

UPL series

High Voltage DC Power Supply 2U 1.2-5kW



The UPL series programmable high power DC power supply is available with rated voltage 6V to 2000V in 1.2kW to 15kW power. The UPL series provides comprehensive customized solutions for rated power up to 300kW and rated current up to 10kA.

The UPL series adopts ZVZCS PWM technology, which greatly reduces switching consumption and therefore facilitates switching function with high efficiency and high stability.

RS232 and RS485 are built at default. LAN interface and analog interface are provided as an option, providing multiple communication choices for both digital control and analog control.

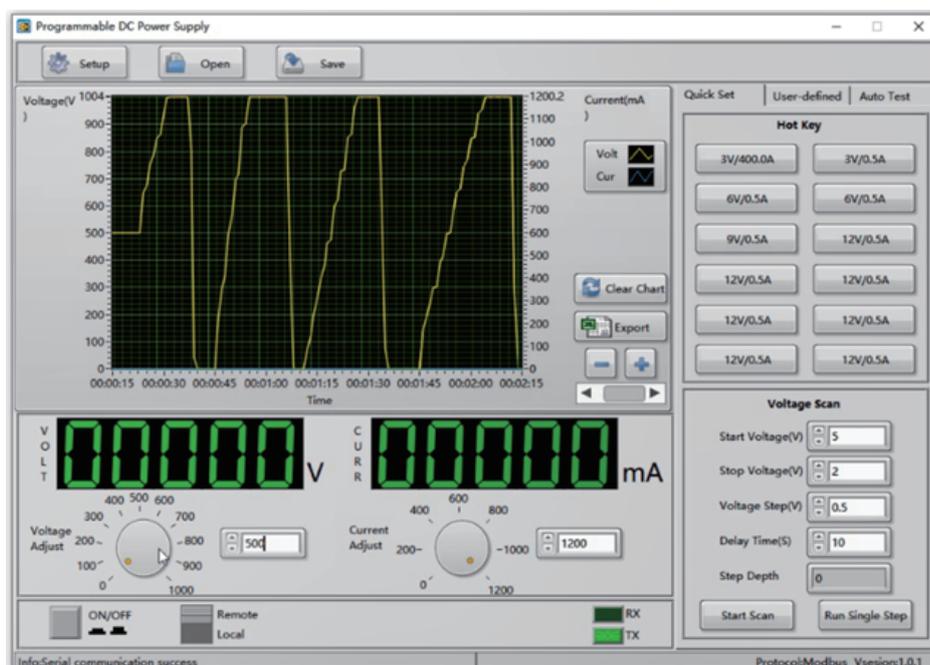
With rack mount design and multiple communications, the UPL series programmable high power DC power supply can be easily integrated into test systems as reliable DC voltage source and DC current source.

Features

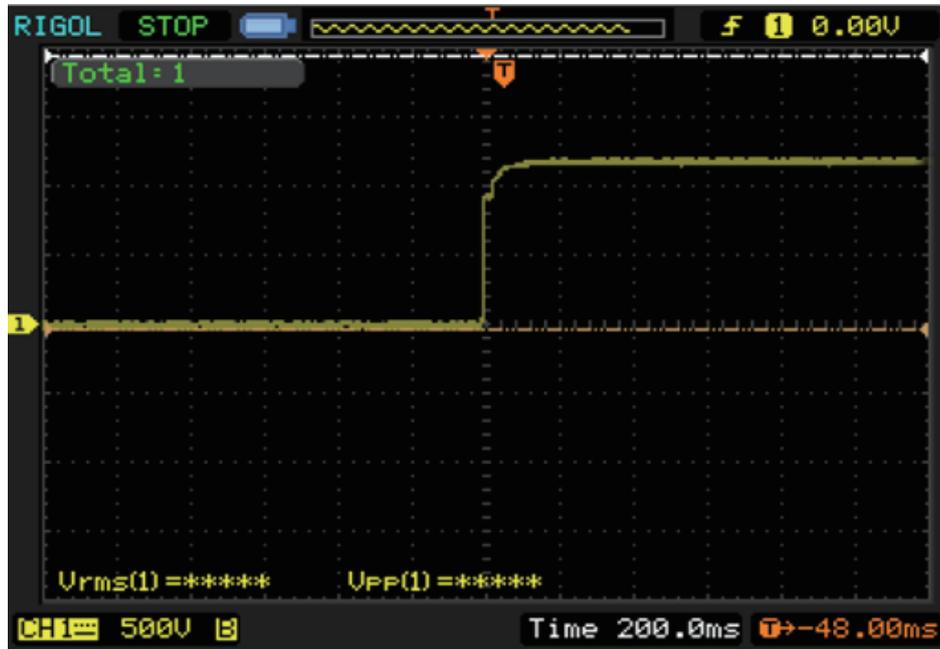
- 4 digits LED display for voltage and current
- Max.rated output 1.2kW to 15kW, customized up to 300kW
- Max.rated voltage from 6V to 2000V
- Max.rated current from 2A to 1000A, customized up to 10kA
- Low ripple, high stability
- List mode function, Auto Run function, Remote sensing function
- No overshoot during startup
- Soft start by hardware, and adjustable voltage rise time by software
- Preset function, setting of voltage and current with output open circuit
- Multiple protections: OVP, OTP, ACF and current limit protections
- Standard interface: RS232 & RS485, support ModBus-RTU commands
- Optional interface: DC 0-5V, 0-10V or 4-20mA interface for control and feedback; LAN interface

