

Jesverty SPS-12003 & 928D

Jesverty DC Power Supply Variable + 60W Digital Display Soldering Iron Station Kit User Manual

Model: SPS-12003 & 928D

INTRODUCTION

This manual provides detailed instructions for the safe and efficient operation of your Jesverty DC Power Supply Variable and 60W Digital Display Soldering Iron Station Kit. Please read this manual thoroughly before use and retain it for future reference.

The kit combines a high-precision adjustable DC power supply (SPS-12003) and a digital display soldering iron station (928D), designed for various electronic projects, repairs, and laboratory applications.

SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the equipment:

- Ensure the power supply is connected to a grounded outlet.
- Do not operate the equipment in wet or damp conditions.
- Avoid touching the soldering iron tip when hot. Use appropriate heat-resistant gloves.
- Ensure proper ventilation when soldering to avoid inhaling fumes.
- Disconnect power before performing any maintenance or cleaning.
- This product conforms to UL Standard (U.S.) for electrical appliance safety.

PRODUCT OVERVIEW

DC Power Supply (SPS-12003) Components

Component Names



- ① Voltage Display
- ② Current Display
- ③ Power Display
- ④ C.V. Mode Indicator
- ⑤ C.C. Mode Indicator
- ⑥ Voltage Knob (Coarse)
- ⑦ Current Knob (Coarse)
- ⑧ Voltage Knob (Fine)
- ⑨ Current Knob (Fine)
- ⑩ USB Charging Port (5V/2A)

- ⑪ Output Terminal + (Red)
- ⑫ Grounding Terminal (Green)
- ⑬ Output Terminal - (Black)
- ⑭ Power Switch
- ⑮ Cooling Fan
- ⑯ AC Power Inlet
- ⑰ Fuse Box (Spare Fuse Inside)

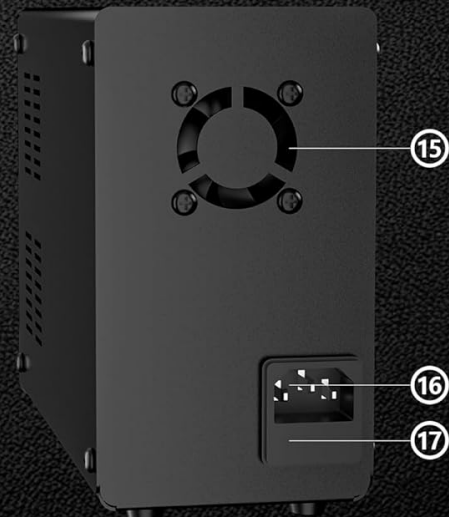


Figure 1: Front Panel and Rear Panel Components of the DC Power Supply.

The DC Power Supply features a clear digital display and intuitive controls. Refer to Figure 1 for component identification:

1. **Voltage Display:** Shows the output voltage in Volts (V).
2. **Current Display:** Shows the output current in Amperes (A).
3. **Power Display:** Shows the output power in Watts (W).
4. **C.V. Mode Indicator:** Illuminates when the unit is operating in Constant Voltage mode.
5. **C.C. Mode Indicator:** Illuminates when the unit is operating in Constant Current mode.
6. **Voltage Knob (Coarse):** Adjusts the output voltage in larger increments.
7. **Current Knob (Coarse):** Adjusts the output current limit in larger increments.
8. **Voltage Knob (Fine):** Adjusts the output voltage in smaller, precise increments.
9. **Current Knob (Fine):** Adjusts the output current limit in smaller, precise increments.
10. **USB Charging Port (5V/2A):** Provides a stable 5V, 2A output for charging compatible devices.
11. **Output Terminal + (Red):** Positive output terminal.
12. **Grounding Terminal (Green):** Ground connection terminal.
13. **Output Terminal - (Black):** Negative output terminal.

14. **Power Switch:** Turns the unit ON/OFF.
15. **Cooling Fan:** Dissipates heat during operation.
16. **AC Power Inlet:** Connects the power cord to the AC mains.
17. **Fuse Box:** Contains a spare fuse for protection.

