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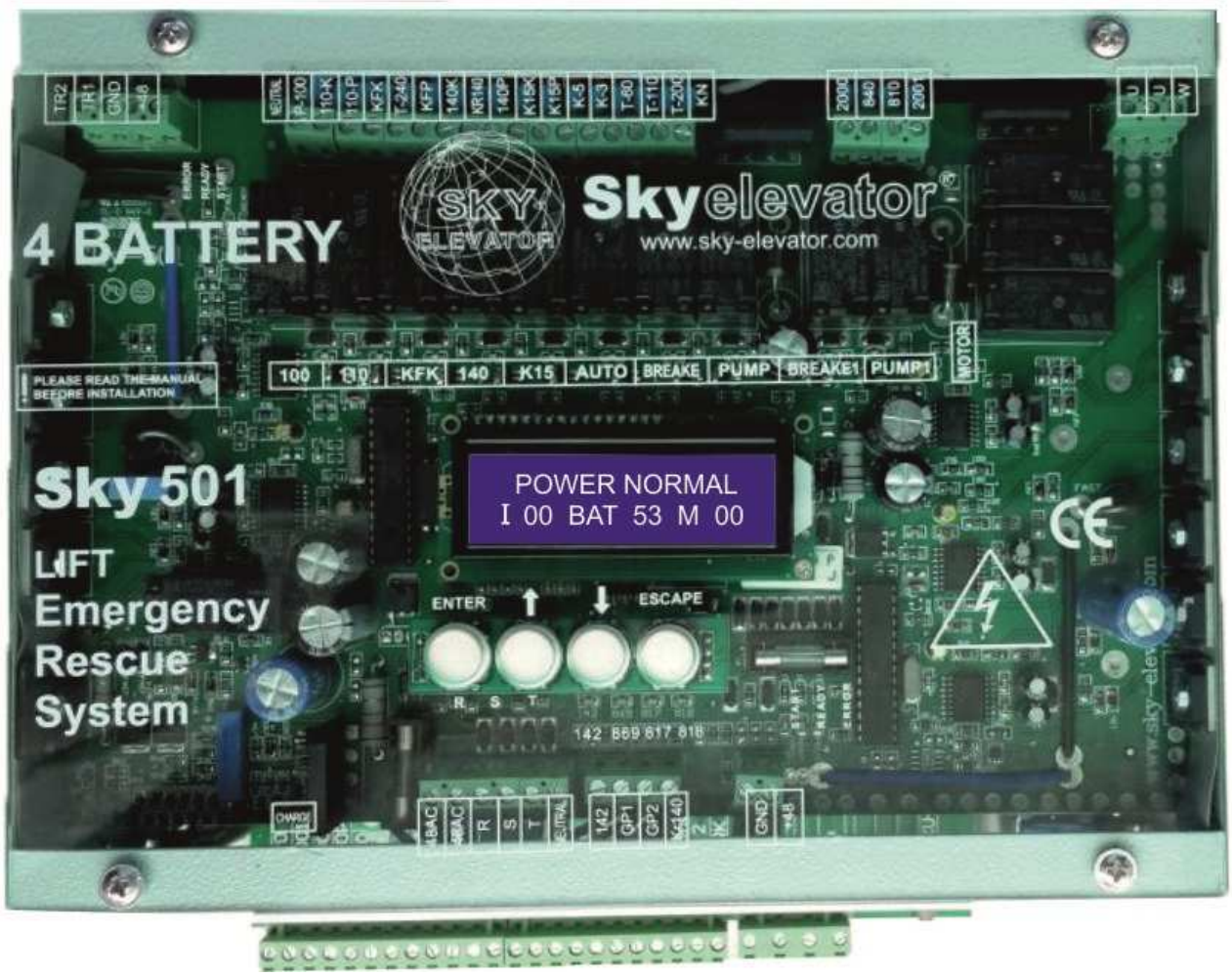