Free PC Software

Multiple remote control and sampling functions. Such as: voltage & current setup, voltage & current feedback, data recording, export data to EXCEL, List mode function, auto run function. Adjustable voltage rise time.



No Overshoot



Panel Descriptions (2U frame)



(1P 220Vac input for 2.4kW~3kW)



(3P 380Vac input for 4kW~5kW)

Product Photos (3U frame)



(1P 220Vac input for 2.4kW~3kW)

Specifications

Output		
Rated Voltage	DC 0~100% full range adjustable	
Rated Current	DC 0~100% full range adjustable	
OVP Range	DC 0~105% of rated voltage adjustable	
Line Regulation	CV \leq 0.5%+2LSB, CC \leq 0.5%+2LSB	
Load Regulation	CV \leq 0.1%+2LSB, CC \leq 0.1%+2LSB	
Ripple & Noise	\leq 50mV / 100mV / 200mV	
Programming		
Programming Resolution	Voltage	0.001V / 0.01V / 0.1V
	Current	0.001A / 0.01A / 0.1A
	OVP	0.001V / 0.01V / 0.1V
Interface	RS232, RS485	
Commands	ModBus-RTU	
Display		
Meter	Voltage	4 1/2 digits LED display for voltage
	Current	4 1/2 digits LED display for current
Display Resolution	Voltage	0.001V / 0.01V / 0.1V
	Current	0.001A / 0.01A / 0.1A
Display Accuracy	Voltage	\leq 0.2%FS+2LSB
	Current	\leq 0.5%FS+2LSB
Protection		
Over Voltage Protection (O.V.P.)	Built-in OVP protection with limit of 105% rated output voltage. The output will be shut down when OVP is activated.	
Over Temperature Protection (O.T.P.)	Built-in OTP protection with heat sink temperature limit of 105 $^{\circ}$ C \pm 5 $^{\circ}$ C. The output will be shut down when OTP is activated.	
Under Voltage Protection (U.V.P.)	Built-in UVP protection with limit of 165Vac. The output will be shut down when UVP is activated.	
General		
Cooling method	Cooling fan	
Operating environment	0 $^{\circ}$ C~40 $^{\circ}$ C, 10%~80%RH	
Storage environment	-20 $^{\circ}$ C~70 $^{\circ}$ C, 10%~90%RH	

List of models

Model (1200W)	Rated Output			Voltage Ripple	Programming Resolution			Display Resolution	
	V	A	OVP		V	A	OVP	V	A
UPL1200-6 ^①	0~6V	0~200A	0~6.3V	≤50mV	0.001V	0.1A	0.001V	0.001V	0.1A
UPL1200-12 ^①	0~12V	0~100A	0~12.6V	≤50mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL1200-15	0~15V	0~80A	0~15.75V	≤50mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL1200-20	0~20V	0~60A	0~21V	≤50mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL1200-30	0~30V	0~40A	0~31.5V	≤50mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL1200-60	0~60V	0~20A	0~63V	≤50mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL1200-1H	0~100V	0~12A	0~105V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL1200-120	0~120V	0~10A	0~126V	≤100mV	0.1V	0.001A	0.1V	0.1V	0.01A
UPL1200-150	0~150V	0~8A	0~157.5V	≤100mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL1200-2H	0~200V	0~6A	0~210V	≤100mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL1200-3H	0~300V	0~4A	0~315V	≤100mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL1200-4H	0~400V	0~3A	0~420V	≤100mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL1200-5H	0~500V	0~2.4A	0~525V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL1200-6H	0~600V	0~2A	0~630V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
Dimensions	Current <100A: 425W×88H×463D mm (2U) Current ≥100A: 425W×88H×503D mm (2U-L)								
Weight	Approx 11kg								
AC Input	1φ3W (L, N, PE), 220V±10% 47~63Hz								

