity	（Kg）	250
Load Center C	（mm）	200
Height min. H1	（mm）	130
Height max. H2	（mm）	1900
Platform Size L1×W	（mm）	475×605
Dimension L×W×H	（mm）	870×740×2220
Front Wheel d	（mm）	Φ75
Rear Wheel D	（mm）	Φ125
Net Weight	（Kg）	99
Maintenance Free Cell		24V

2. Part Name

1. Rear Wheel
2. Electric Control of Transmission Box
3. Handrails
4. Movable Handy Panel
5. Alloy Pole
6. Safety Belt
7. Platform (Various Accessories)
8. Socket for Charger
9. Front Wheel

3. Warning

1. Use only on plain and smooth floor to ensure stability.
2. Always apply wheel brakes when unit is not being moved.
3. Use caution in moving unit; avoid obstructions and floor defects.
4. Remove load & disconnect power before working on unit.
5. Do not operate unit unless all cover plates are securely in place
6. Don't overload, load must be evenly distributed on deck to ensure stability. Pay special attention when heavily loaded.
7. Consult factory for uneven loading.
8. The working life of the elevator shall be greatly prolonged when working under 0.7 times of the maximum nominal load.
9. Never operate unit unless you are watching it stand clear from load when operating.
10. Do not continue to press the up-button if deck is not rising.
11. Buzzer beeps to alarm cell low, charge in time or the cell shall be damaged.
12. Ensure that the input voltage of the charger complies with local power net voltage.
13. Not to contact chain or other moving parts.
14. Not to carry out long hours of continuous work under heavy duty, lest troubles from overheated of motor and panel.

15. Consult factory if adding or performing any modifications to the original equipment.
16. Use only maintenance parts supplied or approved by the manufacturer.
17. Make sure all operator safety labels are in place.
18. Never exceed the maximum capacity of the battery power platform truck.

4. Check before Assembly

Check the following regulations before use

1) Structural deformation of frame.
2) Proper operation of casters.
3) Unusual noise or binding.
4) Signs of wear, fatigue or loosening of any moving parts and contact areas.
5) Check chain tension and adjust if applicable (see chain tension adjustment section).
6) Wear on the chain roller bushings.
7) Cover plates being securely in place.

Warning: Over tensioning of the chain and/or injury can cause potential damage

DO NOT use if there are any of the above!

5. Operation Guide

1) Elevator: Operation of Transition, Loading and Unloading.

1.1 Lock truckles before goods loading and unloading at any height.

1.2 Take care of load uniformity when load and unload; deflected load is always not appreciated.

1.3 Mention not to loose equilibrium from one-sided unloading lest dangerous occurrences.

1.4 When it is needed to move the elevator with unfinished unloading, take care of the uniformity of the gods still needed to be unloaded.

1.5 Lower the platform to the lowest position when the loaded elevator is to move, sa as to ensure safety.

2) Elevator: Operation of Climbing and Descending

2.1 Take care to stop at a right spot and ensure needed operation space when the elevator is to pile or take off goods for some height.

2.2 Lock the wheels, and switch power on.

2.3 Press on the UP button on the panel, the platform climbs smoothly to the needed height, and then release the button, the platform keeps still and shall no slip down. The movable hand control panel is convenient for the operator to observe and operate on different positions.

2.4 Strictly follow the regulations (1.1, 1.3, 1.4) to operate the elevator when goods raised up to

the needed height for unloading or piling.

2.5 Strictly follow the regulations (1.1, 1.2, 1.5) to operate the elevator when taking off goods from racket.

2.6 When finishing unloading at some height, press the SOWN button for the platform descending smoothly; and the DOWN button can be released at any height needed while the platform shall stop descending for the elevator to perform a new job at same spot but different height.

2.7 The elevator is designed to possess the function of overload protection. Whenever the load surpassed 25% of rated capacity, the platform shall not be elevated, the elevator shall not be able to carry out the jobs of up-climbing, down-descending and vehicle transition.

