

Description

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Parameter information:

Input voltage range: DC7-80v

Output voltage range: DC1.4-79V

Voltage display range: 1.40-80.00V (accuracy is about $\pm 0.1V$)

Output current adjustment range: 0-20A

Current display range: 0.00A-20.00A (accuracy $\pm 0.03A$)

Adjustment knob: MPPT voltage adjustment, output voltage adjustment, output current limit adjustment

MPPT function: Yes

Anti-backflow: The battery will not burn if it is poured backward. When the sun is insufficient and there is no charging current, there will be a 0.5-40mA backflow current. It is recommended to connect a diode when charging.

Constant current (current limiting): Yes

Over-power protection: 300W, exceeding the power will shut down the output and display OPP

Dimensions: 108x64x48mm

Weight: Product weight: including display 208g

194g without display

Weight including packaging: 238g including display

224g without display

Application: solar charging, lithium battery charging, LED constant current drive, regulated power supply

Solar battery charging steps:

-ZK-SJ20--

1. Measure the no-load voltage of the solar panel (sufficient sunlight), calculate the MPPT voltage = $0.75 \times$ no-load voltage, or directly look at the manufacturer's panel V_{mp} parameter value.

Be careful not to reverse the positive and negative poles.

2. Connect the solar panel to the module for power supply, switch to the MPPT voltage display interface, adjust the MPPT potentiometer, and adjust the value to the V_{mp} voltage.

3. Rotate the CV potentiometer to adjust the output voltage (the size is the float voltage of the battery being charged).

Short-circuit the positive and negative ends of the output, rotate the CC potentiometer, and adjust the limiting current (the size is the allowable charging current of the battery being charged).

4. If the power of the solar panel is too small, the MPPT light will light up when there is a short circuit. In order to maintain a constant input voltage, the output current will be limited and the current can only be adjusted downward. The current value seen when the MPPT light is off is meaningful. .

It is recommended to adjust the current when there is sufficient sunlight or when a constant voltage source is used as the input.

5. Connect the battery to charge (be careful not to reverse the positive and negative poles). The MPPT potentiometer can be adjusted appropriately so that the module is always output at the maximum power point.

It is recommended to connect a diode to completely prevent backflow. ,

Notes and reminders:

—ZK-SJ20—

1. The positive and negative poles of the input cannot be connected reversely, otherwise it will burn;

2. When the output terminal is connected to the battery, the positive and negative poles cannot be reversed, otherwise it will burn.

3. The maximum output current of 20A is limited to when the voltage difference between the input voltage and the output voltage is small, and the output power does not exceed 300W.

The larger the voltage difference between the input and output voltages, the lower the conversion efficiency and the more severe the heating. When the heat is too severe, please reduce the power, or add a 5V fan yourself (there is

a reserved interface, the fan current is less than 300mA) to assist heat dissipation.

4MPPT voltage is generally set to 0.75 times the open circuit voltage of the solar panel. You can also look at the nameplate or consult the solar panel manufacturer for the V_{mp} voltage value. The V_{mp} voltage value is the MPPT voltage we want to set. The display screen can show the set voltage, making the adjustment clear at a glance, which is very convenient.

5. The output current limit (CC) value is generally the allowable charging current of the rechargeable battery. The current setting method is: directly short-circuit the output end with a wire, and adjust the CC potentiometer while looking at the current display value. The displayed value is the current limit value (maximum output current value).