Remarks^①: Load Regulation: CV≤0.21%+2LSB

Model (2400W)	Rated Output			Voltage Ripple	Programming Resolution			Display Resolution	
	V	A	OVP		V	A	OVP	V	A
UPL2400-12	0~12V	0~200A	0~12.6V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL2400-20	0~20V	0~120A	0~21V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL2400-30	0~30V	0~80A	0~31.5V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL2400-40	0~40V	0~60A	0~42V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL2400-60	0~60V	0~40A	0~63V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL2400-1H	0~100V	0~24A	0~105V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL2400-120	0~120V	0~20A	0~126V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL2400-150	0~150V	0~16A	0~157.5V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL2400-2H	0~200V	0~12A	0~210V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL2400-3H	0~300V	0~8A	0~315V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL2400-4H	0~400V	0~6A	0~420V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL2400-5H	0~500V	0~4.8A	0~525V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL2400-6H	0~600V	0~4A	0~630V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
Dimensions	Current <100A: 425W×88H×463D mm (2U) Current ≥100A: 425W×88H×503D mm (2U-L)								
Weight	Approx 12~13kg								
AC Input	1φ3W (L, N, PE), 220V±10% 47~63Hz								

List of models

Model (3000W)	Rated Output			Voltage Ripple	Programming Resolution			Display Resolution	
	V	A	OVP		V	A	OVP	V	A
UPL3000-15	0~15V	0~200A	0~15.75V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL3000-20	0~20V	0~150A	0~21V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL3000-30	0~30V	0~100A	0~31.5V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL3000-40	0~40V	0~75A	0~42V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL3000-50	0~50V	0~60A	0~52.5V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL3000-60	0~60V	0~50A	0~63V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL3000-1H	0~100V	0~30A	0~105V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL3000-120	0~120V	0~25A	0~126V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL3000-150	0~150V	0~20A	0~157.5V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL3000-2H	0~200V	0~15A	0~210V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL3000-3H	0~300V	0~10A	0~315V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL3000-4H	0~400V	0~7.5A	0~420V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL3000-5H	0~500V	0~6A	0~525V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL3000-6H	0~600V	0~5A	0~630V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
Dimensions	Current <100A: 425W×88H×463D mm (2U) Current ≥100A: 425W×88H×503D mm (2U-L)								
Weight	Approx 12~14kg								
AC Input	1φ3W (L, N, PE), 220V±10% 47~63Hz								