2.8 The elevator is designed to possess the function of low power protection. Should the cell power is not sufficient for jobs during loaded climbing and descending, the buzzer beeps for 50 seconds alarm continuously and then cut off automatically the power circuit with indication light up (operator shall lower the platform to the lowest position during this period); the elevator is protected and the operation of climbing or descending is invalid even if the power is still connected.

3) Cell

3.1 High performance petty maintenance-free sealed acidic-lead storage cell is selected to power the elevator. It is characterized by low discharge ability, safe, easy mounting and change=over, and can be used under the ambient temperature range of -15ºC~50ºC.

3.2 The working life of the cell is greatly depends on the right use. The working life of the cell shall be greatly shortened when repeatedly used at the condition of low voltage, and even burn the control element. Considering of this, the elevator is designed with the function of low voltage protection in the part of electric control. During the elevator is operating under low voltage for up-climbing or down-descending, the buzzer shall beep for 50 seconds continuously and then cut off the power supply. The operator shall charge the cell in time.

4) Charger

4.1 High performance charger is provided together with the elevator, so that the cell can be chares at any handy power terminal. Be sure the voltage of local power net is as needed by the inlet voltage of the charger.

4.2 When charging with switch off elevator power, connect charger source pin and power terminal socket, the red indicator of source power of the charger is lit up, while the charging status green indicator is lit, that means the cell is tin the status of charging; and when the green indicator faded, that means the cell is charged full. Generally, the charging period takes 10~12 hours.

4.3 Shall the charged cell show low voltage status during heavy duty job, probably the cell is damaged or the charger is in trouble.

4.4 The charge interval of this unit will vary based on the load and frequency of use. Since the majority of applications require less than the maximum capacity and only intermittent use the actual time between charging will only be found through experience. Also, the batteries should be fully recharged each time. This will increase the battery life.

4.5 Disconnect battery when storing the unit without power for more than one month.

4.6 The charger can be connected for extended periods without damage to the batteries.

4.7 Do not expose the lift or charger to rain or adverse conditions.

5) Safety Belt

5.1 Safety belt is a safety device provided for preventing the transmission chain to break suddenly and that may cause equipment damaging. The device makes the elevator possess the characteristics of safe and reliable.

