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This manual uses the following conventions.

In this manual, we refer to low voltage and high voltage as **LV** and **HV** for short.

To avoid personal injury, property damage, or accidental damage to the product, please read all information in this chapter before using the product.

Operating Regulation and Requirements for HV Equipment

(1) Please read this manual carefully and operate the equipment in accordance with relevant guidelines and safety regulations.

(2) During maintenance, it is required to wear necessary safety protection articles with a voltage resistance level greater than 1000V.

(3) When disassembling, connecting and operating HV appliances and equipment, attention shall be paid to whether the protection of sheet metal on the vehicle body is normal to avoid wear.

(4) When installing connectors and terminals of HV components, please ensure that the connectors are properly installed and confirm that connection is reliable.

(5) During maintenance, please try to use one hand.

(6) When using digital power, please keep the station dry, bright, and ventilated to prevent electric shock accident caused by the damp environment

(7) In case of abnormal accident or fire, operators shall immediately cut off

HV and LV circuits, evacuate personnel, and extinguish the fire with the fire extinguisher and fire sand under the condition of ensuring their own safety.

(8) During power output of digital power, please do not operate the equipment or connect the cable harness with power on.

(9) Improper use of digital power may cause personal injury.

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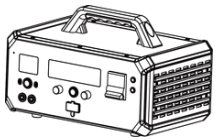
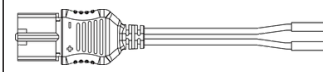
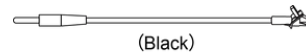
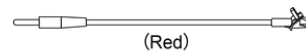
1. Packing List

The following accessories are for reference only. Please consult from the local agency or check the package list supplied with this equipment together.

Main Unit and Accessories			
NO.	**Name**	**Q'TY**	**ReferencePicture**
1	**ELA320**	1	
2	**AC Power Cord**	1	
3	**HV Extension Cable**	1	
4	**HV Wire (Alligator Clip-Fits)**	1	

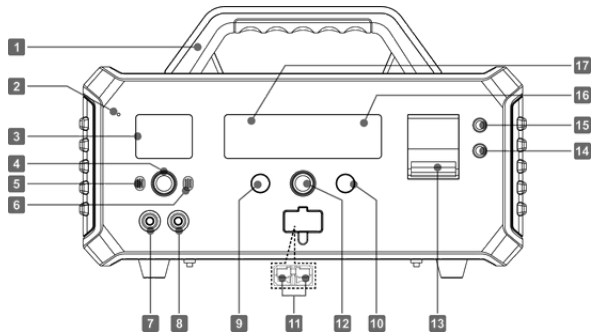
5	**HV Jumper Cable (4mm Banana Plug)**	1	
6	**LV Wire (Alligator Clip-Fits)**	1	 (Black)
	LV Wire (Alligator Clip-Fits)	1	 (Red)
7	**Certification**	1	-
8	**User Manual**	1	-
9	**Packing list**	1	-

2. Product Introduction

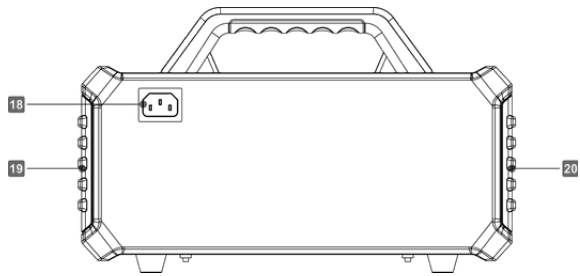
2.1 Overview

ELA320 Intelligent Digital Power Supply for automobile maintenance is a dual-output switching DC stabilized voltage supply developed by Launch for both new energy vehicles and fuel vehicles. This product has stable current output, excellent performance indicators, and a variety of protection mechanisms. It is a smart digital power supply dedicated to auto repair, which is safe and easy to use, and supports Bluetooth control.

2.2 ELA320



Front View



Rear View

No.	Name and Description
1	**Handle**
2	**Buzzer Hole** The buzzer will keep sounding when the HV output.
3	**Display Area for LV Value** Display the current LV output value.
4	**LV ON/OFF Button** Turn on/off LV output. Under LV output, the LED light (green) o the button is always on; When the LV is not output, he LED ligh (green) of the button is off.
5	**Button of 12V Voltage** Press this button to switch to the gear of 12V output voltage.
6	**Button of 24V Voltage** Press this button to switch to the gear of 24V output voltage.
7	**Positive Electrode of LV Output Port (Red)** **Negative Electrode of LV Output Port (Black)**
8	**Adjusting Knob for HV Current**
9	This knob is used to adjust the set HV current value. The curre can be adjusted from 0 to 5A.
10	**Adjusting Knob for HV Voltage** This knob is used to adjust the set HV value. The voltage can adjusted from 250~750V.

