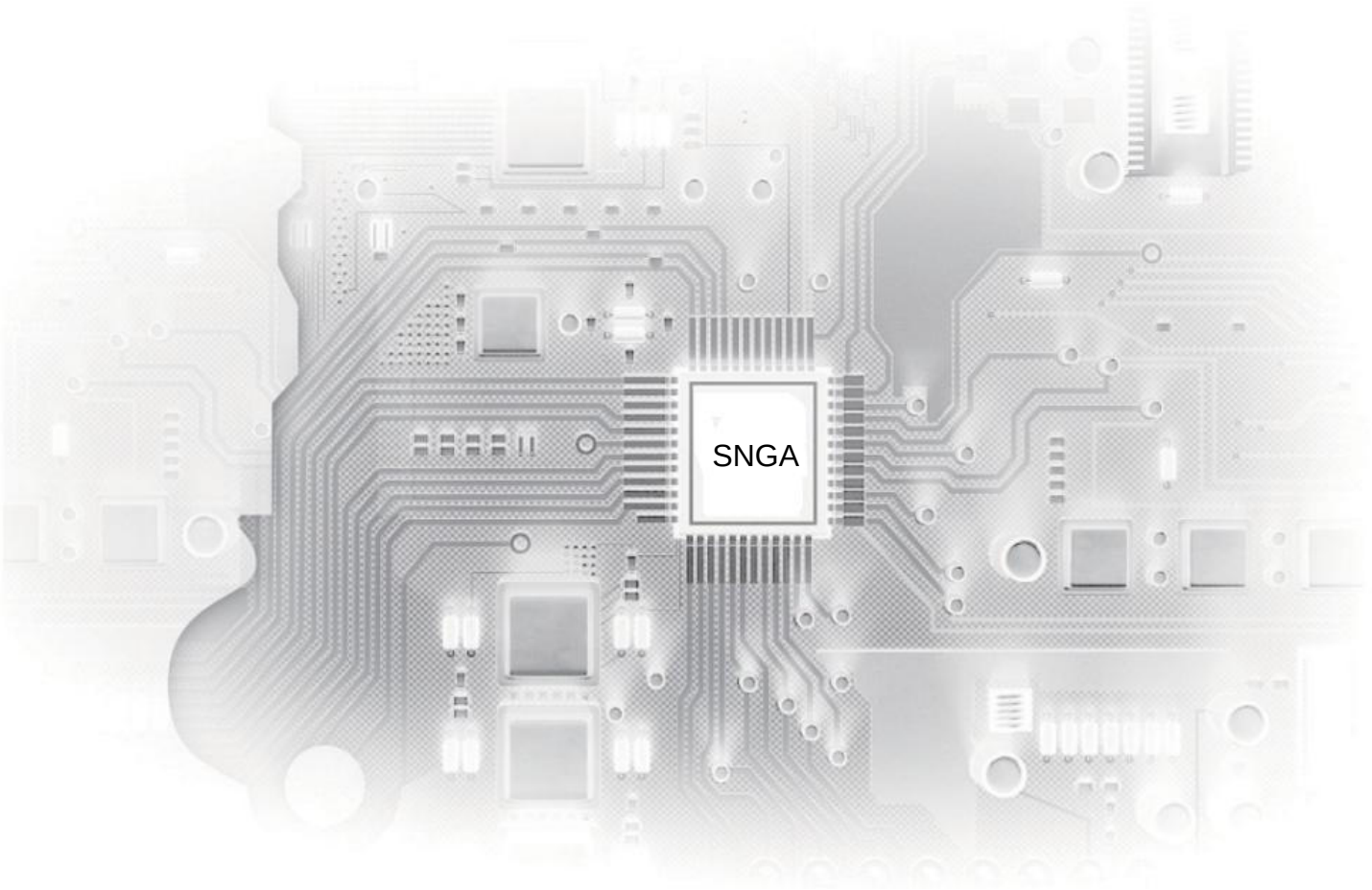
ARD Elevator Automatic Rescue Device (ARD)

(SNGA 2P/380) operation manual



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1. Introduction

ARD used to provide back-up emergency power supply to lift frequency control system. It has significant advantages such as installation convenience, wiring simple, high performance cost ratio, etc. In case of power failure, ARD run automatically in the set time, make the lift car run slowly to the nearby flat to save passengers.