6. Daily Maintenance & Periodic Inspection

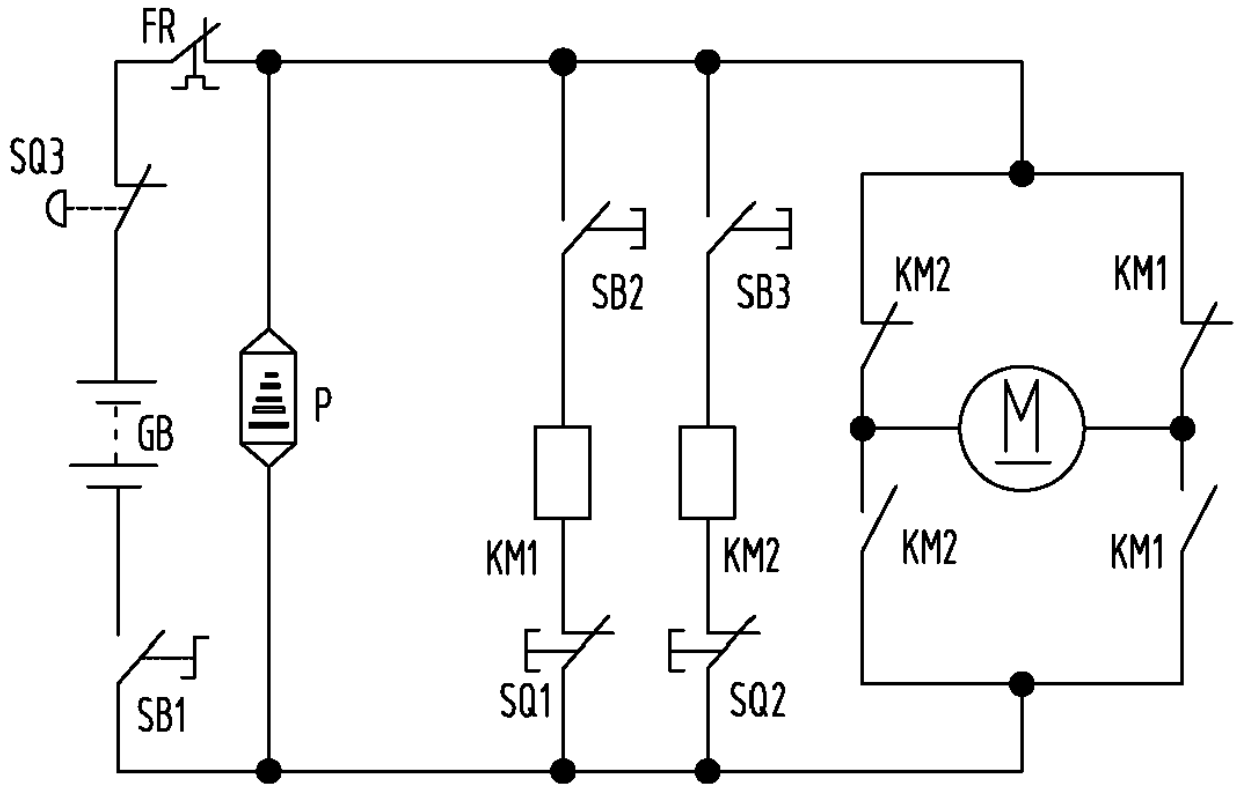
1. Check if right every day for each status indication, including the smoothness and stability of platform up-climbing and down-descending.
2. Check once a month if any deformation, connection loosening, wearing and abnormal sound for connecting bolts, wheels, rolling bearing, transmission chain, structure parts and moving parts.
3. Check once a month the jiggling, wearing, lubricating, and loosening for chain, sprocket wheel, chain-trolley and connecting bolts inner transmission box, grease in time, as well.
4. Once each three months check control panel, charger, cell and electric control wiring if any loosening inner transmission box and the inner box cleaning.
5. Check each month the bending and deforming status of the pole, and if the flexible and smooth for the safety belt protruding and retrieving.

7. Trouble Shooting

No.	Description	Cause	Treatment
1	Power on, press UP button, platform not climbing up.	1.Power switch damage	Check and changeover
		2.Wire off	Check and connect
		3.Cell dead or damaged	Charge of change
		4.Button fail or wire off	Check and changeover
		5.Panel fuse burnt	Changeover
		6.Motor damaged	Check or changeover
		7.Overload	Partial unloading
		8.Lowest Position traveling switch fail	Check or changeover
2	Press UP button, climbing slowly or not climbing up	1.Cell low or over discharged	Charge in time
		2.Motor trouble, RPM lowered	Check or changeover
		3.Panel adjustment fail	Re-adjust panel
3	Platform can't climb to the height max.	1.Barrier inner guiding rail	Clear away barrier and lubricating
4	Platform climbed to the height max but fail to descending	1.DOWN button fail	Check or changeover
		2.Travelling switch inner panel fail	Check or changeover
		3.Panel damage	Check or changeover
		4.Safety belt fail, not working	Check or changeover
5	Safety belt fails to protruding or retrieving	1.Ratcher structure of the device retrieving fail	Check or changeover
		2.Wrest spring inner device damage	Check or changeover
6	Cell charged, platform climbing slowly or can not climbing up	1.Insufficient charging	Re-charge
		2.Cell damage	Change new cell
		3.Charger fail	Check or changeover the charger
7	Obvious low voltage but buzzer not to beep	1.Wire off or buzzer fail	Check or changeover
		2.Buzzer circuit damage	Check or changeover
8	Abnormal sound from platform up/down transmission	1.Chain elongated	Adjust to proper
		2.Sprocket loosening or shift	Check, adjust or fix
		3.Sprocket wheel damage	Check or changeover
		4.Other commissioning part worn out, deformation	Check or changeover