Soldering Iron Station (928D) Components



Figure 2: Overview of the Soldering Iron Station.

The soldering station includes a digital display and various features for efficient soldering:

- **Digital Display:** Shows current temperature, settings, and error codes.
- **Temperature Adjustment Buttons:** Used to increase or decrease the set temperature.
- **Function/Calibration Button:** Accesses various functions and calibration mode.
- **Soldering Iron Holder:** Securely holds the soldering iron when not in use.
- **Tip Cleaner:** Sponge or brass wool for cleaning the soldering tip.
- **Helping Hands:** Two adjustable arms with alligator clips for holding components.
- **Solder Wire Dispenser:** Integrated holder for a roll of solder wire.
- **Power Switch:** Turns the soldering station ON/OFF.

SETUP

DC Power Supply Setup

1. Place the power supply on a stable, level surface with adequate ventilation.
2. Ensure the power switch is in the OFF position.
3. Connect the provided AC power cord to the AC Power Inlet (16) on the rear panel and then to a grounded wall outlet.
4. For output, connect your load to the Output Terminal + (11) and Output Terminal - (13) using appropriate test leads. For grounding, connect to the Grounding Terminal (12) if required by your application.

Soldering Iron Station Setup

1. Place the soldering station on a heat-resistant, stable surface.
2. Ensure the power switch is in the OFF position.
3. Connect the soldering iron handle cable to the designated port on the soldering station.
4. If using, attach the helping hands to the designated slots on the station.
5. Place the tip cleaning sponge in its tray and dampen it slightly with water, or use the brass wool provided.
6. Connect the AC power cord to the station and then to a grounded wall outlet.

OPERATING INSTRUCTIONS

DC Power Supply Operation

1. **Power On:** Turn on the power supply using the Power Switch (14). The LED display will illuminate.
2. **Setting Voltage and Current:**
 - Use the Voltage Knob (Coarse) (6) and Voltage Knob (Fine) (8) to set the desired output voltage.
 - Use the Current Knob (Coarse) (7) and Current Knob (Fine) (9) to set the desired current limit. It is recommended to set the current limit before connecting the load to prevent overcurrent.
3. **Constant Voltage (C.V.) and Constant Current (C.C.) Mode:**

The power supply automatically switches between C.V. and C.C. modes based on the load. If the load resistance is high, the unit operates in C.V. mode, maintaining the set voltage. If the load resistance is low and the current reaches the set limit, the unit switches to C.C. mode, maintaining the set current and reducing the output voltage.

The C.V. (4) or C.C. (5) indicator will light up to show the active mode.
4. **USB Charging Port:** The 5V/2A USB Charging Port (10) can be used independently to charge compatible USB devices. Simply connect your device to the port.

Support **USB Charging** Function

[5V/2AUSB port] Variable power built-in fast charging protocol recognition chip



Figure 3: Using the 5V/2A USB Charging Function.

Soldering Iron Station Operation

1. **Power On:** Turn on the soldering station using the Power Switch. The digital display will show the current temperature.

2. **Setting Temperature:**

Use the temperature adjustment buttons (Up/Down arrows) to set the desired soldering temperature. The station features rapid heating and PID temperature stabilization to maintain the set temperature consistently.



Figure 4: Real-time Temperature Display and Functionality.

3. **°C/°F Conversion:** Press the Function/Calibration button to switch between Celsius (°C) and Fahrenheit (°F) temperature display modes.
4. **Auto Sleep Function:** The station is equipped with an auto-sleep function to conserve energy and extend tip life. If the iron is idle for a set period, it will enter sleep mode, reducing the tip temperature. Moving the iron will wake it up.
5. **Digital Temperature Calibration:** For precise temperature control, the station supports digital temperature calibration. Refer to the specific instructions in the full manual for calibration procedures.
6. **Using Helping Hands:** Position the flexible helping hands to securely hold PCBs or components during soldering.
7. **Tip Cleaning:** Regularly clean the soldering tip using the damp sponge or brass wool to ensure optimal performance and extend tip lifespan.