Product Functions

— ZK-SJ20 —

Output constant current (current limiting) regulation

Output indicator

Constant current (current limiting) indicator

(DC 7-80V)

Input negative Input positive

Output positive

(1.4-79V output adjustable)

Output negative

MPPT
Voltage (CVT)
Adjustment

Output voltage regulation

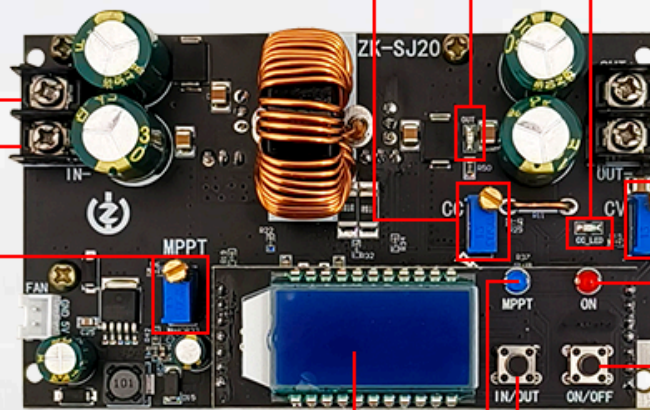
Output indicator

LCD display

Output switch button

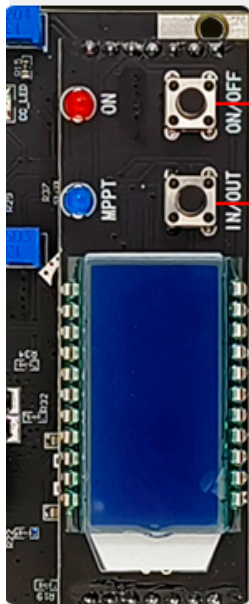
MPPT indicator (on when the input voltage is lower than the set MPPT voltage)

Display switch button



Introduction to buttons

— ZK-SJ20 —



Output switch button

Click: turn on or off the output

Long press for 2 seconds: default to output when powered on (display "ON"); Default power-on without output (display "OFF")

Press and hold for 10 seconds: current reset (until 0.00A indicates successful reset)

ON/OFF

IN/OUT

Display switch button

Click: switch to uplink display, input voltage/output voltage/MPPT voltage display

Long press: switch to downstream display, current/power

Interface Display

— ZK-SJ20 —



Input voltage Output current



Output voltage Output power



Input voltage Output power



MPPT voltage Output power

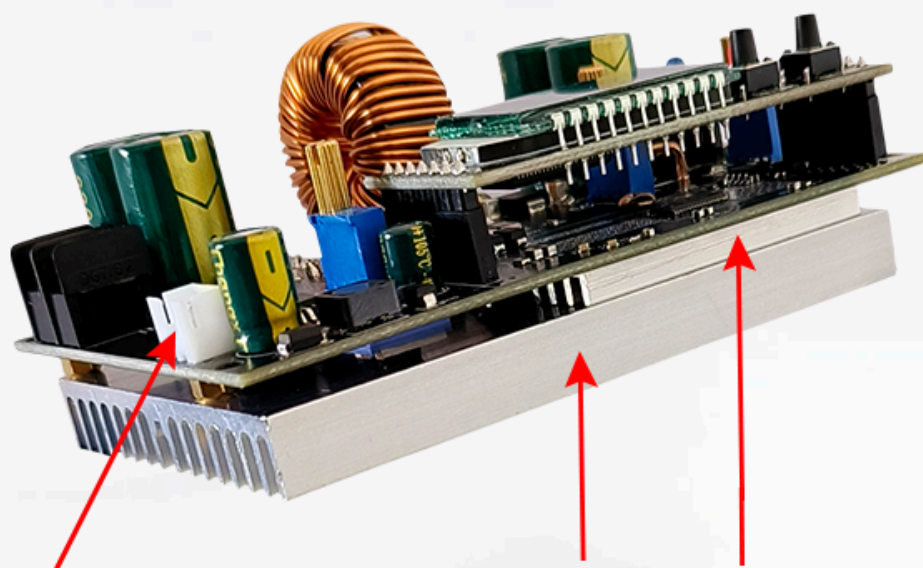


This interface represents the tracking point voltage, which can also be called MPPT voltage or V_{mp} voltage or input constant voltage value

When the voltage of the solar panel is lower than the set voltage, the module will automatically reduce the output power, making the input voltage constant at the voltage value, so as to ensure that the solar panel can charge the battery at the maximum power.

