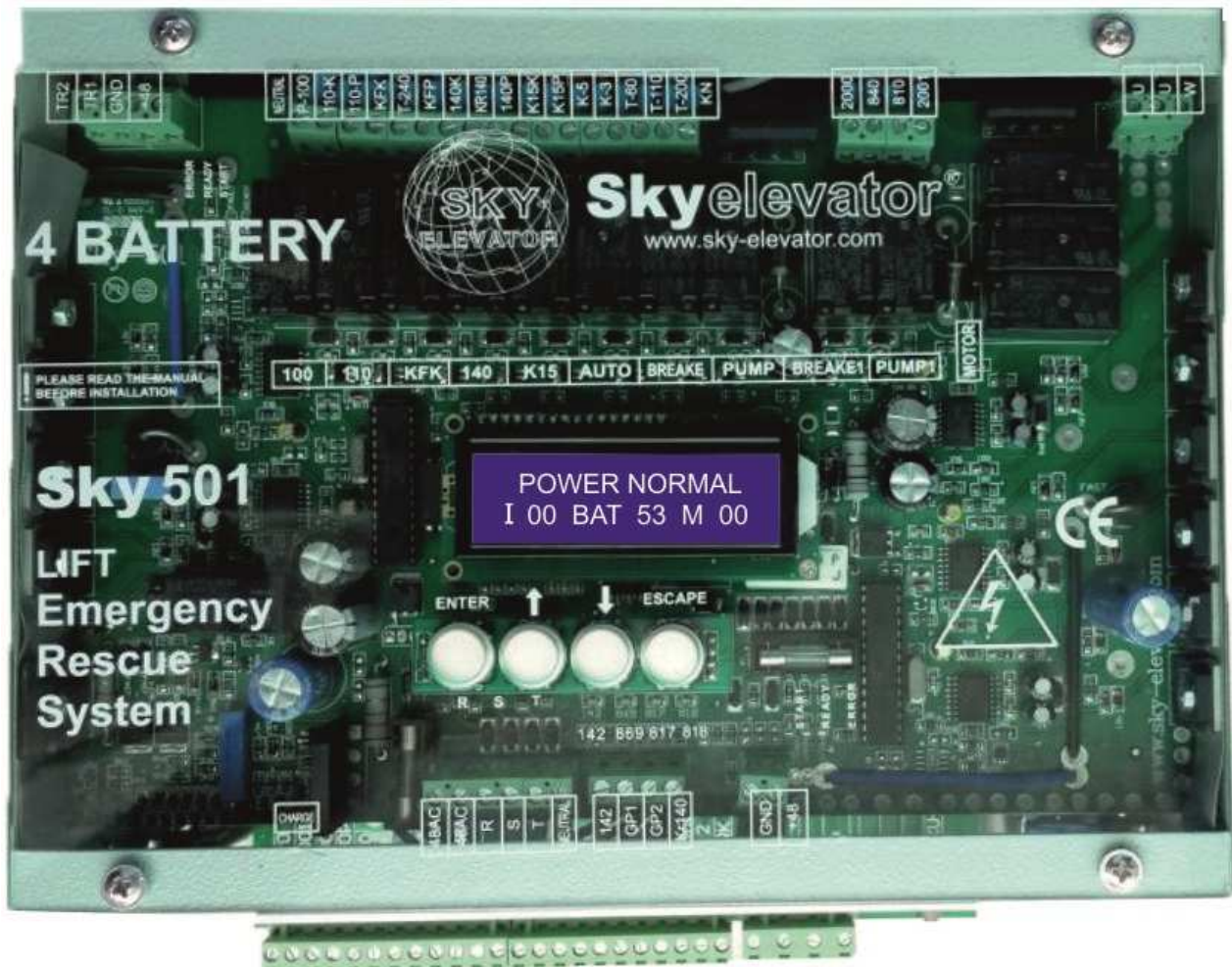




Sky
Elevator
www.sky-elevator.com



Sky-501

Electronic Rescue Systems USER MANUAL

RESCUE UNIT

THIS DOCUMENT IS A SAMPLE FOR APPLICATION. ALL INFORMATIONS CONTAINED IN THIS DOCUMENT ARE SUBJECT TO CHANGE BY Skyelevator WITHOUT NOTICE. Skyelevator ASSUMES NO RESPONSIBILITY FOR ANY DAMAGE, LIABILITY OR OTHER LOSS ARISING FROM THESE INACCURACIES OR ERROR

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

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Skyelevator 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.