- **General Cleaning:** Disconnect both units from power. Use a soft, dry cloth to wipe down the exterior of the power supply and soldering station. Do not use abrasive cleaners or solvents.
- **Soldering Tip Maintenance:**
 - Always tin the soldering tip with a small amount of solder before storing it and after cleaning.
 - Replace the soldering tip when it becomes excessively worn or corroded.
- **Cooling Fan:** Ensure the cooling fan vents on the power supply are clear of dust and obstructions to maintain proper airflow.
- **Fuse Replacement:** If the power supply does not turn on, check the fuse in the Fuse Box (17) on the rear panel. Replace with a fuse of the same type and rating if blown.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Power Supply does not turn on.	No power from outlet; Blown fuse; Power cord not connected.	Check wall outlet; Replace fuse; Ensure power cord is securely connected.
No output from Power Supply.	Output terminals not connected; Voltage/current set to zero; Overload protection activated.	Check connections; Adjust voltage/current settings; Reduce load or check for short circuit.
Soldering Iron not heating up.	Iron not connected to station; Heating element failure; Incorrect temperature setting.	Ensure iron cable is fully inserted; Contact support if heating element is faulty; Increase temperature setting.
Soldering tip not tinning properly.	Tip is oxidized or dirty; Insufficient temperature.	Clean tip thoroughly with sponge/brass wool and re-tin; Increase temperature.

SPECIFICATIONS

DC Power Supply (SPS-12003)

- **Model Name:** SPS-12003
- **Output Voltage:** 0-120V (Adjustable)
- **Output Current:** 0-3A (Adjustable)
- **Output Wattage:** 360W (Max)
- **Display:** 4-Digit LED (V/A/W)
- **Display Resolution:** 0.01V, 0.001A, 0.1W

- **USB Port:** 5V/2A
- **Input Voltage:** 90-120V AC
- **Cooling Method:** Air (Intelligent Temperature Controlled Fan)
- **Safety Features:** Short Circuit Protection, Leakage Protection, Thermal Protection, Voltage Overload, Power Overload

Soldering Iron Station (928D)

- **Model Name:** 928D (Implied from description, not explicitly listed as model name in specs)
- **Output Power:** 60W
- **Temperature Range:** 194°F-896°F / 90°C-480°C
- **Display:** Digital LED
- **Features:** °C/°F Conversion, Auto Sleep, Digital Temperature Calibration, Anti-static Design
- **Accessories:** 2 Helping Hands, Solder Wire Dispenser, Tip Cleaning Sponge/Brass Wool

WHAT'S IN THE BOX

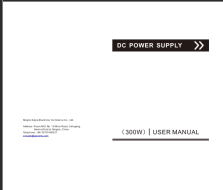
The Jesverty DC Power Supply Variable + 60W Digital Display Soldering Iron Station Kit includes:

- 1 x Jesverty DC Power Supply (SPS-12003)
- 1 x Jesverty 60W Digital Display Soldering Iron Station (928D)
- 1 x Soldering Iron Handle
- 1 x Solder Tip (pre-installed or included)
- 2 x Helping Hands
- 1 x Tip Cleaning Sponge/Brass Wool
- 1 x Power Cord for DC Power Supply
- 1 x Power Cord for Soldering Station
- 1 x User Manual (this document)

WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Jesverty customer service. Refer to the contact information provided with your product packaging or visit the official Jesverty website. This product is manufactured by Jesverty and is designed for reliable performance. For any issues not covered in this manual, professional assistance is recommended.

Related Documents

	<p>JESVERTY SPS-3010X DC Power Supply User Manual</p> <p>User manual for the JESVERTY SPS-3010X 300W DC Power Supply, detailing its specifications, panel instructions, safety precautions, and operational functions including constant voltage/current characteristics and fuse replacement.</p>
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