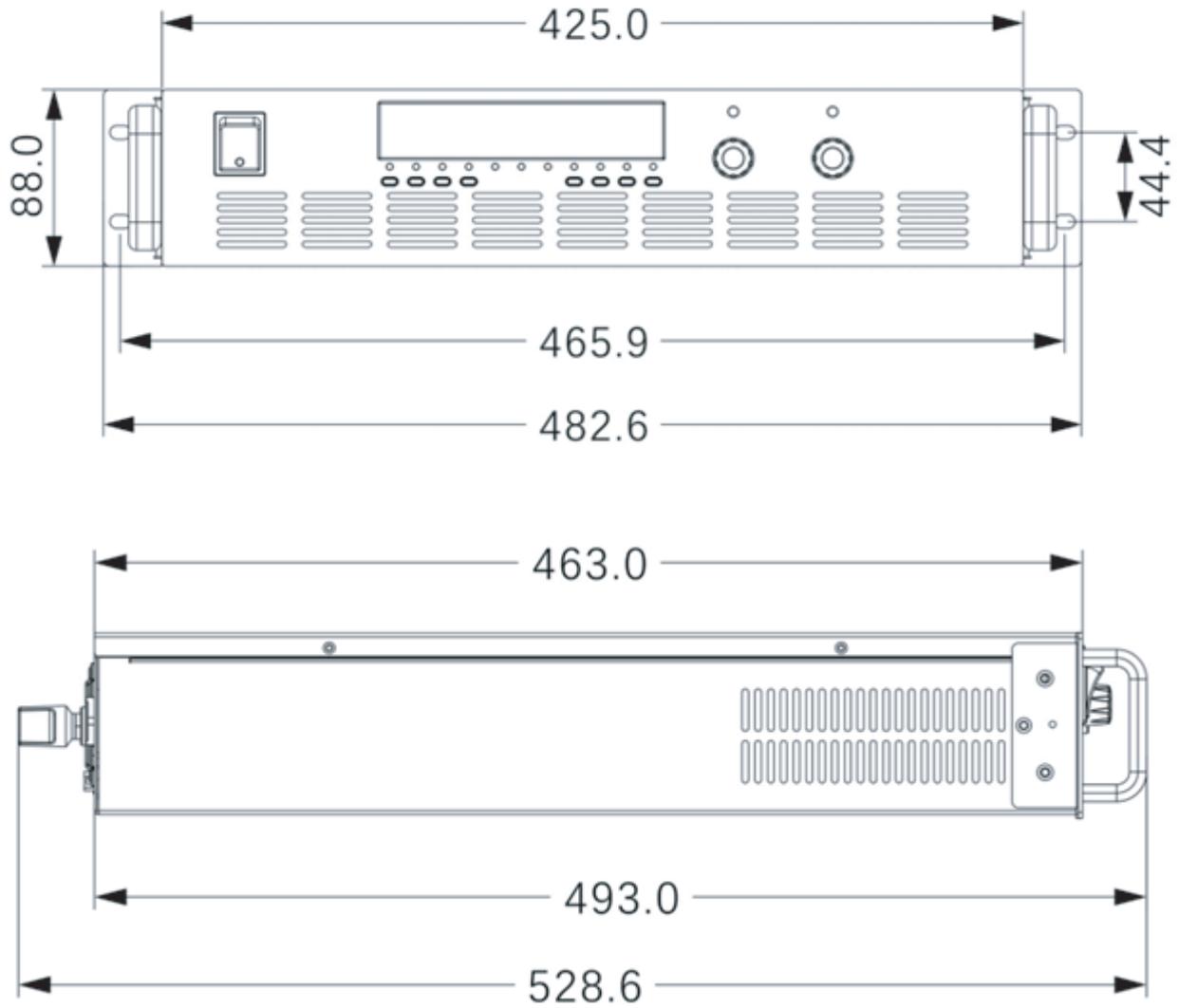
Model (4000W)	Rated Output			Voltage Ripple	Programming Resolution			Display Resolution	
	V	A	OVP		V	A	OVP	V	A
UPL4000-20	0~20V	0~200A	0~21V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL4000-30	0~30V	0~133A	0~31.5V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL4000-40	0~40V	0~100A	0~42V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL4000-60	0~60V	0~67A	0~63V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL4000-1H	0~100V	0~40A	0~105V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL4000-150	0~150V	0~26.7A	0~157.5V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL4000-2H	0~200V	0~20A	0~210V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL4000-3H	0~300V	0~13.3A	0~315V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL4000-4H	0~400V	0~10A	0~420V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL4000-5H	0~500V	0~8A	0~525V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
UPL4000-6H	0~600V	0~6.7A	0~630V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
Dimensions	425W×88H×503D mm (2U-L)								
Weight	Approx 16kg								
AC Input	3φ4W (L1, L2, L3, PE), 380V±10% 47~63Hz								