2. Attentions before installation

2.1. Please be sure to read this manual carefully In order to use ARD correctly.
2.2. This manual applies for the 2-phase output ARD.
2.3. Must be take safety measures before using ARD as follows in order to avoid people and equipment accident:
2.3.1 Cut off the power supply before installation.
2.3.2 Please make sure that the elevator various equipment grounding good.
2.3.3 In order to prevent the installation or maintenance personnel cause harm, avoid damage to elevator equipment, please follow the instruction for use ARD.
2.3.4 Make sure the electric system contact correct between ARD and elevator.
2.3.5 ARD must be installed by elevator professional technician.
2.4. This manual introduces ARD's installation and connection steps, signal terminal.
2.5. We will not notify if the introduction has changed.

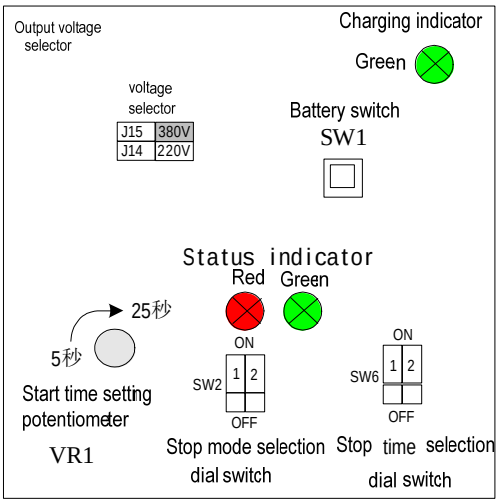
3. Function features

3.1. ARD is in standby mode in case of normal power supply, battery charged. ARD start into the inversion model automatically when power supply failure, provides backup power supply to elevator controller. ARD also can be quickly returned to standby mode when supply restoration.
3.2. The time from power supply failure to ARD starting can be adjusted to 5- 25s by potentiometer.
3.3. ARD work time can be set in the following 3 ways by 2-bits dial switch:
3.3.1. Bit 1 = ON, Bit 2 = OFF
ARD delay 10 s stop when received the door-lock off signal. The door-lock off signal is from NC contact of door-lock relay. In case of the door-lock signal not be used, ARD stop after continuous working 5 min.
3.3.2. Bit 1 = ON, Bit 2 = ON
ARD delay 10 s stop when received the door-lock off signal. The door-lock off signal is from NO contact of door-lock relay. In case of the door-lock signal not be used, ARD stop after continuous working 5 min.
3.3.3. Bit 1 = OFF, Bit 2 = ON or OFF
ARD work continuously until the battery energy is exhausted.

4. Installation and connection

4.1. Installation: ARD has bolt hole on the bottom of the box, can be fixed firmly in structure with M8 bolt.

4.2. Voltage selection: Before use, please check the 4 place voltage selector state whether with the actual voltage consistent. The voltage selector position as follows:



4.3. Choosing stop pattern by the dial switch

1	SW2-1 = ON SW2-2 = OFF	ARD delay 10 s stop when received the door-lock off signal. The door-lock off signal is from NC contact of door-lock relay. In case of the door-lock off signal not be used, ARD stop after continuous working 5 min.
2	SW2-1 = ON SW2-2 = ON	ARD delay 10 s stop when received the door-lock off signal. The door-lock off signal is from NO contact of door-lock relay. In case of the door-lock off signal not be used, ARD stop after continuous working 5 min.
3	SW2-1 = OFF SW2-2 = OFF or ON	ARD work continuously until the battery energy is exhausted.