Skylevator RESCUE UNIT MONTAGE GUIDE

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

Skylelevator 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
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	--
MOTOR TORQUE	0 – 5	0	--
INV.CURRENT	0 – 5	0	--

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

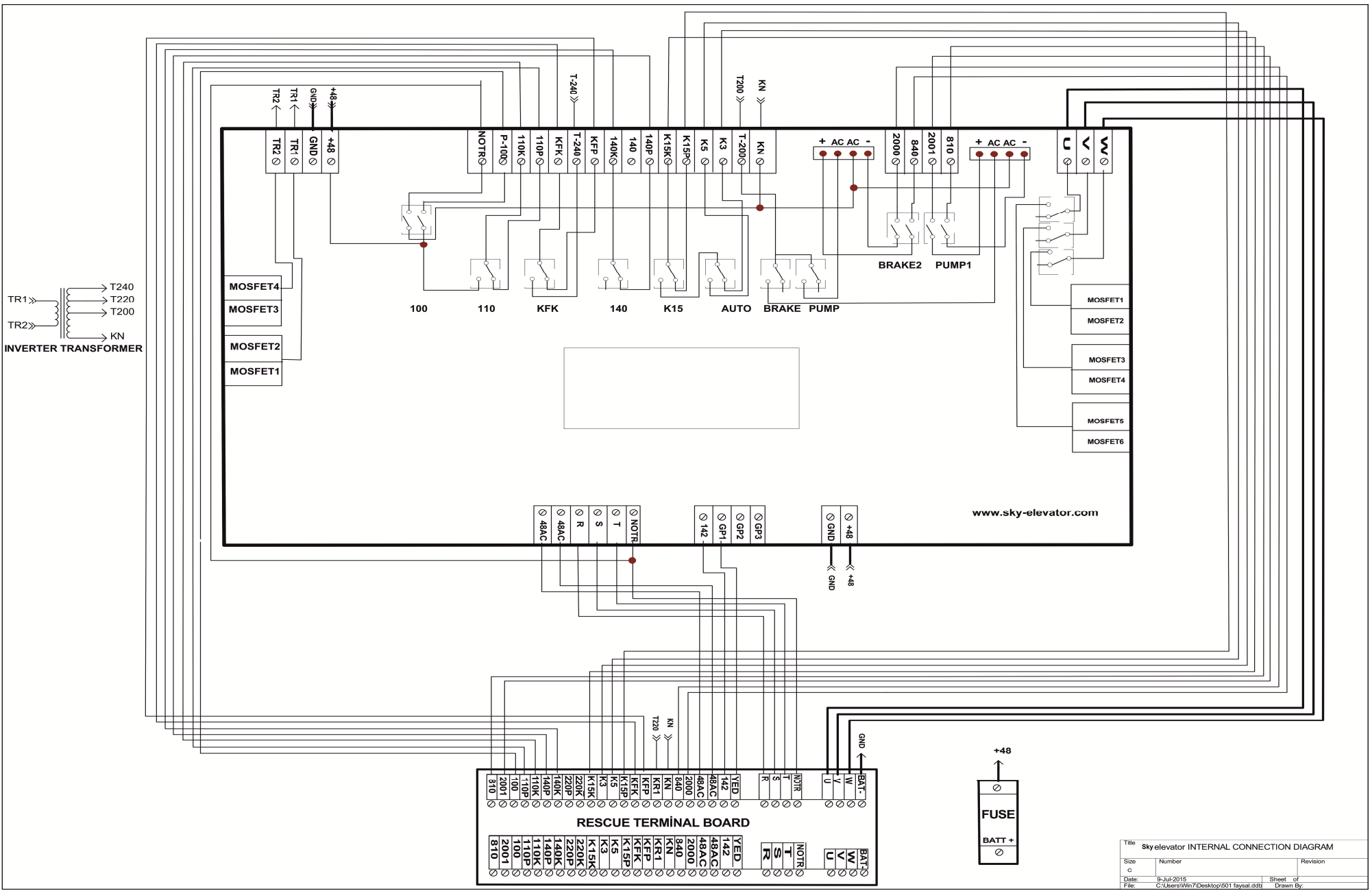
- The car is at its floor, door is open and rescue is over.

