OPERATING MANUAL

400W DC-DC

CNC Boost Module

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Contents

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2. Inspecting Package Contents

When you get a new 400W module, please inspect the instrument as follows:

2.1 Check if there is damage due to transportation

If the package is damaged, please retain them until the instrument and accessories are tested.

2.2 Check package contents

Contents of the case are as bellows, if the content does not match with the packing list or the instrument is damaged, please contact us.

400W DC-DC CNC boost module   1pc

User manual   1pc

2.3 Check the machine

If the machine was damaged; did not work properly or failed to pass performance tests, please contact your dealer or our company.

3. Summary

3.1 Brief introduction

400W DC-DC CNC step-up module is a small size, high power, high efficiency, stable, digital display boost module. Adopting advanced microprocessor control, precise regulation of voltage and current by using the keys, constant voltage and constant current can be output. With four bits LED, the real-time output voltage and current can be displayed. Meanwhile, the module with working indicator, you can view real-time working status. In addition, the machine has an automatic power output function, and it can be turned on or off as needed

3.2 Features

3.2.1 Using high-quality power devices, with the external precision op amp loop consisting of CV and CC, greatly improves module performance;
3.2.2 Using two 1mm double-wound high current inductor, input with a 1000uF/63V electrolytic capacitor, the output with two 470uF/100V electrolytic capacitors, so the output voltage quality is very good;
3.2.3 All-digital display, easy to use;
3.2.4 Constant voltage and constant current output;
3.2.5, The module with working status indicator (the output OUT, constant voltage CV, constant current CC), you can view real-time working status;
3.2.6 Adopting advanced microprocessor, output voltage and current can be precisely regulated by the key;
3.2.7 Using four high-brightness LED, the output voltage and current can be displayed in real time;
3.2.8 The current values of voltage and current can be saved by a key of Set;
3.2.9 The automatic power output can be set.

3.3 Technical data

Item	Parameter
Input voltage	6V~40V
Input current	15A（max）
Output voltage	8V~80V
Output current	0~9.99A
Output power	400W（max）
Voltage resolution	0.01V
Current resolution	0.01A
Efficiency	Approx 95%
Ripple	≤50mV

Short circuit protection	15A fuse
Connection	8500 terminals
Dimensions	86×75×63(mm)(W*H*D)
Weight	295g

3-1 400W module technical data

4. Instrument Introduction

4.1 The module Introduction

Item	Introduction	Item	Introduction
1	Negative input	5	Working indicator
2	Positive input	6	Operating buttons
3	Positive output	7	LED
4	Negative output		

4-1 400W Module Introduction

4.2 Display Introduction

Display Content	Introduction
00.00	Voltage 00.00~36.00V
0.000	Current 0.000~3.00A
--0-	Automatic power output function

3

--y-	Automatic power output function(On)
--n-	Automatic power output function(Off)
----	Save parameters
⌐--n	Restore factory settings

4-2 400W Module Display Introduction

5. Operation

5.1 Connection

Make sure the input and output are connected properly; the input voltage meets the requirements, and reverse prohibited.

Note: Input voltage range: 6V ~ 40V;
Output voltage range: 8V ~ 80V;
Input current range: 0A ~ 15A;
Output current range: 0A ~ 9.99A

5.2 Setting Voltage & Current

The default display is the setting value of voltage as power on, the voltage value format is "00.00", unit is "V". For example, "12.34" means "12.34V". Press the "SET" button to switch to the current setting value, the current value format is "00.00A", unit is "A", for example,"1.23A" means"1.23A". Setting method: press the button⬆ to increase the set value, press the button⬇ to reduce the set value, short press can accurately set; long press can quickly set. After the voltage or current value changes, press "SET" button, "----" will be displayed, which indicates the current setting values of voltage and current have been saved. If there is no change in voltage or current value, press the "SET" button will switch to the current or voltage values.

5.3 Output

After setting the voltage and current values, press the "OK" button to output directly.

5.4 Adjust Voltage & Current

As output, pressing ⬆ can increase output voltage and current, pressing ⬇ can decrease output voltage and current, short press can accurately set; long press can quickly set.

5.5 Close Output

As output, press "SET" button to turn off the output. If the output voltage or current values have been adjusted, when the output is closed, the voltage and current setting values will be saved by pressing "SET" button.

5.6 Automatic Power-output Function

Automatic power-output on/off method: Long press "OK" buttons, power to the module, as "--0-" is displayed, release the button. If "--y-" is displayed after releasing the button, that is the automatic power-output function on, otherwise "--n-" is displayed, that indicates the automatic power-output function off.

6. Cautions

6.1 This module is a boost module, $V_{OUT} \geq V_{IN}$。 After power to the module, in the absence of output, there is voltage of the output terminal, the output terminal voltage is equal to the input voltage; if the output voltage set lower than the input voltage, the output voltage of the output terminal is equal to the input voltage, which is a normal phenomenon, when using the module, the input voltage must be lower than the output voltage or the rated voltage of electrical equipment.

6.2 When it is used to power to the high-power load, turn off the automatic output function, connect the input and output, then press the "OK" button to output, as the voltage rises to the set voltage, and finally turn on the load.

6.3 When it is used to charge the battery, turn off the automatic output function, set proper charging voltage and current, connect the battery, press "OK" to output, and then it can charge the battery.

6.4 Fan is needed as long time high-power working.

6.5 The effective power P = input voltage$\times$10A, the max. power of the module reaches 400W under specified conditions, the max. output power is affected by the input voltage and current, for example:

Input voltage is 12V: the max. output power P= 12V$\times$10A=120W

Input voltage is 24V: the max. output power P= 24V$\times$10A=240W

Input voltage is 40V: the max. output power P= 40V$\times$10A=400W

6.6 Conversion efficiency: approx 85% (conversion efficiency affected by input / output voltage & current)

7. Warranty and service

Thank you for purchasing our products. To maximize the use of the new product features, we recommend that you take the following steps:
1 Read safe and efficient use instruction.
2 Read the warranty terms and conditions.

We warrants to the original purchaser that its product and the component parts thereof will be free from defects in workmanship and materials for a period of one year from the data of purchase.

We will repair or replace, at its' option, defective product or component parts. Returned product must be accompanied by proof of the purchase date.

Exclusions: This warranty does not apply in the event of misuse or abuse of

product or as a result of unauthorized alternations or reapers. It is void if the serial number is alternated, defaced or removed.