11 **HV Output Port**

It includes HV positive and negative electrode interface, a dustproof cover, and fool-proof and anti-reverse connection design.

12 **HV ON/OFF Button**

Start/Stop HV output. Under HV output, the LED light (orange) the button is always on; When the HV is not output, the LED lig (orange) of the button is off.

13 **Circuit Breaker**

Push the circuit breaker handle up to turn on the power switch the equipment, and pull the handle down to turn off the power switch of the equipment.

14 **Bluetooth Indicator**

After the equipment is powered on, the Bluetooth indicator is always on, and the indicator will continue to flash after establishing a bluetooth connection with the external detection equipment.

15 **Power Indicator**

After connecting the power supply and pushing up the circuit breaker handle of the equipment to turn on the power switch o equipment, this indicator will be on.

16 **Display Area for HV Voltage Value**

When HV output is not started, the current voltage set is displayed. When HV output is started, the actual output voltag

displayed.

Display area for HV Current Value

17

The current set voltage is displayed when the high-voltage output is not started, and the actual output voltage is displayed after the high-voltage output is started.

Power Supply Input

Air Vent for Heat Dissipation

1

Air vent of cooling fan, with a dust screen.

8

Air Inlet for Heat Dissipation

1

Air inlet of cooling fan, with a dust screen.

30

9

3. Technical Parameters

Technical Indexes		
PowerSupplyInput		AC100~240V@16A
Power		3200WMax
HV Parameters	VoltageRange	250~750V
	CurrentRange	0~5A
	Voltage Sampling Accuracy	0.1V
	Current Sampling Accuracy	0.1A
	Output Protection	Current-limiting protection, short-circuit protection,undervoltageprotection, overvoltageprotection,and overtemperature protection
	Input Protection	Overvoltageprotection,short-circuit protection,andundervoltageprotection
	Insulation Impedance	Input-output: DC500V 10MΩ Min (Ambient temperature) Input-earth:DC500V10MΩMin (Ambienttemperature) Output-earth: DC500V 10MΩ

	Insulation and Resisting Voltage	Input-output：2000Vac 50Hz (2828Vdc) 1 minute Input-earth: 2000Vac 50Hz (2828Vdc) 1 minute Output-earth: 2000Vac 50Hz (2828Vdc) 1 minute
LV Parameters	**Output Voltage**	DC 12V/24V (switch with buttons)
	Output Current	1A
	Output Protection	Short-circuit protection
Environment	**Working Temperature**	-10~65°C
	Storage Temperature	-40~70°C
	Working Environment Humidity	5~95% Relative humidity (no condensation)
Dimension		315x223x191mm

4. Equipment Operation

4.1 Equipment Startup

(1) Pull down the circuit breaker handle.

(2) After confirming that voltage of input power supply is correct, connect two ends of the power cord to the power socket and the power input respectively.

(3) Push up the circuit breaker handle to switch on the power switch.

Note: After the equipment is powered on for the first time, the default LV output is 12V, and the default HV output is 250V 1A.

4.2 LV Output

(1) Select the required voltage range and verify that the voltage displayed in the upper voltage display area is correct.

(2) Insert a red LV test wire into the positive electrode of the LV output, and connect the other end to the positive electrode of the device to be tested; Insert the black LV test wire into the negative electrode of the LV output, and connect the other end to the negative electrode of the device to be tested.

(3) After pressing the LV ON/OFF button, the LED light (green) of the button is always on, and the digital power supplies power to the device under test according to the set voltage value.

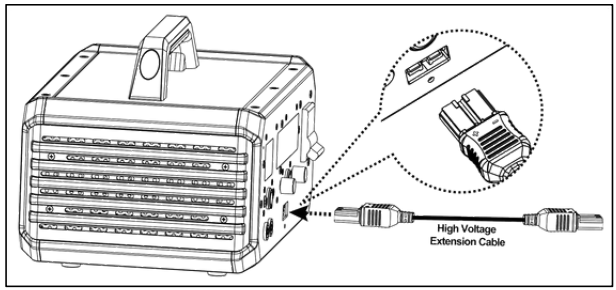
(4) If it is required to stop the LV output, press the LV ON/OFF button again. The LED light of the button (green) will be off, and the digital power will close the LV output.