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**



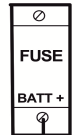
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RESCUE UNIT

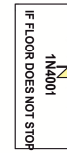
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RESCUE TERMINAL BOARD



PANEL

PANEL TERMINAL



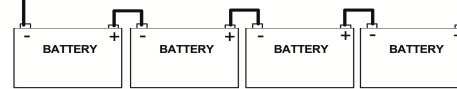
MAIN SUPPLY

MOTOR HIGH SPEED

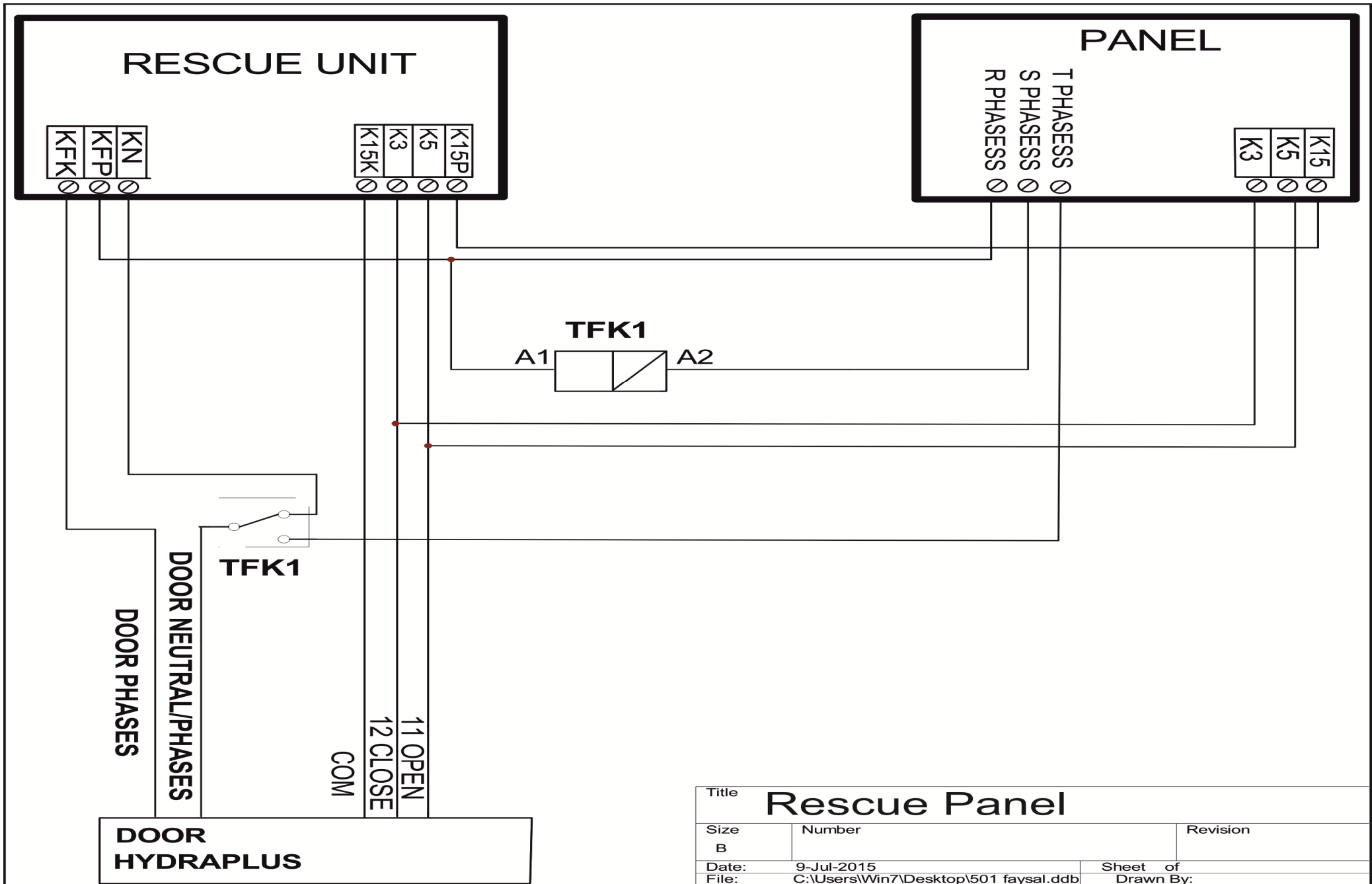
ENGINE BRAKE SWITCH (GEARLESS ONLY)