1	SW6-1 = ON SW6-2 = OFF	After inverter output, stop for 2 minutes
2	SW6-1 = ON SW6-2 = ON	After inverter output, stop for 1 minutes
3	SW6-1 = OFF SW6-2 = OFF	After inverter output, stop for 5 minutes

4.4. Setting start time by potentiometer VR1

Minimum time: About 5 s (counter clockwise). Maximum time: About 25 s (clockwise)

5. Modify and use introduction

5.1. Installation and using ARD must be after lift running normal.

5.2. At first, disconnect the elevator general power. Than complete connection between ARD and lift controller according to this manual, check and confirm the right connection. Make sure connect the normal power supply L1, L2, L3 to ARD's L1, L2, L3 (R, S, T) terminal, and ARD's T1, T2, T3 (U, V, W) terminal to lift controller's power input terminal. ARD may be damaged and accidental injury may be happen if connection error.

5.3. Switch on the normal 3-phase power, than switch on ARD's outside power switch, push on the ARD's inside battery button. The red charging LED and the green status LED show. That indicate ARD is in standby model and battery is recharging.

5.4. Switch on the normal 3-phase power, ARD's red and green status LED show simultaneously. After the setting time, ARD's red status LED show, meanwhile output 2 phase power to lift control system.

5.5. Switch on the normal 3-phase power again, ARD restore to standby state.

6. Maintaining

6.1. Battery must be charged in first using or after a long leave unused.

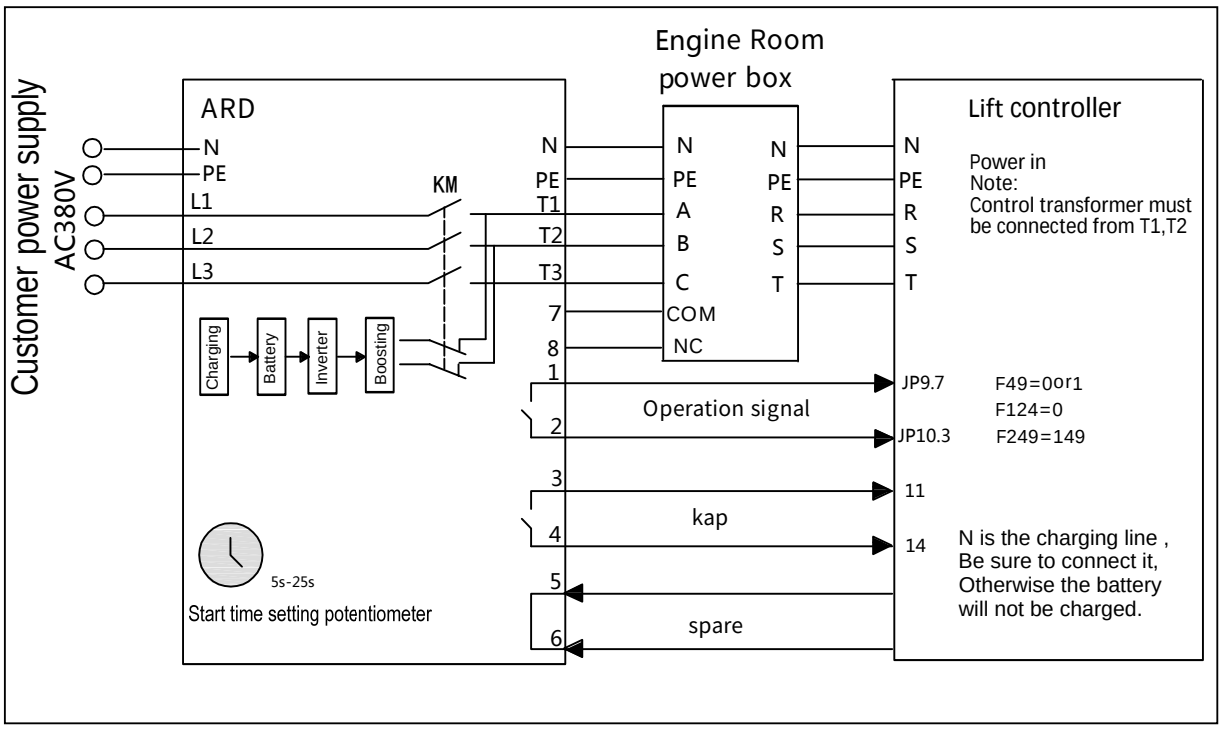
6.2. Please replace the battery if finding battery leakage or other abnormal.

