



# Datasheet

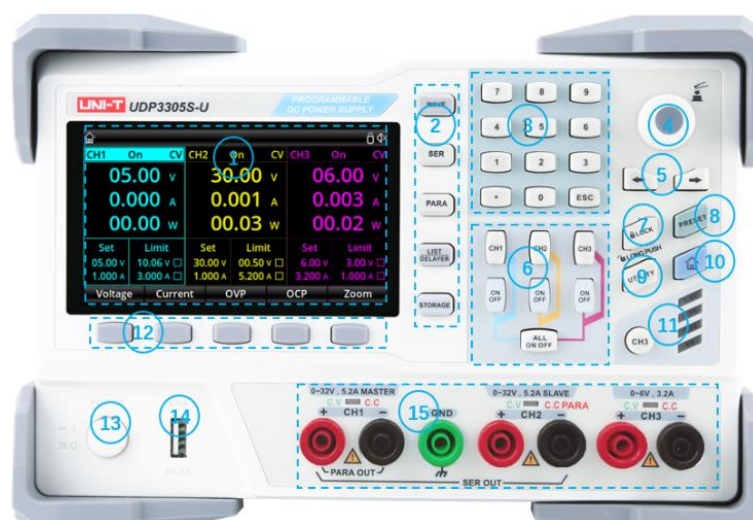
## UDP3305S-U Programmable DC Power Supply

REV 1.1

October 2024

## Main Features

- Maximum power up to 373W
- 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
- Ultralow output ripple and noise
- Support one key serial and parallel output function
- The 4.3-inch TFT display can display three channels and multiple parameters at the same time
- List /delayer function to control voltage and current output as required
- External trigger function to realize industrial automation control
- Provide 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
- Support 10 groups of file storage and transfer out, and support 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 mis operation
- Support SCPI remote command control





- ① LCD display ② Function key ③ Digital keyboard ④ Rotary encoder  
 ⑤ Shift 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 output  
 ⑮ Output channel and indicator ⑯ USB HOST ⑰ LAN ⑱ USB device  
 ⑲ Digital IO ⑳ RS232 ㉑ Fan ㉒ Input source selection ㉓ Protected GND  
 ㉔ AC socket

## Product Introduction

UDP3305S-U is a high-performance programmable linear DC power supply. It has a clear LCD user interface, excellent performance indicators, a variety of analysis functions and communication interfaces. It can meet the diversified test needs of users. It aims to provide cost-effective DC programmable power supply equipment for teaching, scientific research, industry and other fields.

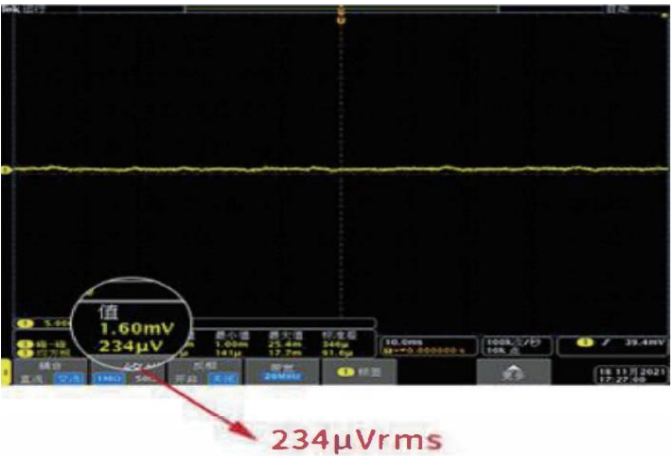
### Human-computer interaction

UDP3305S-U 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 value and limit value 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**

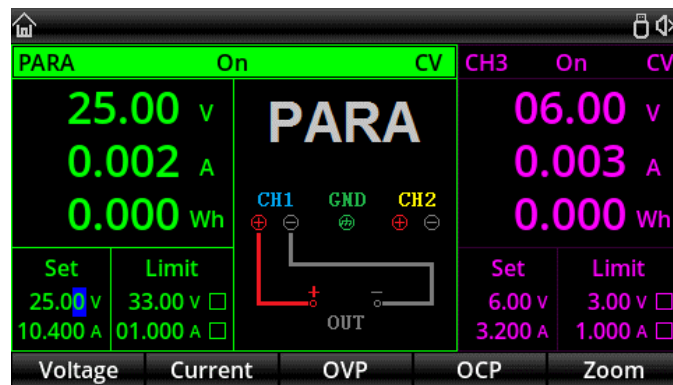
UDP3305S-U has excellent performance indicators. Provide cleaner and reliable DC power supply. It reduces unnecessary interference in use.



