UDP3000S Series Programmable Linear DC Power Supply Datasheet



Main Features

- ✧ Maximum power up to 348W
- ✧ Four channel independent output：CH1/CH2: 0~30V/5A,CH3：0~6V/3A, CH4：5V/2A
- ✧ Multiple protection：OCP/OVP/OTP
- ✧ Excellent load regulation and line regulation
- ✧ Ultra-low output ripple and noise
- ✧ Supports one key serial and parallel output functions
- ✧ The 4.3-inch TFT display can display three channels and multiple parameters at the same time
- ✧ List / delayer functions to control voltage and current output as required
- ✧ External trigger function to realize industrial automation control
- ✧ Provides USB host, USB device, LAN, RS232, digital IO and other interfaces
- ✧ With waveform display function, real-time and dynamic display of output voltage / current / power waveform

- ✧ **Intelligent speed control of fan can effectively reduce fan noise during operation**
- ✧ **Supports 10 groups of file storage and transfer out, and supports USB flash disk reading and writing**
- ✧ **High precision display of five-digit voltage / four-digit current, with resolutions of 10mV / 1mA and 1mV / 1mA**
- ✧ **Keyboard lock function to prevent misoperation**
- ✧ **Supports SCPI remote command control**

DC Power Supply Panel



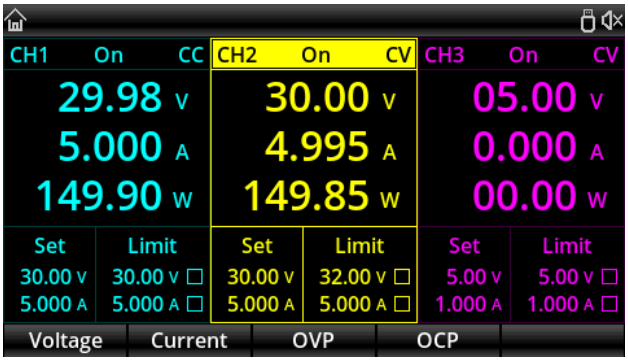
① LCD display ② Function keys ③ Digital keyboard ④ Rotary encoder ⑤ Step through parameters key ⑥ Channel selection and output control ⑦ Keyboard lock ⑧ Preset key ⑨ System settings ⑩ Home key ⑪ CH3 quick selection ⑫ Operation menu ⑬ Power switch ⑭ CH4 5V/2A USB output ⑮ Output channels and indicators ⑯ USB HOST ⑰ LAN ⑱ USB device ⑲ Digital IO ⑳ RS232 ㉑ Fan ㉒ Input power source selection ㉓ Protected GND ㉔ AC socket

Product Introduction

UDP3000S series is a high-performance programmable linear DC power supply. It has a clear LCD user interface, excellent performance indicators, and a variety of analysis functions and communication interfaces. It can meet the diversified test needs of users. It aims to provide a cost-effective DC programmable power supply for teaching, scientific research, industry and other fields.

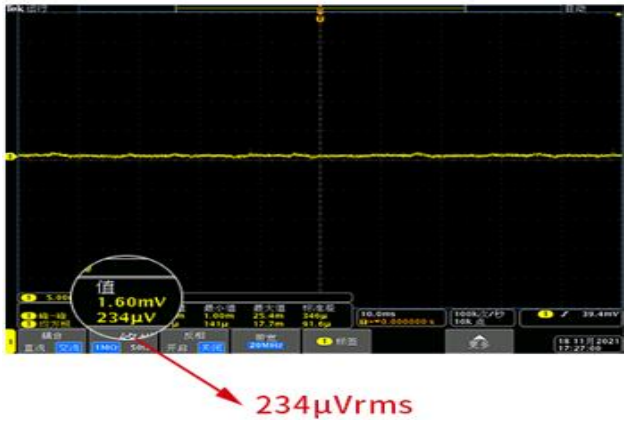
Human-computer interaction

The UDP3000S series power supply has 4.3inch TFT LCD, which provides a human-computer interaction interface with rich functions and simple operation. The real-time information, setting values and limit values of three channels are displayed at the same time. The test interface is clear at a glance, saving the time of browsing and searching.



Excellent performance

The UDP3000S series has excellent performance indicators and provides a cleaner and reliable DC power supply. It reduces unnecessary interference in use.



One key series parallel

All channels of this series of power supply are isolated from each other. One key series parallel connections of CH1 and CH2 can be realized through function keys. You do not need additional wiring. Just follow the interface diagram for wiring, which is fast and easy to operate. It provides you with a wider working range of power supply.



