

**TENMA<sup>®</sup>**



**72-8690  
72-8695  
72-8700  
Series**

**OPERATING MANUAL**

**DC POWER SUPPLY**



72-8xxx Series Operating Manual

**72-8xxx Series**  
**DC Power Supply**  
**Instruction Manual**

## Introduction

Thank you for purchasing our product.

In order to ensure correct installation, operation and optimum performance of this product please read this manual in detail and keep for future reference.

This instrument is produced under strict quality control. All parts go through screening and ageing, and a series of performance testing, environmental testing and safety testing. In order to guarantee safe use, and the best working performance, working environment guidelines must be followed.

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## 1. Summary

72-8xxx is a series of general DC power supplies suitable for laboratory use.

Both CH1 and CH2 may work in CV or CC mode, and these two modes convert automatically according to the load. CH1 and CH2 have auto tracking function. In this condition, the output of CH2 tracks the output of CH1. This function is usually used when adjustable symmetrical and double polarity power is required. Both CH1 and CH2 display the output voltage or current with a 3-digit-LED meter.

CH3 is a 5V fixed output. Its maximum output current is 2A, and it is usually used in TTL circuits etc.

CH1, CH2 and CH3 all have overload protection.

## 2. Specifications

### Output Voltage and Current:

Model	CH1, CH2 Voltage	CH3 Voltage	CH1, CH2 Current	CH3 Current
72-8690	0V – 32V	/	0A – 3A	/
72-8695	0V – 32V	5V	0A – 3A	2A
72-8700	0V – 32V	/	0A – 5A	/

### CH1 and CH2

Load Regulation:	CV: $\leq 1 \times 10^{-4} + 2\text{mV}$ ;	CC: $\leq 20\text{mA}$
Ripple and Noise:	CV: $\leq 1\text{mVrms}$ ;	CC: $\leq 1\text{mVrms}$
Adjustable Resolution:	CV: $\leq 20\text{mV}$ (typical) CC: $\leq 50\text{mA}$ (typical)	
Interactive Regulation:	CV: $5 \times 10^{-5} + 1\text{mV}$ CC: $< 0.5\text{mA}$	
Tracking Error:	$5 \times 10^{-3} + 2\text{mV}$	

## CH3

Output Voltage: 5V  
Output Current: 0-2A  
Ripple and Noise:  $\leq 3\text{mVrms}$

### Ambient Temperature Range:

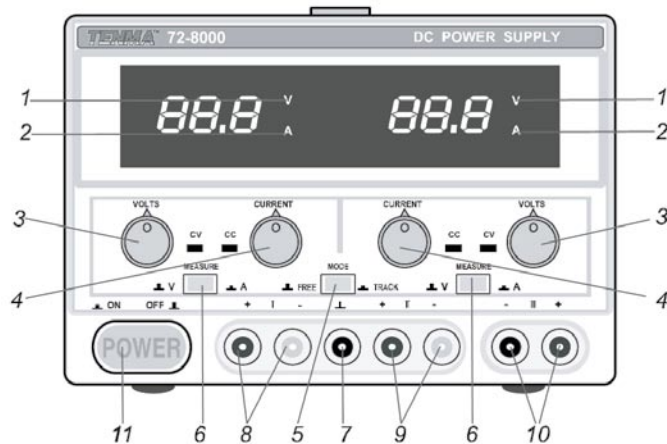
Operating: $+0^{\circ}\text{C}$ to $+40^{\circ}\text{C}$ (for UK/Europe)	$+ 32^{\circ}\text{F}$ to $+ 104^{\circ}\text{F}$ (for US)
Storing: $+5^{\circ}\text{C}$ to $+45^{\circ}\text{C}$ (for UK/Europe)	$+41^{\circ}\text{F}$ to $+ 113^{\circ}\text{F}$ (for US)
Power Source: AC $220\text{V} \pm 10\%$ , $50\text{Hz} \pm 4\%$ (UK/Europe)	AC $110\text{V} \pm 10\%$ , $50\text{Hz} \pm 4\%$ (US)
Dimensions (H x W x D): 152mm x 197mm x 305mm	
Weight: Approx. 9.5kg	
MTBF: $\geq 2000\text{h}$	

### Accessories

Check the meter for any damage or exposed metal parts. Packaging should include the following accessory items - if any differences or damage, please contact the nearby sales offices:

- Power cord 1 pcs
- Instruction manual 1 pcs

## 1. Description of Panel



1)	Voltage meter
2)	Current meter
3)	VOLTS: Adjusts the output voltage at CV mode
4)	CURRENT: Adjusts the output current at CC mode
5)	MODE: Controls two main channels. Works in FREE mode or TRACK mode.
6)	MEASURE: Selects the digital meter's display, the output voltage or the output current
7)	Ground of instrument
8)	Output terminal of CH1
9)	Output terminal of CH2
10)	Output terminal of CH3
11)	POWER: Push in to turn on the power.



## 2.Applications

The left area of panel corresponds to CH1 and the right area of panel corresponds to CH2. When the left MEASURE is pushed out, the CV lamp switches on, and the left digital meter displays the output voltage of CH1. When this button is pushed in, the CC lamp switches on, and the left digital meter displays the output current of CH1. CH2 is same as CH1.

When the MODE button is pushed out, each CH1 and CH2 works independently. When this button is pushed in, CH2 tracks to CH1.

The output of CH1 and CH2 are suspended. You can set the negative level of output by connecting the reference point to the “-”terminal.

Each CH1 and CH2 can output from:

0V to 32V and from 0V to 3A (adjustable)

0V to 64V and from 0A to 3A current (adjustable in series)

0V to 32V and from 0A to 6A (adjustable in parallel)

The “-”terminal of III channel has been connected to the ground.

A protective grounding connection is essential for safe operation. This is helpful to reduce the ripper and also the 50Hz noise



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Please note

The product includes with the power source 220V (for UK/Europe) or 110V (for USA)

Operating Manual content is subject to change without notice

Tenma  
405 S. Pioneer Blvd,  
Springboro, Ohio 45066-3001  
Phone: 1-888-655-5409  
Fax: 1-800-765-6960