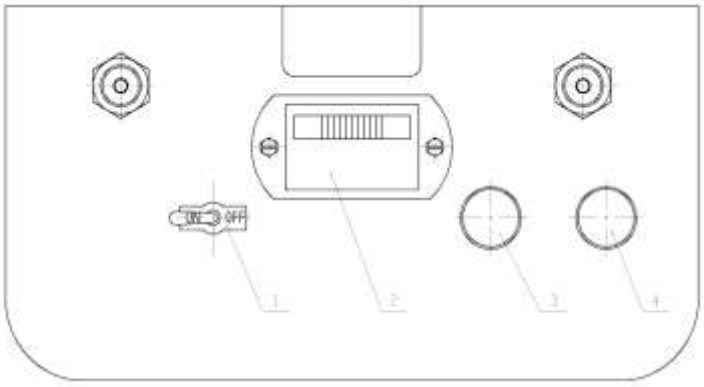
8. Diagram

(1)Wiring diagram of Electric Control



FR	Thermal cutoff	**KM1**	Up Contactor
SB1	Power Supply Switch	**KM2**	Down Contactor
SB2	Up Switch	**SQ1**	Up Limit Switch
SB3	Down Switch	**SQ2**	Down Limit Switch

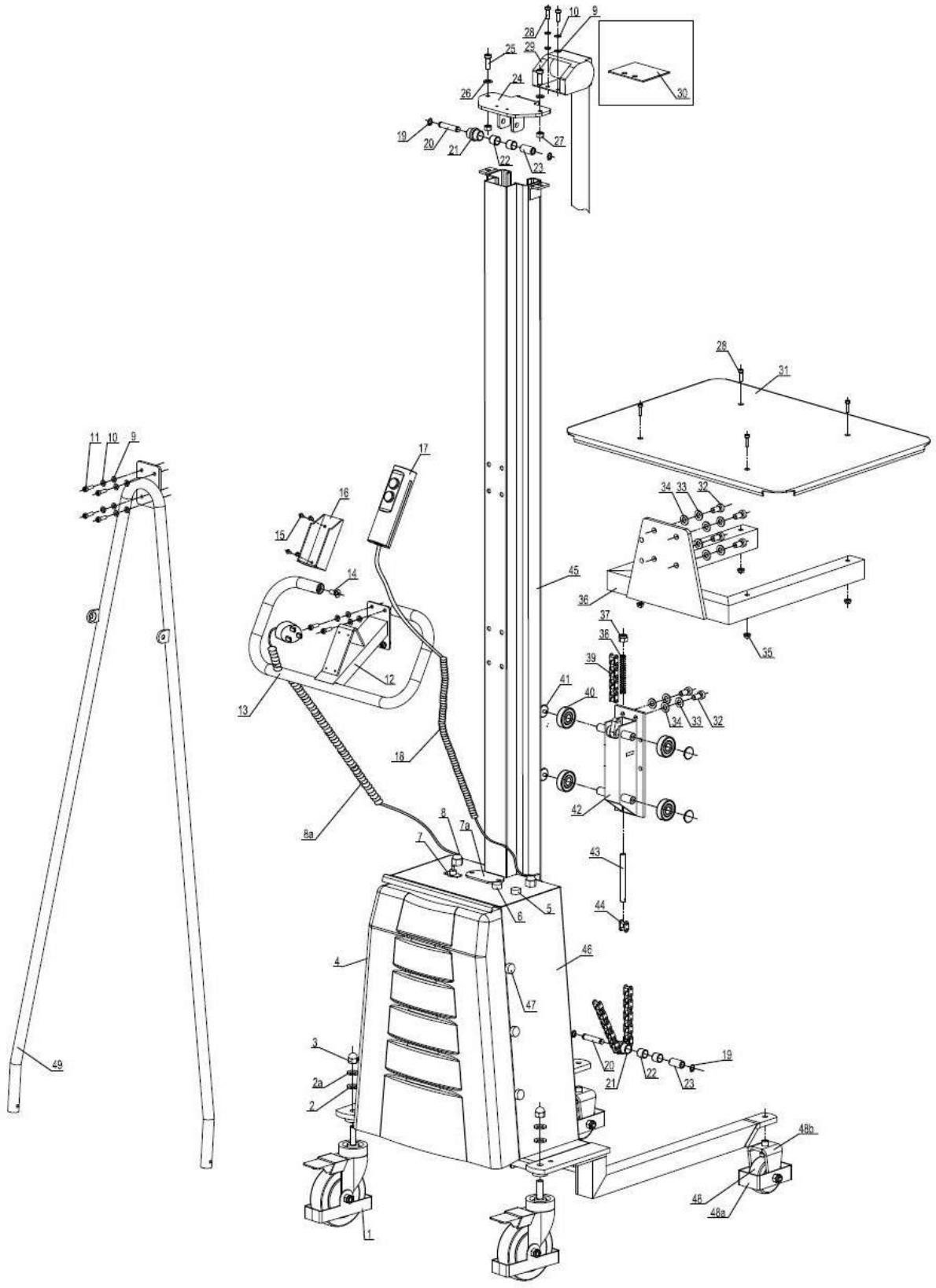
(2) Sketch Map of Electric Panel



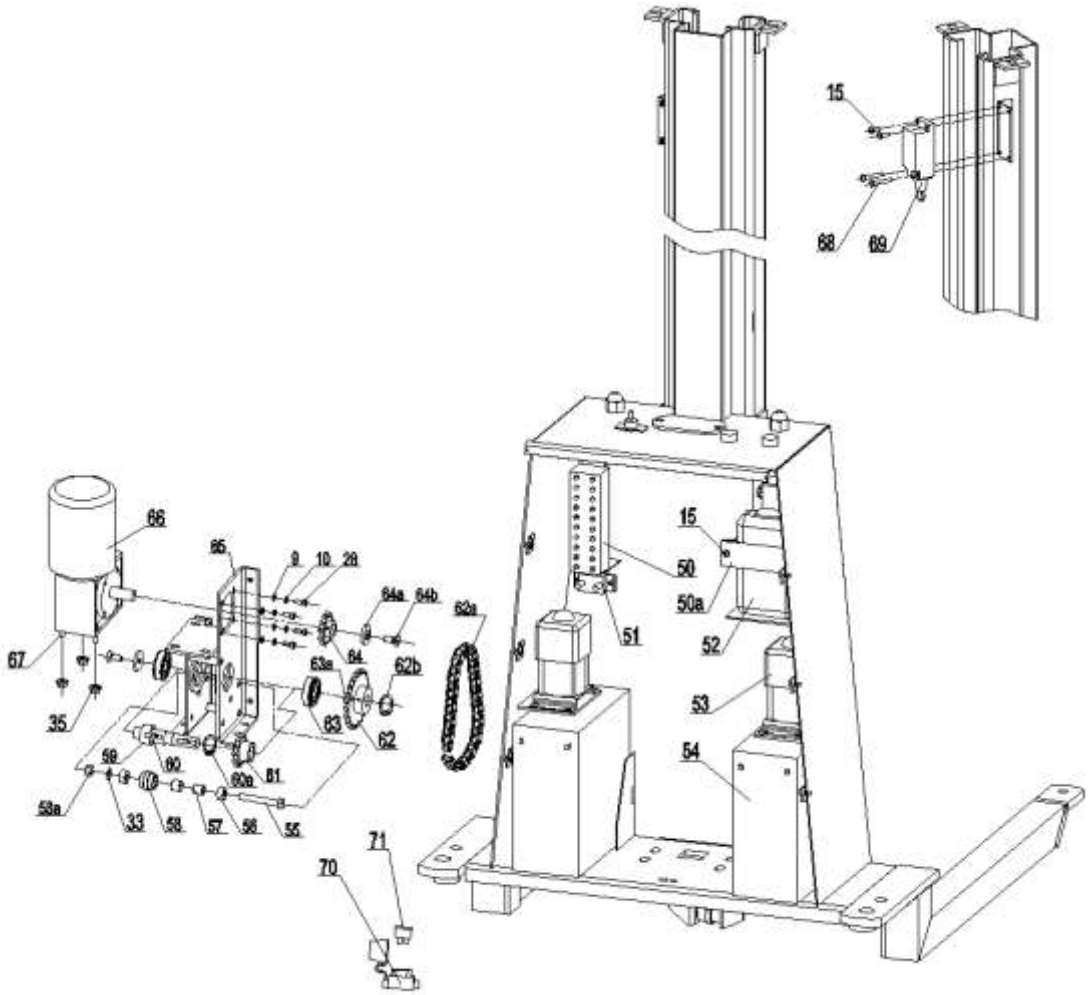
1	Power Supply Switch
2	Power Indication
3	Charging Status(charging)
4	Charging Status(charged)