Remote control

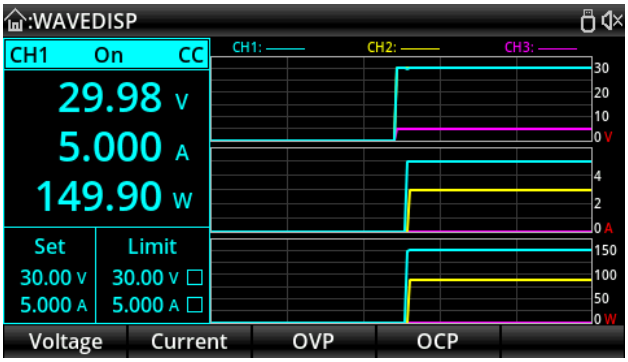
This series of power supply provides a variety of remote connection interfaces of USB / LAN / RS232. It supports SCPI general protocol and is equipped with host computer software, which can set, view, and carry out statistical work on a PC.



Waveform display

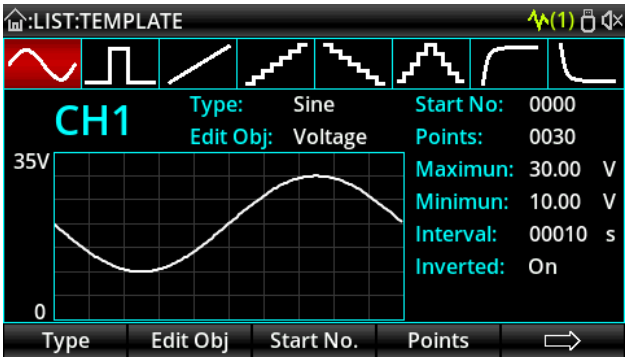
The UDP3000S series power supply has a waveform

display function, which can intuitively display the trend of voltage, current, and power and provide users with a better operation experience.



List/delayer function

The UDP3000S series provides list and delayer functions. The power output curve can be edited freely to meet the test requirements. The delayer can be applied to an on-off test to investigate the reliability of the tested equipment.



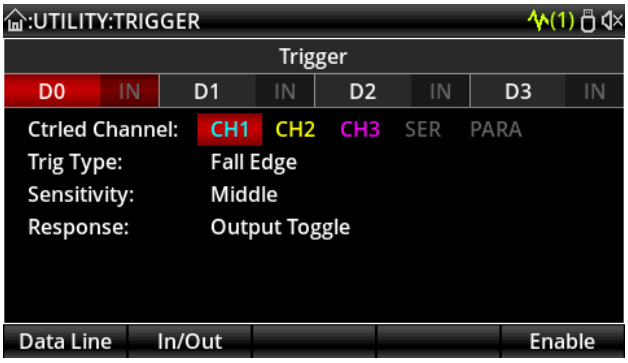
Protection function

The UDP3000S series has OVP / OCP / OTP function to provide protection for the power supply. It is equipped with current and voltage limit functions to provide a guaranteed range for the tested equipment. It is equipped with a monitor function, which can freely set protection conditions and give alarms.



External trigger

This series of power supplies provides a digital IO port, which can be edited as an external trigger mode to realize a remote control power supply. Set as output mode, it can provide trigger information and status flags for external instruments.



Preset function

UDP3000S series power supply can save 10 groups of list and delayer files respectively. You can save 5 sets of common configurations through presets. It provides convenience for quick access to common settings.