TO ENGINE FAST POINTS

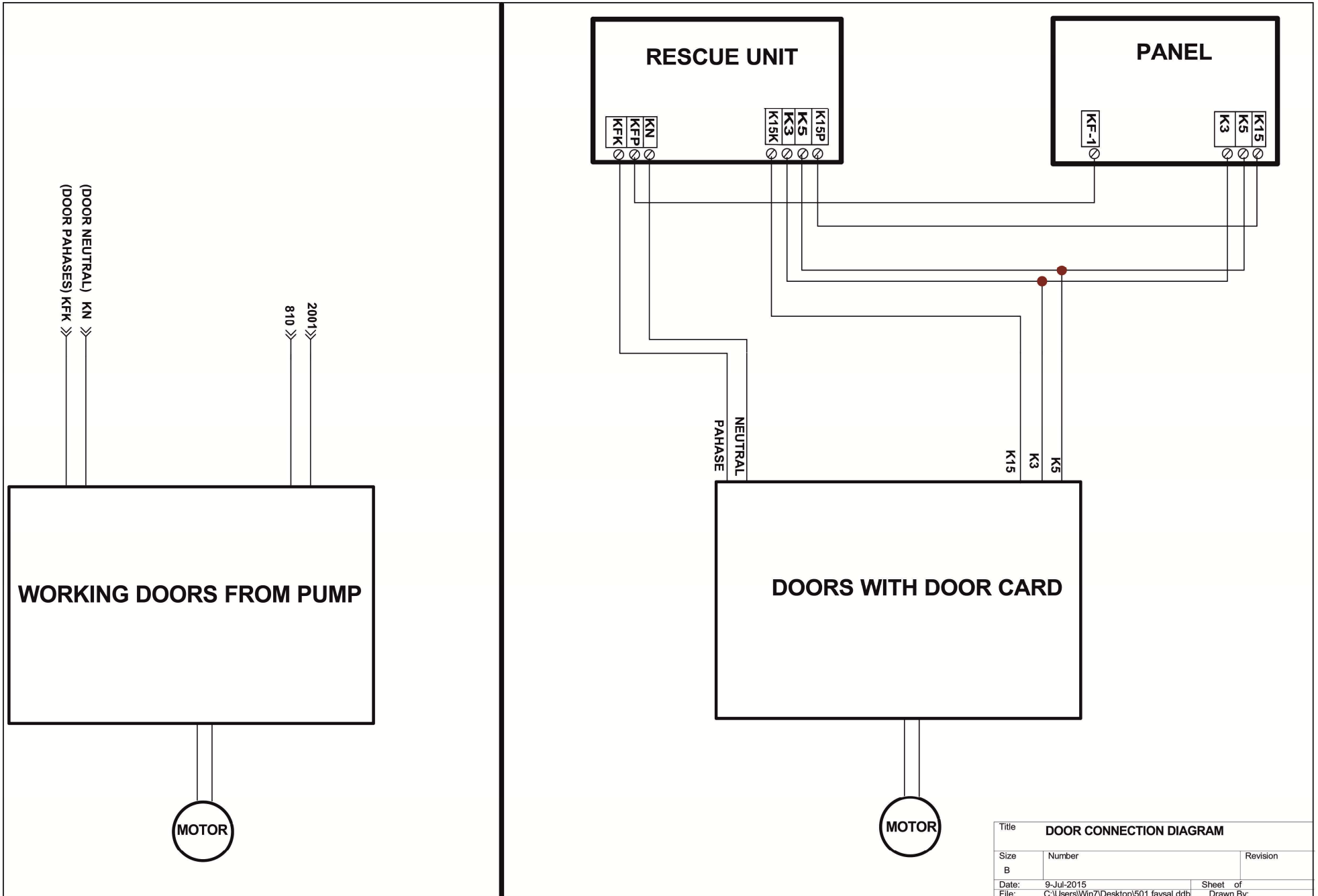
- UVW PANEL 110
- 110.P SHAFT 110
- 110.K PANEL 140
- 140.P SHAFT 140
- 140.K NO CONNECTION
- 220.P NO CONNECTION
- 220.K PUMP -
- 810- PUMP +
- 2001+ BRAKE +
- 840+ BRAKE -
- 2000- RESCUE(DOOR) NEUTRAL
- K.N INSIDE OF PANEL'S 100, CONNECTS DIRECTLY
- 100 DOOR PHASE PANEL
- KF.P DOOR PHASE SHAFT
- KF.K AUTO DOOR OPEN CONNECTS DIRECTLY
- K 3 AUTO DOOR CLOSE CONNECTS DIRECTLY
- K 5 FROM SHAFT K15
- KR 1 TO PANEL K15
- K15K PANEL TRANSFORMER 48 VOIFDR BATTERY CHARGE
- K15P PANEL TRANSFORMER 48 VOIFDR BATTERY CHARGE
- 48 AC R PHASE (AFTER THERMIC)
- 48 AC S PHASE (AFTER THERMIC)
- R TR PHASE (AFTER THERMIC)
- S NOTR MAIN SYSTEM NEUTRAL
- T 142 CONNECTS DIRECTLY
- NOTR SPARE INPUT
- 142 SPARE INPUT
- GP1 SPARE INPUT
- GP2 SPARE INPUT
- GP3 SPARE INPUT