Strengthen heat dissipation

— ZK-SJ20 —



5V fan port

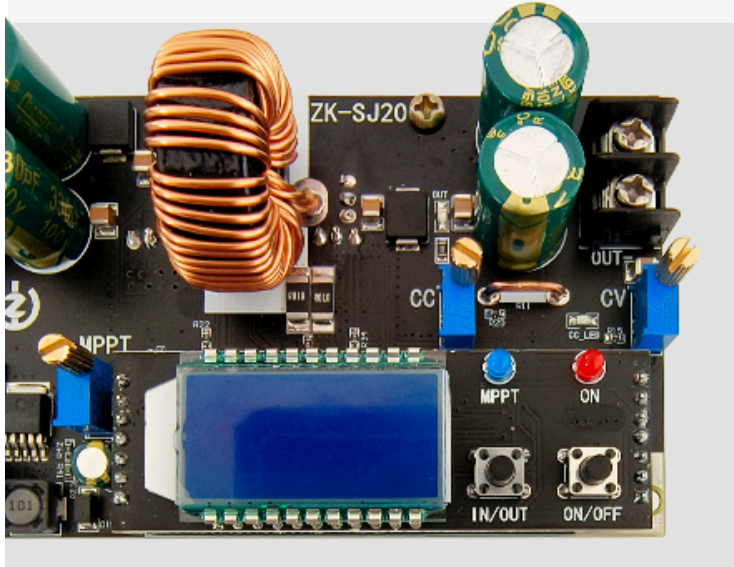
External fan can be connected by yourself
(Default shipment without fan)

