



# Skyelevator®



## Skyelevator RESCUE UNIT

## USER MANUAL

V - 1.0

[www.sky-elevator.com](http://www.sky-elevator.com)

## 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 220/380 , 50/60 Hz, N
CONTROL SUPPLY VOLTAGE	48 ± 5V DC
BATTERY TYPE	4 x 12V Dry Type
SECURITY CIRCUIT VOLTAGE	MAX. 48V DC
MAX. OUTPUT SIGNAL	3 x 220 V / (With 12 Ah Battery) 7,5 kW Motor 3 x 380 V / (With 12 Ah Battery) 15 kW Motor
CONTROL SIGNAL INPUT	48 ± 5V DC With Short Circuit Protection
MANUFACTURER	<b>Sky Elevator</b> <b>ISTANBUL</b> <b><u>Tel:+0090 2124441988</u></b> <b><a href="http://www.sky-elevator.com">www.sky-elevator.com</a></b>

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## Skylelevator 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.

## Skyelevator RESCUE UNIT MONTAGE GUIDE

U.V.W	→ → →	to motor fast ends ( <b>WITH AT LEAST 2, 5 mm WIRE</b> )
110. P	→ → →	to <i>panel 110</i> (start of panel security circuit from panel to rescue unit)
110. K	→ → →	to <i>shaft 110</i> (start of panel security circuit from rescue unit to panel)
140. P	→ → →	to <i>panel 140</i> (the signal coming from the shaft is from rescue unit to panel)
140. K	→ → →	to <i>shaft 140</i> (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)

## Skylevator 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.

## Skylevator RESCUE UNIT PARAMETER LIST

PARAMETER	SETTING LIMITS	FACTORY VALUE	EXPLANATION
GENERATOR WAITING	1 -- 90	1	Waiting time to activate the generator if system has one.
TRIAL NUMBER	1 - 5	3	Number of trial to rescue setting
LEVEL TIME	10 – 200	59	Rescue time setting
LOCK TIME	3 – 30	10	While rescuing, lock waiting time setting
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

## 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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