Title		
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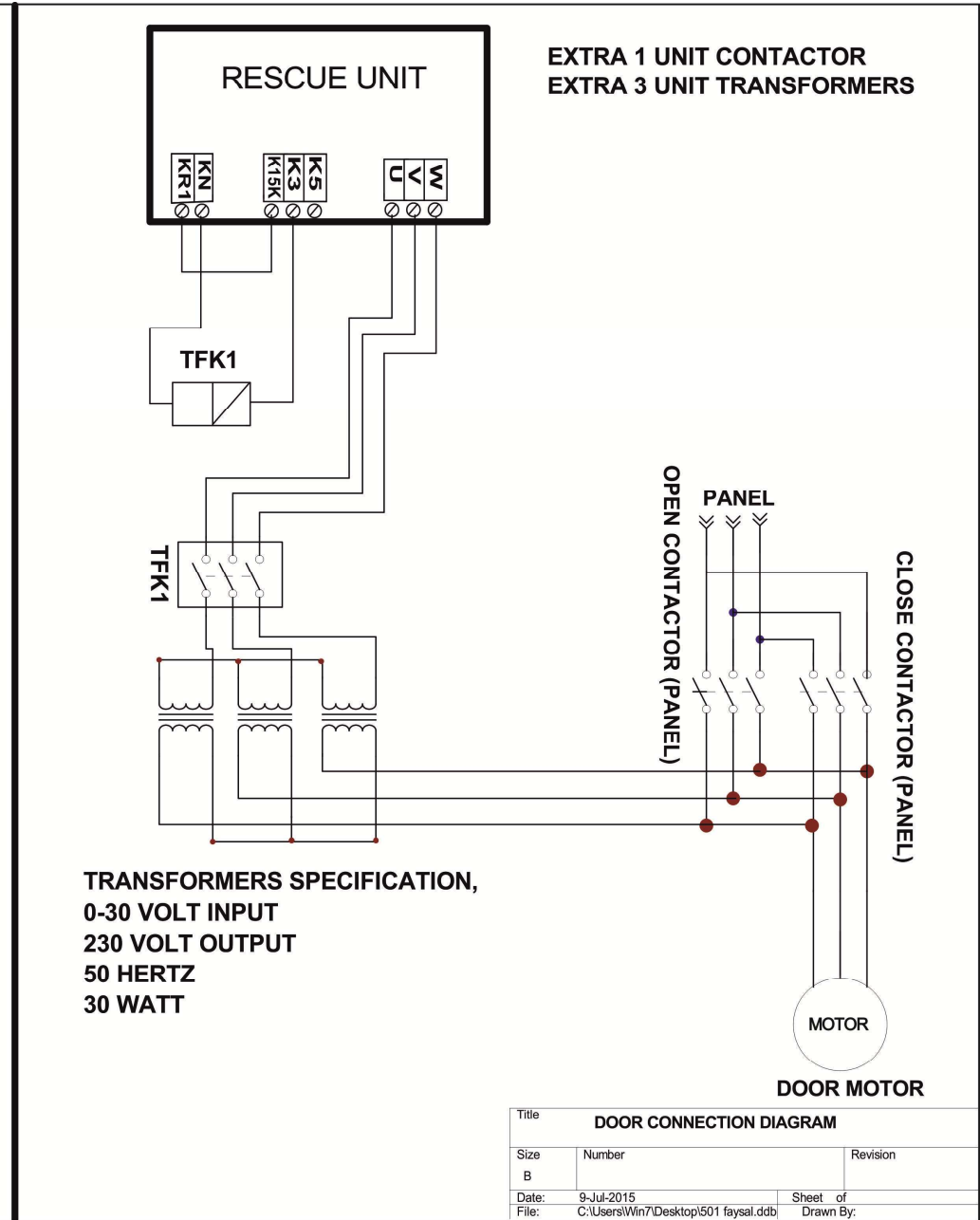