Note: The voltage cannot be adjusted during the LV output of the equipment; If it is required to adjust the voltage, please stop the LV output of the equipment and set it again.

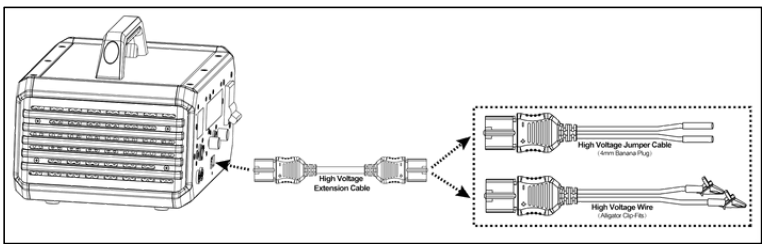
4.3 HV Output

(1) Rotate the HV current adjusting knob and the HV voltage adjusting knob to set the required current and voltage values.

(2) Remove the dust-proof cover of the HV output port, and insert one end of the HV extension cable into the HV output port (with a fool-proof anti-reverse insertion design, the positive and negative signs on the plug are consistent with the positive and negative signs on the output port before inserting)



(3) Select the corresponding high-voltage test wire (alligator clip-fits HV wire or banana plug HV jumper cable) as needed. Connect one end of the test wire to the HV extension cable, connect the red wire at the other end of the test wire to the positive pole of the device under test, and the black wire at the other end to the negative pole of the device under test.



(4) After pressing the HV ON/OFF button, the LED light (orange)

of the button is always on, the buzzer keeps sounding, and the digital power supply supplies power to the device under test according to the set voltage value.

Note: The voltage and current cannot be adjusted during the HV output of the equipment; If it is required to adjust the voltage and current, stop the HV output of the equipment and set them again.

(5) If it is required to stop the HV output, press the HV ON/OFF button again. The LED light of the button (orange) will be off, and the digital power supply will close the HV output.

Note: When not using the HV output function of digital power supply, it is advised to cover the dust-proof cover to protect the HV output interface and prevent accidental touch.

5. Equipment Protection

5.1 Power Iutput Protection Mechanism

The ELA320 protects the input circuit through a circuit breaker. When the fault protection is triggered, the circuit breaker will automatically cut off the power supply of the equipment.

5.2 LV Output Protection Mechanism

When the LV part triggers fault protection, the digital power supply will automatically cut off the output and prompt the corresponding fault code, and return to the default state. The fault information is described in the following table:

Fault name	Fault Code	HandlingMechanism(recommended)
Short-circuit protection	E01	Stopoutputimmediately,andprompttocheckthe equipment

5.3 HV Output Protection Mechanism

When the HV part triggers fault protection, the digital power supply will automatically cut off the output and prompt the corresponding fault code, and return to the default state. The fault information is described in the following table:

Fault Name	Fault Code	HandlingMechanism(Recommended)
AC Overvoltage	E01	CheckinputconnectionsandACvoltage
AC Undervoltage	E02	CheckinputconnectionsandACvoltage
Output Overvoltage	E03	Stopoutputimmediately,andprompttocheckthe equipment.
Output Undervoltage	E04	Norisktothemodule.Determinebyyourselfaccor ding to the equipment safety.

Output Overcurrent	E0	Stop output immediately, and prompt to check the equipment.
Output Short-circuit	5	Stop output immediately, and prompt to check the equipment.
Overtemperature Protection	E0 E07 6	Stop output immediately, and prompt to check the equipment.
Hardware Fault	E0	Stop output immediately, and prompt to check the equipment.
No Equipment Connected	8	No risk. Determine by yourself according to the equipment safety.
Equipment Polarity Reverse	E0 E10 9	Stop output immediately, and prompt to check the equipment.
PFC derating Caused by Overtemperature	E11	No risk. Check the working environment temperature o the equipment.
Fan Derating Caused by Overtemperature	E12	No risk. Check for fan noise of the equipment.
Derating at a Higher Temperature	E13	No risk. Check the working environment temperature o the equipment.

FCC Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.