6.3. Propose discharging battery per 3-6 month.

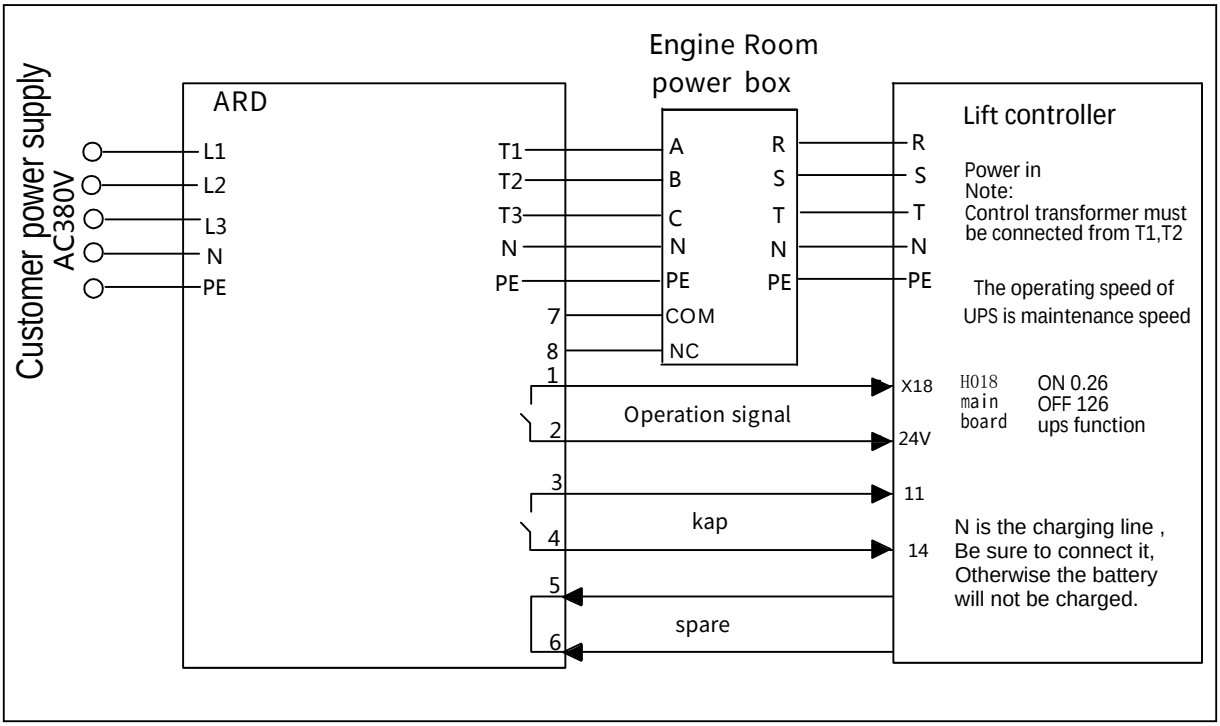
6.4. When needing to shut off the lift power to repair, please be sure to close ARD, to prevent accidental injuries.