Sky-501

Electronic Rescue Systems

USER MANUAL

V - 2.0

RESCUE UNIT

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DIMENSIONS	255 × 245 × 145 mm
OPERATION TEMPERATURE	0°C -- 60 °C
PROTECTION CLASS	IP20
MOISTURE	<%95
SYSTEM INPUTS	3 x 110V, 60 Hz, N
CONTROL SUPPLY VOLTAGE	48 ± 5V DC
BATTERY TYPE	4 x 12V Dry Type
SECURITY CIRCUIT VOLTAGE	MAX. 48V DC
MAX. OUTPUT SIGNAL	1.5 kW Inverter (With 12 Ah Battery) 4.5 kW Motor
CONTROL SIGNAL INPUT	48 ± 5V DC With Short Circuit Protection
MANUFACTURER	**Sky Elevator** **ISTANBUL** **Tel:+0090 2124441988** **www.sky-elevator.com**

CONTENT

Sky elevator RESCUE UNIT FEATURES

- Compatible with all panels as external.
- Becomes activated at power cut and phase problems. It directs the lift to the predetermined floor and evacuates the passengers by opening automatic door.
- Parameters can easily adjust with program buttons and LCD screen.
- All failure warnings such as working state, battery voltage, motor current, inverter current (pump, brake, and door) displayed on the LCD screen.
- Works with 4 units of maintenance free dry battery. Even if the battery voltage is very low, it has smart charging system to charge all batteries that still not lose its property.
- The inverter and motor outputs are full short circuit protected (***overheating, overcurrent, overvoltage protected***).
- By doing current control, it perceives if the motor is connected or not.
- With a suitable battery, up to 16 kW, it can be used with all motors without making any changes.
- No needs to connect sensors to motor.
- In the case of failure, it can be disabled with three shunts.
- For the buildings with generator, the 'generator waiting time' can be adjustable. After 'JF' (level stopper) is sensed, the motion time can be adjustable.
- The 3-phase can be used with full-auto, half-auto, and manual doors.
- Adjustable '*door opening/closing*', '*waiting locked*' and '*max. rescue*' time.
- Easily applicable to all systems.

Sky elevator RESCUE UNIT MONTAGE GUIDE

U.V.W → → → to motor fast ends (**WITH AT LEAST 2, 5 mm WIRE**)

110. P → → → to *panel 110* (start of panel security circuit from panel to rescue unit)

110. K → → → to *shaft 110* (start of panel security circuit from rescue unit to panel)

140. P → → → to *panel 140* (the signal coming from the shaft is from rescue unit to panel)

140. K → → → to *shaft 140* (signal coming from the shaft is from shaft unit to rescue unit)

220. P → → → Empty

220. K → → → Empty

810 - → → → Pump (-), parallel with panel

2001 + → → → Pump (+), parallel with panel

840 + → → → Brake (+), parallel with panel

2000 - → → → Brake (-), parallel with panel

K.N → → → Rescue Neutral

100 → → → Panel 100 (directly connected)

KFP → → → Door Phase Panel (phase from panel to automatic door supply)

KFK → → → Door Phase Shaft (phase from panel to automatic door supply)

K3 → → → Open Automatic Door (directly connected)

K5 → → → Close Automatic Door (directly connected)

K15K → → → Door Open/Close Common Shaft (look at door schematics door detailed explanation)

K15P → → → Door Open/Close Common Panel (look at door schematics door detailed explanation)

KR1 → → → General purposed 220V, generated during rescuing (Max.40W)

48AC → → → Panel Transformer 48V AC (for battery charge)

48AC → → → Panel Transformer 48V AC (for battery charge)

RR → → → Phase (after thermic)

SS → → → Phase (after thermic)

TT → → → Phase (after thermic)

Neutral → → → Main Network Neutral

142 → → → Level Stopper (directly connected)

Sky elevator RESCUE UNIT PARAMETER SETTINGS

1. Press the '*enter*' button to enter the parameter settings menu,
2. Press '*up*' or '*down*' buttons in order to find the desired setting,
3. Press '*enter*' button to change the value of the desired parameter, the chosen parameter is going to be blink, set the parameter to desired value by using '*up*' and '*down*' buttons (if you don't want to store the value in memory press '*escape'* button),
4. After setting the parameter value, press '*enter*' button to memorize it, then it passes the next parameter.
5. Press '*escape*' button to exit from parameter settings menu.

☞ EXAMPLE: Setting the generator waiting time

- Press '*enter*' button to enter the parameter setting menu,
- Press '*up*' button until find '*gen. waiting*' parameter
- Press '*enter*' button again, '*gen. waiting*' number will blink,
- Choose the waiting time using the '*up*' and '*down*' buttons
- Press '*enter*' button to memorize the value and pass the next parameter setting.