9. Exploded View

(1) E250NS Single Pole Electric Elevator



(2) Electric Box of E250NS



10. Chart of Parts

(1) E250NS Single Pole Electric Elevator

No.	Part Description	Qty.	No.	Part Description	Qty.
1	Rear Swivel Castor Unit（5''）	2	40	Ball Bearing 6302	4
2	Plain Washer 12	2	41	Limit Shaft	4
2a	Spring Washer 12	2	42	Mounting Seat for Roller, Weld	1
3	HEX DOMED CAP NUT M12	2	43	Bolt, Load Chain End	1
4	Electric Box Cover	1	44	Load Chain Link 08B	6
5	Charging Indicator-Green	1	45	Steel .Mast	1
6	Charging Indicator-Red	1	46	Main Frame, Weld	1
7	Toggle Switch	1	47	Combination screw	6
7a	Battery Indicator	1	48	Front Fixed Castor Unit（3''）	2
8	Wire fixing Nut	2	48a	Fender bracket	2

8a	Charger Adjustable Wire & Plug	1	48b	Wheel stand	2
9	Plain Washer 6	17	49	Supporting Handrail, Weld	1
10	Spring Washer 6	17	50	Terminal block	1
11	The countersunk head screw M6X20	8	50a	Fixing Plate for Charger	1
12	Handle, Weld	1	51	Circuit Breaker-Automatic Reset	1
13	PU-Buffer	1	52	Charger 24VDC-2A	1
14	The countersunk head screw M8X20	4	53	Contactor	2
15	The countersunk head screw M4X10	10	54	Battery -12V20Ah	2
16	Control Handle Seat	1	55	Hex Bolt M10X70	1
17	Control Handle	1	56	Bushing	2
18	Handle Adjustable Wire	1	57	Tube Bushing	1
19	Retaining Ring 10-Shaft	4	58	Load Chain Roller	1
20	Shaft-Load Chain Guide Wheel	2	58a	Nut M10	1
21	Load Chain Guide Wheel	2	59	Transmission Shaft	1
22	Copper Bush15X1	6	60	Flat key 6X6X20	2
23	Spacer Tube	2	60a	Retaining Ring 20-Shaft	1
24	Top Block Cover	1	61	Sprocket Wheel-12teeth	1
25	Socket head Cap Screw M8X25	2	62	Sprocket Wheel-30 teeth	1
26	Plain Washer 8	4	62a	Load Chain 08B	1
27	Hex flange self-locking nut M8	2	62b	Retaining Ring 18-Shaft	1
28	Socket head cap screw M6X16	10	63	Ball Bearing 6204-ZN	2
29	Safety Belt Unit	1	63a	Stopper Screw M5X10	1
30	Protection Steel Cover-Safety Belt	1	64	Sprocket Wheel-11 teeth（11 齿）	1
31	Platform	1	64a	Plain Washer	2
32	Socket head cap screw M10X20	6	64b	The countersunk head screw M6X16	2
33	Spring Washer 10	7	65	Reducer seat	1
34	Plain Washer 10	6	66	Worm Gear Box assembly	1
35	Hex flange self-locking nut M6	7	67	Socket head cap screw M6X25	3
36	Platform Base Frame ， Weld	1	68	The countersunk head screw M4X10	4
37	The hexagonal locking nut M10	2	69	Limit Switch	2
38	Load Chain Buffer Spring	1	70	Fuse holder	1
39	Load Chain 08B		71	Plug fuse(40A)	1