Specification		ARD- -055	ARD- -075	ARD- -110	ARD- -150
Max. applicative power		5.5 KW	7.5 KW	11KW	15 KW
Input	Phase number	3-phase (Charging with 2-phase power input from L1, L2)			
	Voltage	AC400 V ±10% , 50 Hz			
Output	Phase number	2-phase (Terminal T1, T2)			
	Voltage	AC400 V ± 20%, 50Hz			
Battery	Voltage & Capacity	DC 12V, 4 AH	DC12 V, 7AH	DC12V, 7AH	DC12V, 8 AH
	Charging time	Normally 20 hours			
Start pattern		Automatic, start time can be set in 5 – 25 s			
Stop pattern (3-way may be selected)		1. Delay 10 s stop when received the door interlock break signal. The door interlock break signal take from NC contact of door interlock relay. In case of the door interlock signal not be used, ARD stop after continuous working 5 min. 2. Delay 10s stop when received the door interlock break signal. The door interlock break signal take from NO contact of door interlock relay. In case of the door interlock signal not be used, ARD stop after continuous working 5 min. 3. Working continuously until the battery energy is exhausted.			
Protection function		Over voltage protection and over current protection			

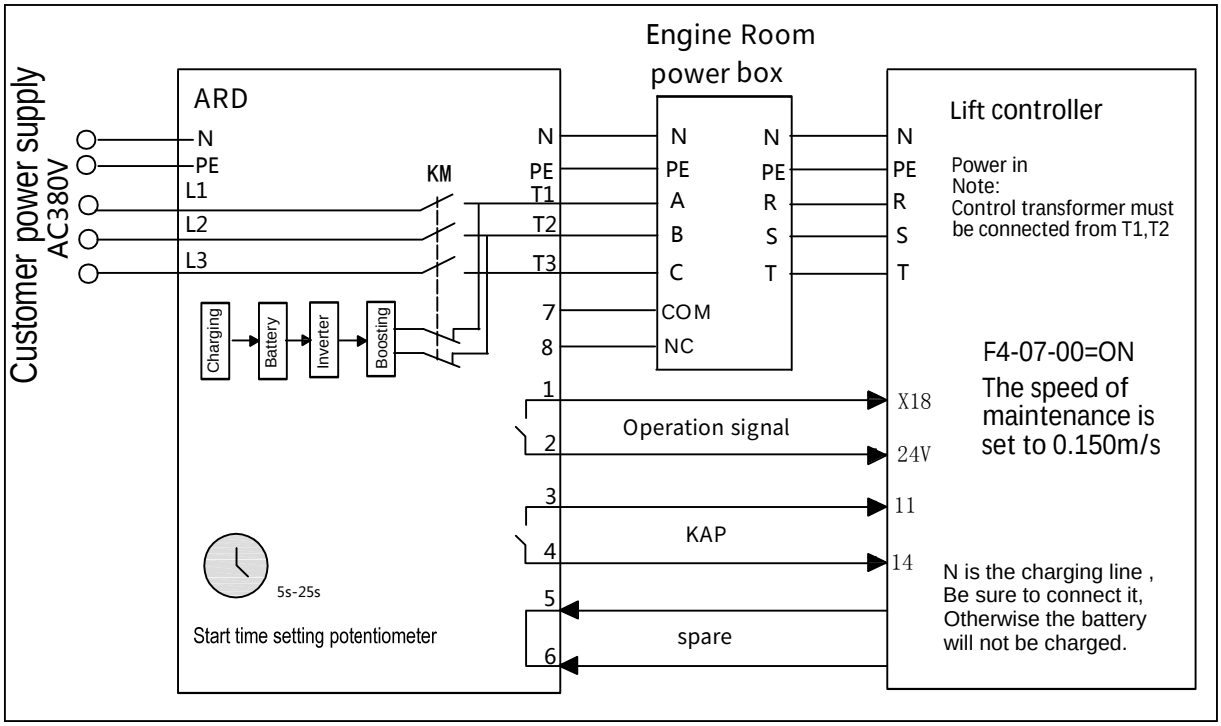
AS380 Integrated Machine system



Beijing sode E9 serial-one system



Blue serial-one system



Monarch NICE3000+Serial Integrated Machine system