List of models

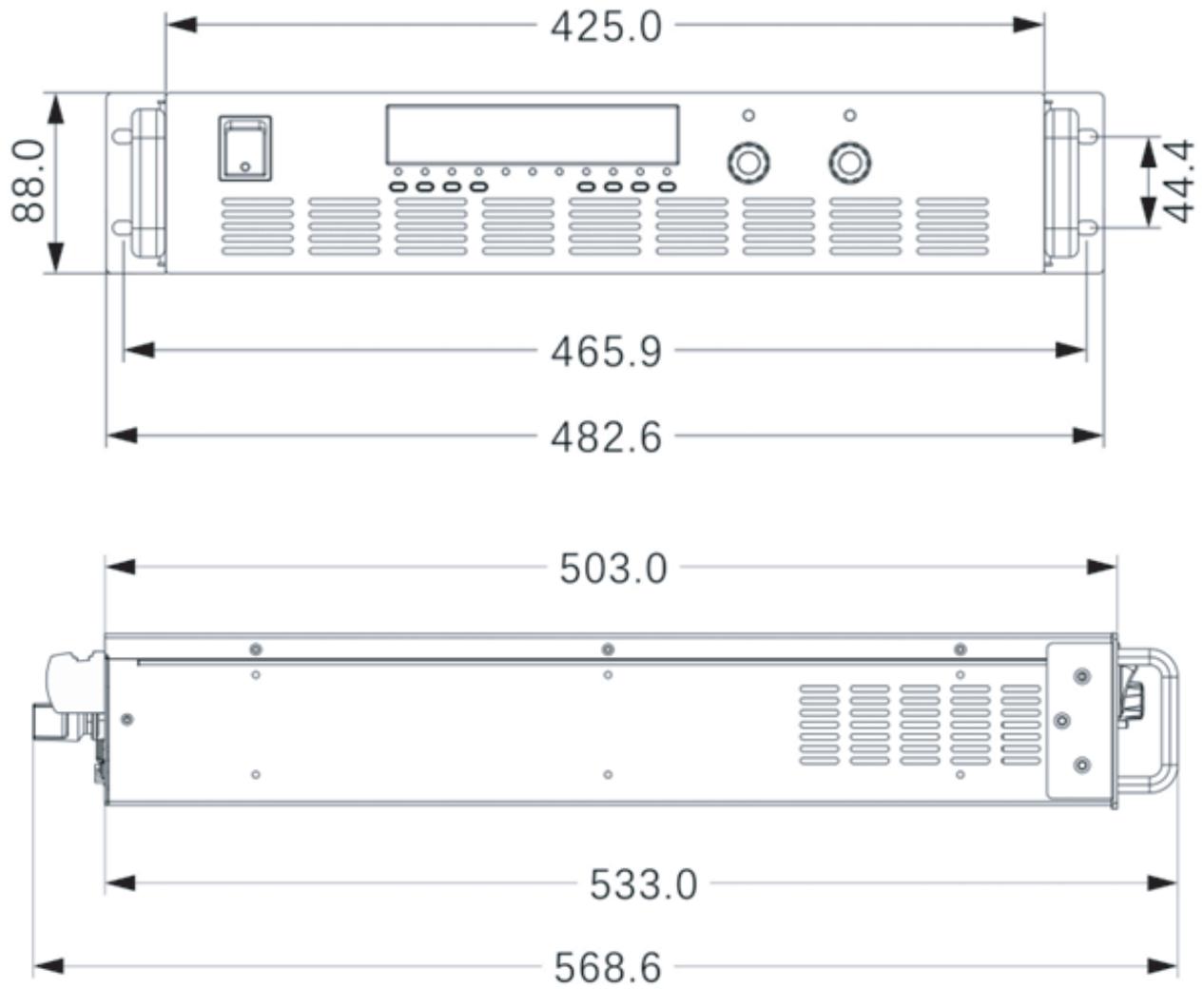
Model (5000W)	Rated Output			Voltage Ripple	Programming Resolution			Display Resolution	
	V	A	OVP		V	A	OVP	V	A
UPL5000-20	0~20V	0~250A	0~21V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL5000-30	0~30V	0~167A	0~31.5V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL5000-40	0~40V	0~125A	0~42V	≤100mV	0.01V	0.1A	0.01V	0.01V	0.1A
UPL5000-60	0~60V	0~83A	0~63V	≤100mV	0.01V	0.01A	0.01V	0.01V	0.01A
UPL5000-1H	0~100V	0~50A	0~105V	≤100mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL5000-150	0~150V	0~33.3A	0~157.5V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL5000-2H	0~200V	0~25A	0~210V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL5000-3H	0~300V	0~16.7A	0~315V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL5000-4H	0~400V	0~12.5A	0~420V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL5000-5H	0~500V	0~10A	0~525V	≤200mV	0.1V	0.01A	0.1V	0.1V	0.01A
UPL5000-6H	0~600V	0~8.3A	0~630V	≤200mV	0.1V	0.001A	0.1V	0.1V	0.001A
Dimensions	425W×88H×503D mm (2U-L)								
Weight	Approx 16kg								
AC Input	3φ4W (L1, L2, L3, PE), 380V±10% 47~63Hz 1φ3W (L, N, PE), 220V±10% 47~63Hz (at request, cabinet changed to 3U)								

For the purpose of product improvement, specifications are subject to change without prior notice.