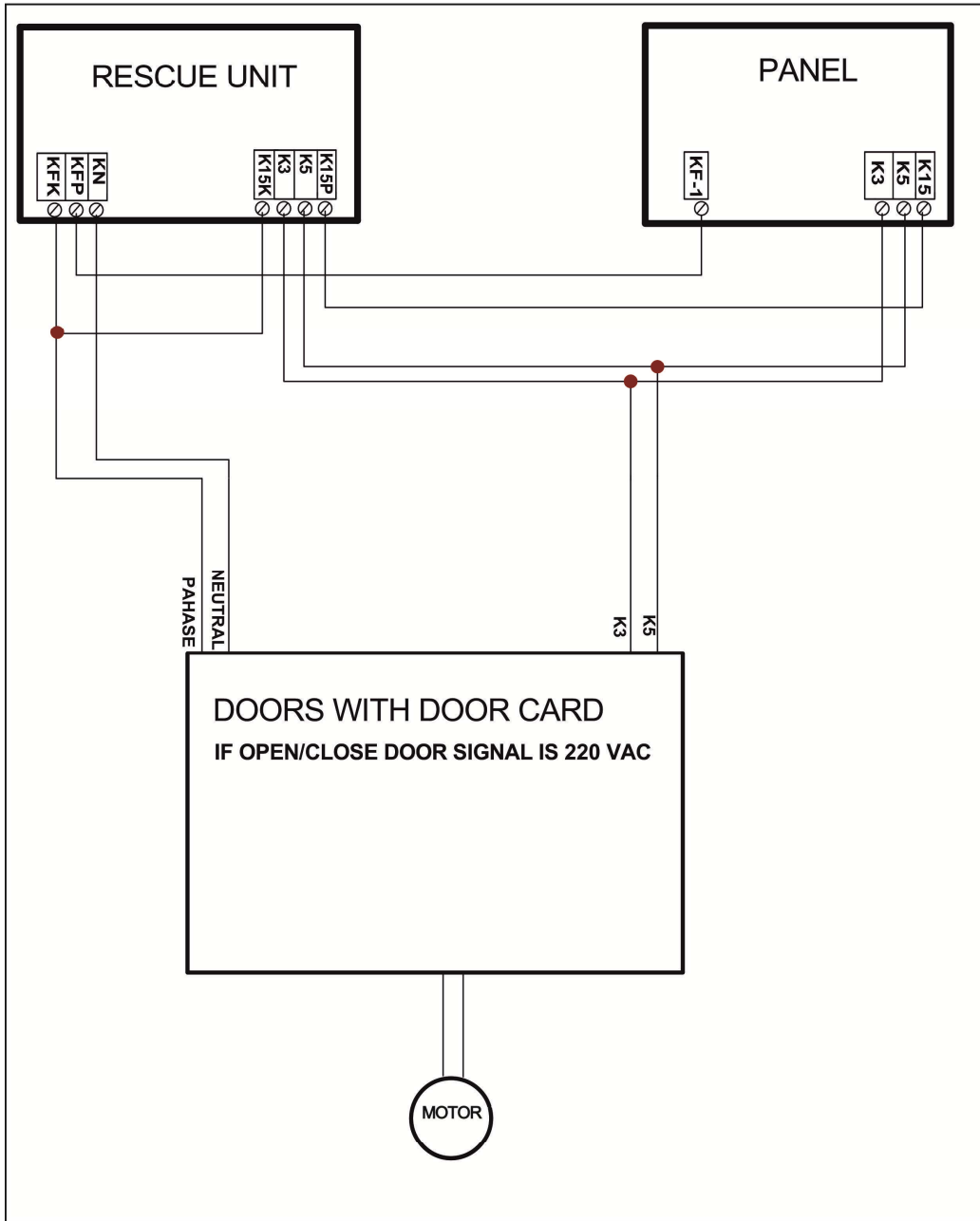


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