Chip and MOS tube enhance heat dissipation

Strong boost output capability,
large output power, reliable and
stable output

Detail Display

— ZK-SJ20 —

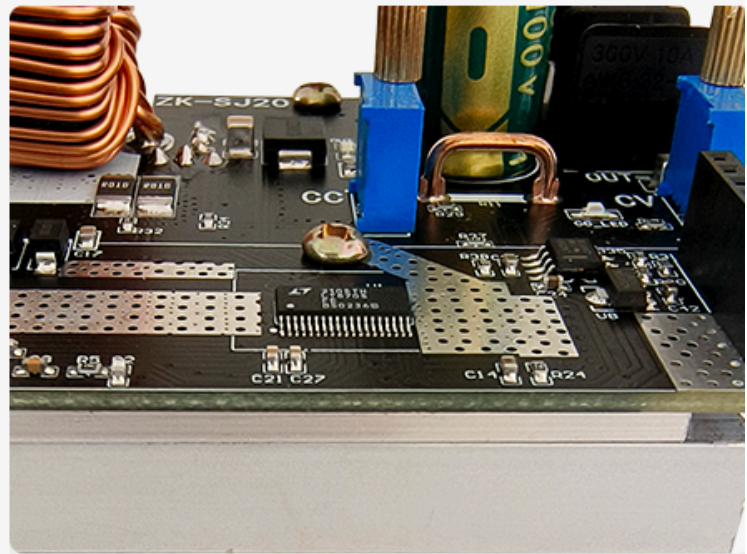


01

All adopt screwdriver free potentiometers for direct manual adjustment

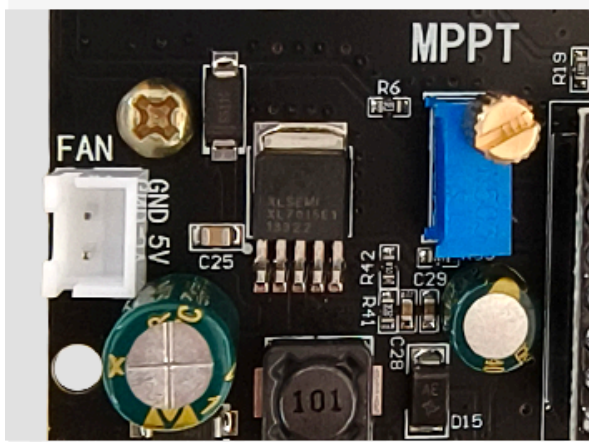
02

The chip enhances heat dissipation, reliability, stability and high power



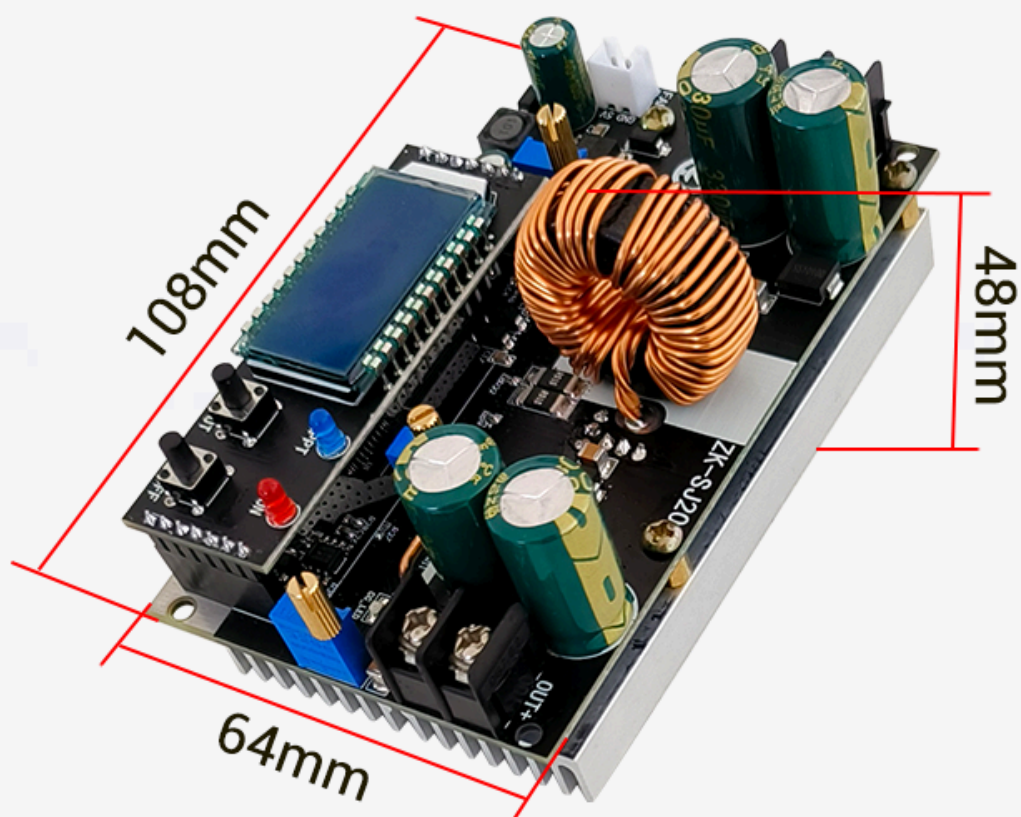
03

Reserved 5V fan interface for customers



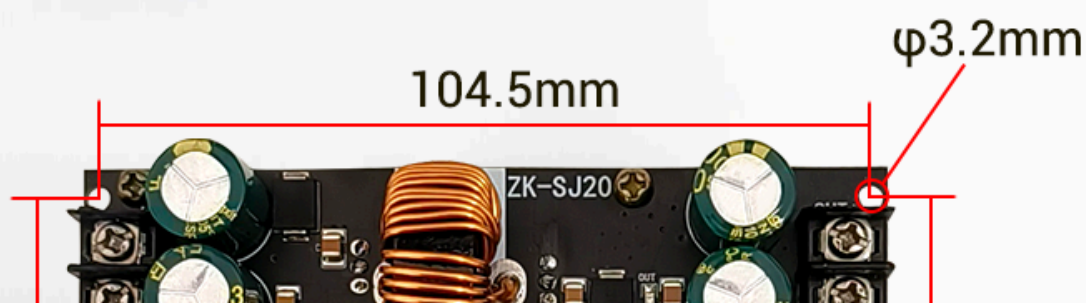
Product Size

— ZK-SJ20 —



	With display	Without display
Net weight	208g	194g
Packing weight	238g	224g

Mounting hole size



Product Parameters

— ZK-SJ20 —

Input voltage range	DC7-80V
Output voltage range	DC1.4-79V
Voltage display range	1.40-80.00V (Accuracy \pm 0.1V or so)
Output current regulation range	0-20A
Current display range	0.00A-20.00A (Accuracy \pm 0.03A or so)
Adjusting knob	MPPT voltage regulation, output voltage regulation, output current limiting regulation
MPPT function	Yes
Anti-backflow	The battery does not burn after recharging. When the sun is insufficient and there is no charging current, there will be 0.5-40mA recharging current. It is recommended to connect the diode during charging.
Constant current (current limiting)	Yes
Overpower protection	300W, If the power is exceeded, the output will be turned off and OPP will be displayed
Size	108x64x48mm
Weight	Product weight: 208g with display 194g without display Package weight: 238g with display 224g without display
Application	Solar charging, lithium battery charging, LED constant current drive, regulated power supply

Charging steps of solar cell

— ZK-SJ20 —

- ① Measure the no-load voltage of the solar panel (with sufficient sunlight), calculate the MPPT voltage= $0.75 \times$ no-load voltage, or directly check the V_{mp} parameter value of the manufacturer's panel.
Note that the positive and negative electrodes shall not be connected reversely.
- ② The solar panel access module supplies power, switches to the MPPT voltage display interface, adjusts the MPPT potentiometer, and adjusts the value to V_{mp} voltage.
- ③ Rotate the CV potentiometer to adjust the output voltage (the size is the floating charge voltage of the charged pool).