**One key series parallel**

All channels of this series of power supply are isolated from each other. One key series parallel connection 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.





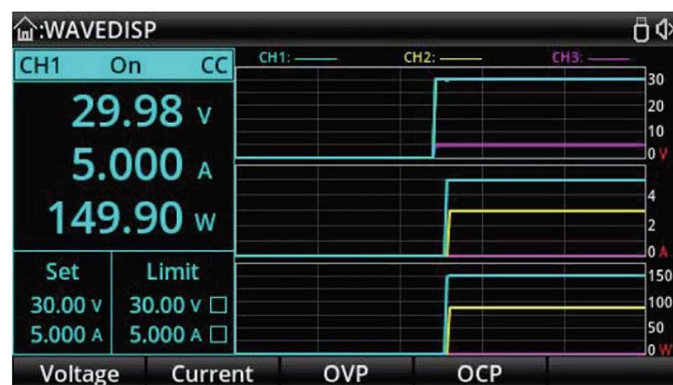
### Remote control

UDP3305S-U 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 PC.



### Waveform display

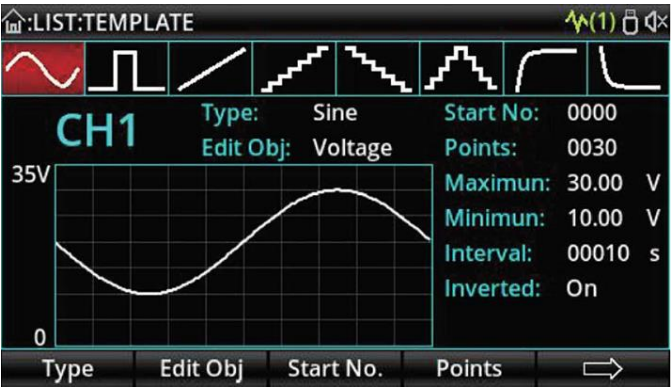
UDP3305S-U power supply has waveform display function, which can intuitively display the change trend of voltage, current and power. Provide users with better operation experience.



### List/ delayer function

UDP3305S-U provides list and delayer functions. The power output curve can be edited freely to meet the test requirements. The delayer can be applied to the on-off test to investigate the reliability of the tested equipment.





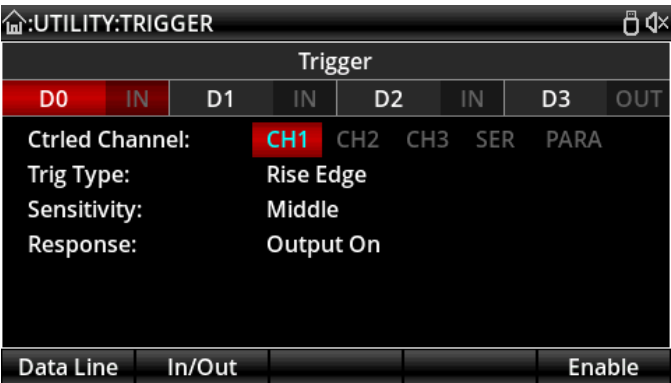
Protection function

UDP3305S-U has OVP / OCP / OTP function to provide protection for power supply. It is equipped with current and voltage limit functions to provide guarantee for the tested equipment. It is equipped with monitor function, which can freely set protection conditions and give alarms.



External trigger

UDP3305S-U of power supply provides digital IO port, which can be edited as external trigger mode to realize remote control power supply. Set as output mode, it can provide trigger information and status flag for external instruments.



Preset function

UDP3305S-U 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.

PRESET				
Preset1	Preset2	Preset3	Preset4	Preset5
	Volt(V)	Curr(A)	OVP(V)	OCP(A)
CH1	12.00	1.000	33.00 <input type="checkbox"/>	5.200 <input type="checkbox"/>
CH2	12.00	1.000	33.00 <input type="checkbox"/>	5.200 <input type="checkbox"/>
CH3	3.00	0.500	3.00 <input type="checkbox"/>	1.000 <input type="checkbox"/>
SER	00.00	0.000	03.00 <input type="checkbox"/>	1.000 <input type="checkbox"/>
PARA	00.00	00.000	03.00 <input type="checkbox"/>	01.000 <input type="checkbox"/>
Edit				Load