Sky elevator RESCUE UNIT PARAMETER LIST

PARAMETER	SETTING LIMITS	FACTORY VALUE	EXPLANATION
GEN.WAITING	1 – 90	1	Waiting time to activate the generator if system has one.
TRYING QTY	1 – 5	3	Number of trial to rescue setting
FLOOR TIME	0–99	59	Waiting time at the Floor
LOCK TIME	3 – 30	10	While rescuing, lock waiting time setting
DOOR TYPE	0 – 1	0	--
DOOR TIME	0 – 30	5	--
JF TIME	0 – 15	0	Motion time after level stopper detected
THERE PHASE	220–380	380	Engine connection Star=380 Delta=220
DOOR TEST TM	0 –15	0	Door test waiting time
LIR_BRAKE V	220 – 60	60	Brake Voltage value
ENGINE TYPE	0 – 1	0	Gear = 0 Gearless = 1
MOTOR TORQUE	0 – 5	0	You Should Up The Value If Machine Is High Amper Shaft (Not Round Stability)
INV.CURRENT	0 – 5	0	You Should Up The Value If BRK/CAM Is High Amper Shaft

RESCUE UNIT MAIN SCREEN AND ERROR CODES

☞ POWER NORMAL
I 05 BATT. 055 M 12

- I : Current of Inverter (pump, brake, door) tolerance 01%
- BATT. : Battery Voltage, tolerance 01%
- M : Current of Motor, tolerance 01%

☞ GEN. WAITING
I 05 BATT. 055 M 12

- Waiting for '*generator waiting time*'

☞ INVERTER ACTIVE
I 05 BATT. 055 M 12

- Generator waiting time is over, inverter time is activated

☞ DOOR TEST WAIT
I 05 BATT. 055 M 12

- Waiting for Door test (120), series (130), lock (140)

☞ 120-130-140 WAIT
I 05 BATT. 055 M 12

- Waiting for stop (120), series (130), lock (140)

RESCUE ACTIVE
I 05 BATT. 055 M 12

- Rescue unit active, car is in motion

INV. OVER CURR.
RESCUE ERROR

- Short circuit at pump, brake and motor circuit
- Check the pump, brake, motor diode and their connections
- Check the pump and brake coil
- Check if there exist any short circuit between *KFK* and *KN*

MOTOR OVER CURR.
RESCUE ERROR

- Check the U, V, W connectors,
- Check the motor for short circuit

120-130-140 ERR
RESCUE ERROR

- 120-130-140 is deactivated. Control 120-130-140.
- Check the connection of 110K-110P and 140K-140P
- Check the 2A fuse on the connector card.

☞ MOTOR LOST
RESCUE ERROR

- Control if the U, V, W ends correctly connected to the high speed contactor

☞ BATTERY VOLTAGE
LOW

- The battery's voltage is under 42V limit. They have to be charged at least for 24 hours.

☞ POWER LOST
DOOR OPENING

- The car is at the predefined floor and waiting for the '*door opening time'*.

☞ POWER LOST
CAR AT THE FLOOR

If it is perceived as at the floor when exactly not at the floor

- Check the connection between 100 connectors on the connector card and on the panel.
- When it's in between the floors, 142 led must be lighted.

☞ POWER LOST
END OF RESCUE

- The car is at its floor, door is open and rescue is over.

SUGGESTIONS FOR BATTERY TYPE

- ☞ For up to 11kW local motors : 12V 12Ah battery
- ☞ For higher local motors : 12V 12Ah battery
- ☞ For up to 6kW Schindler Motors : 12V 12Ah battery
- ☞ For higher Schindler Motors : 12V 12Ah battery

WARNING!!!

- **BATTERY CONNECTION WIRES MUST BE AT LEAST 2.5MM IN DIAMETER**
- **THE U,V,W MOTOR CONNECTIONS MUST BE AT LEAST 2.5 MM IN DIAMETER**
- **DO NOT TOUCH THE UNIT'S TERMINALS WHEN BEING ACTIVATED AND DOING RESCUE**
- **DO NOT SHORT CIRCUITED ANY SECURITY CONTACT IN ORDER TO ACTIVATE THE UNIT**

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