Technical Specification

Model		UDP3305S-E	UDP3305S
Channel	Channel	4	4
Output Rating	Voltage	CH1&CH2：0 ~ 30V	CH1&CH2：0 ~ 30V
		CH3：0 ~ 6V	CH3：0 ~ 6V
		CH4：5V（USB Output）	CH4：5V（USB Output）
	Current	CH1&CH2：0 ~ 5A	CH1&CH2：0 ~ 5A
		CH3：0 ~ 3A	CH3：0 ~ 3A
		CH4：2A（USB Output）	CH4：2A（USB Output）
	Power	348W	348W
CV mode	Regulation	Line Regulation：≤0.01%+2mV	Line Regulation：≤0.01%+2mV
		Load Regulation：≤0.01%+2mV	Load Regulation：≤0.01%+2mV
	Ripple and noise	＜350μVrms/2mVpp(5Hz~1MHz)	＜350μVrms/2mVpp(5Hz~1MHz)
	Reaction time	≤ 50μs(50% load variation, minimum load 0.5A)	≤ 50μs(50% load variation, minimum load 0.5A)
	Command processing time	＜100ms	＜100ms
CC mode	Regulation	Line Regulation：≤0.01%+250μA	Line Regulation：≤0.01%+250μA
		Load Regulation：≤0.01%+250μA	Load Regulation：≤0.01%+250μA
	Ripple current	≤2mArms	≤2mArms
Tracking mode	parallel connection	Line Regulation：≤0.01%+2mV	Line Regulation：≤0.01%+2mV
		Load Regulation：≤0.01%+2mV	Load Regulation：≤0.01%+2mV
	series connection	Line Regulation：≤0.01%+3mV	Line Regulation：≤0.01%+3mV
		Load Regulation：≤300mV	Load Regulation：≤300mV
	Tracking error	≤0.5%+10mV（10~30V No load） ≤0.5%+30mV（0~9.99V No load） Access load ≤ 300mA	≤0.5%+10mV（10~30V No load） ≤0.5%+30mV（0~9.99V No load） Access load ≤ 300mA
measure	Display	Voltage full scale, 4-digit display; 4.3inch LCD	Voltage full scale, 5-digit display; 4.3inch LCD
		Current full scale, 4-digit display; 4.3 inch LCD	Current full scale, 4-digit display; 4.3 inch LCD
	Programming resolution	Voltage：10mV	Voltage：1mV
		Current：1mA	Current：1mA
	Readback resolution	Voltage：10mV	Voltage：1mV
		Current：1mA	Current：1mA
	Programming accuracy（25±5℃）	Voltage：±（0.3%+20mV）	Voltage：±（0.03%+10mV）
		Current：±（0.2%+5mA）	Current：±（0.2%+5mA）

	Readback accuracy（25±5℃）	Voltage：±（0.1%+20mV）	Voltage：±（0.03%+10mV）
		Current：±（0.15%+5mA）	Current：±（0.15%+5mA）
Voltage programmed speed (1% of the total variation range)	**CH1**	Rise: full load ＜ 50ms; No load ＜ 30ms	Rise: full load ＜ 50ms; No load ＜ 30ms
		Fall: full load ＜ 45ms; No load ＜ 400ms	Fall: full load ＜ 45ms; No load ＜ 400ms
	CH2	Rise: full load ＜ 50ms; No load ＜ 30ms	Rise: full load ＜ 50ms; No load ＜ 30ms
		Fall: full load ＜ 45ms; No load ＜ 400ms	Fall: full load ＜ 45ms; No load ＜ 400ms
	CH3	Rise: full load ＜ 15ms; No load ＜13ms	Rise: full load ＜ 15ms; No load ＜13ms
		Fall: full load ＜ 22ms; No load ＜ 100ms	Fall: full load ＜ 22ms; No load ＜ 100ms
Temperature coefficient per ℃ (output percentage + offset)	**CH1**	Voltage：0.01%+5mV	Voltage：0.01%+5mV
		Current：0.01%+2mA	Current：0.01%+2mA
	CH2	Voltage：0.01%+5mV	Voltage：0.01%+5mV
		Current：0.01%+2mA	Current：0.01%+2mA
	CH3	Voltage：0.01%+2mV	Voltage：0.01%+2mV
		Current：0.01%+2mA	Current：0.01%+2mA
Channel 4 (USB output)	**Output voltage**	5V ±0.25V	5V ±0.25V
	Output current	2A	2A
Input	**Voltage**	AC 100V/120V/220V/230V±10%	AC 100V/120V/220V/230V±10%
	Frequency	50/60Hz	50/60Hz
	Power	MAX 600W	MAX 600W
	Fuse	AC220V ： T4AL250V	AC220V ： T4AL250V
		AC110V ： T8AL250V	AC110V ： T8AL250V
Environment	**Operating temperature**	0℃~40℃	0℃~40℃
	Operating humidity	20%~80%（non-condensing）	20%~80%（non-condensing）
	Storage temperature	-10℃~60℃	-10℃~60℃
	Altitude	≤2000 m	≤2000 m
	Pollution degree	2	2
Size and weight	**Size**	355mm*240mm*168mm	355mm*240mm*168mm
	Weight	10.2kG	10.2kG

*The UDP3000S series have been certified by CE, UKCA, cTUVus

Accessories

Standard accessories	UT-D14 USB data cable
	Power cable
	5pin plug
Optional accessories	Alligator clip test leads

Warranty

Three-years warranty, excluding probes and accessories. Please visit https://instruments.uni-trend.com/list_190/65.html to learn more information. To protect your investment, please purchase from UNI-T official authorized global distributors.

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