## Technical Specification

Model		UDP3305S-U
Channel	Channel	4
Output Rating	Voltage	CH1&CH2:0~30V
		CH3:0~6V
		CH4:5V(USB Output)
	Current	CH1&CH2:0~5V
		CH3:0~3A
		CH4:2A(USB Output)
	Power	328W
CV mode	Regulation	Line Regulation: $\leq 0.01\% + 2\text{mV}$
		Load Regulation: $\leq 0.01\% + 2\text{mV}$
	Regulation	$< 350\mu\text{Vrms}/2\text{mVpp}(5\text{Hz} \sim 1\text{MHz})$
	Reaction time	$\leq 50\mu\text{s}$ (50% load variation, minimum load 0.5A)
	Command processing time	$< 10\text{ms}$
CC mode	Regulation	Line Regulation: $\leq 0.01\% + 250\mu\text{A}$
		Load Regulation: $\leq 0.01\% + 250\mu\text{A}$
	Ripple current	$\leq 2\text{mArms}$
Tracking mode	Parallel connection	Line Regulation: $\leq 0.01\% + 2\text{mV}$
		Load Regulation: $\leq 0.01\% + 2\text{mV}$
	Series connection	Line Regulation: $\leq 0.01\% + 3\text{mV}$
		Load Regulation: $\leq 300\text{mV}$
	Tracking error	$\leq 0.5\% + 10\text{mV}$ (10~30V No load)
		$\leq 0.5\% + 30\text{mV}$ (0~9.99V No load) Access load $\leq 300\text{mV}$
measure	Display	Voltage full scale, 4-digit display: 4.3inchLCD
		Current full scale, 4-digit display: 4.3inchLCD
	Programming resolution	Voltage: 10mV
		Current: 1mA
	Readback resolution	Voltage: 10mV
		Current: 1mA
	Programming accuracy	Voltage: $\pm(0.3\% + 20\text{mV})$

	(25°C± 5°C)	Current: ±(0.2%+5mA)
	Readback accuracy (25°C± 5°C)	Voltage: ±(0.1%+20mV)
		Current: ±(0.15%+5mA)
Voltage programmed speed (1% of the total variation range)	CH1	Rise: full load<50ms; No load<30ms
		fall: full load<45ms; No load<400ms
	CH2	Rise: full load<50ms; No load<30ms
		fall: full load<45ms; No load<400ms
	CH3	Rise: full load<15ms; No load<13ms
		fall: full load<22ms; No load<100ms
Temperature coefficient per °C ± (output percentage +offset)	CH1	Voltage:0.01%+5mV
		Current:0.01%+2mA
	CH2	Voltage: 0.01%+5mV
		Current:0.01%+2mA
	CH3	Voltage: 0.01%+2mV
		Current: 0.01%+2mA
Channel 4 {USB output}	Output voltage	5V±0.25V
	Output current	2A
Input	Voltage	AC 100V/120V/220V/230V±10%
	Frequency	50/60Hz
	Power	MAX 600W
	Fuse	AC 220V: T4AL250V
		AC 110V: T8AL250V
Environment	Operating temperature	0°C~40°C
	Operating humidity	20%-80% (non-condensing)
	Storage temperature	-40°C~60°C
	Altitude	≤2000m
	Pollution degree	2
Size and weight	Size	355mm*240mm*168mm
	Weight	10.2kg



\*The UDP3305S-U have been cerified by CE, UKCA, cTUVus

Accessories	
Standard accessories	Power cord that meets the standards of the country of destination
	USB data cable
	5pin plug
Optional accessories	Alligator clip test line



## Warranty

Three-years warranty, excluding probes and accessories.

Please visit [https://instruments.uni-trend.com/list\\_190/65.html](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.

## Find a Distributor

Find an authorized distributor here: <https://instruments.uni-trend.com/Network>

## Contact UNI-T

E-mail: [info@uni-trend.com](mailto:info@uni-trend.com)

Test & Measurement Instruments Website: [instruments.uni-trend.com](https://instruments.uni-trend.com)

UNI-T Corporate Website: [www.uni-trend.com](https://www.uni-trend.com)

UNI-T group maintains a wide products category includes Digital Test & Measurement instruments, Field Testing Meter, Infrared thermal imaging products. As early as 2008, we continue to introduce self-developed Digital Test and Measurement instruments to the market and have made remarkable achievements. At present, we have formed a variety of product lines of Oscilloscope, AWG, Spectrum Analyzer, Bench Multi-meter, Power Supply, DC Load, Power Meter, LCR Meter, Micro Ohm Meter and Data logger. We have separated instruments sub-sites, [instruments.uni-trend.com](https://instruments.uni-trend.com), on the basis of the original website [www.uni-trend.com](https://www.uni-trend.com), in order to be more targeted to provide customers with better service and value.

UNITMKT-TMI-SCAL-2205-029

[Instrument.uni-trend.com](https://Instrument.uni-trend.com)

The logo for UNI-T, featuring the letters "UNI-T" in a bold, red, sans-serif font. A registered trademark symbol (®) is located to the right of the letter "T".