- ④ Short circuit both ends of the positive and negative output poles, rotate the CC potentiometer, and adjust the limiting current (the size is the allowable charging current of the charged pool). If the power of the solar panel is too small, the MPPT light will be on when the circuit is short circuited. In order to maintain the input constant voltage, the output current will be limited. The current can only be adjusted downward. The current value seen when the MPPT light is off is meaningful. It is recommended to adjust the current when sunlight is sufficient or constant voltage source is used as input.
- ⑤ Connect the battery for charging (note that the positive and negative electrodes should not be connected reversely). The MPPT potentiometer can be properly adjusted so that the module is always at the maximum power point output. It is recommended to connect the diode to completely prevent reverse flow.

Notes and Reminders

— ZK-SJ20 —

- 1** The input positive and negative poles cannot be connected reversely, or they will be burned;
- 2** When the output terminal is connected to the battery, the positive and negative electrodes must not be reversed, otherwise they will be burned.
- 3** The maximum output current of 20A is only limited to when the difference between input voltage and output voltage is small, and the output power does not exceed 300W. The greater the difference between input and output voltage, the lower the conversion efficiency and the more serious the heating. If the heating is too serious, please reduce the power for use, or add a 5V fan (with reserved interface and fan current less than 300mA) to assist in heat dissipation.
- 4** The MPPT voltage is usually set to 0.75 times the open circuit voltage of the solar panel. You can also refer to the nameplate or consult the solar panel manufacturer's V_{mp} voltage value, which is the MPPT voltage we want to set. The display screen can display the set voltage, which is easy to adjust.
- 5** The output current limiting (CC) value is generally the allowable charging current of the rechargeable battery. The current setting method is: short-circuit the output terminal directly with a wire, and adjust the CC potentiometer by looking at the current display value. The displayed value is the current limiting value (maximum output current value).