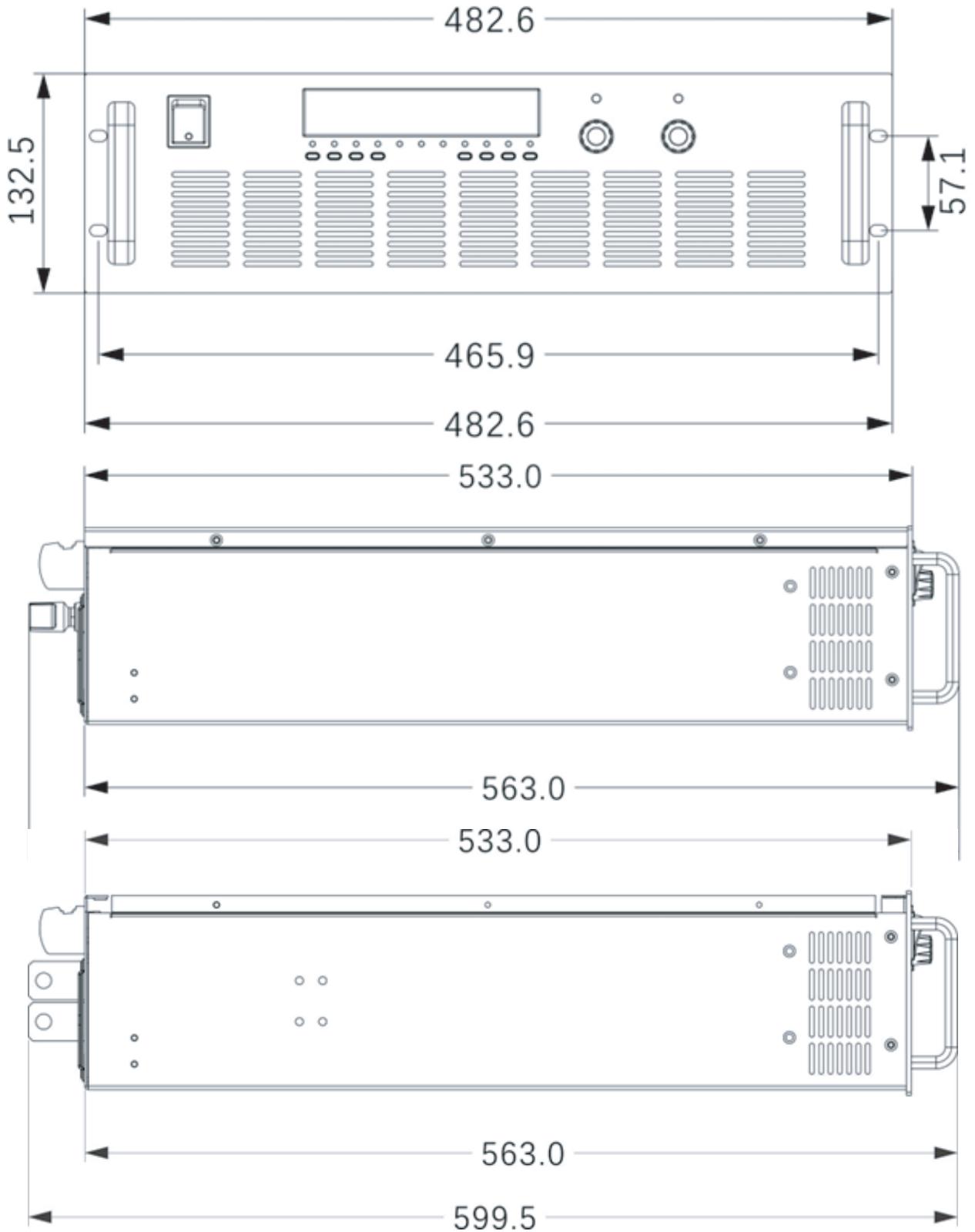
Dimensional drawings (2U)



Dimensional drawings (2U-L)



Dimensional drawings (3U)





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