

PPS 1500U

DC and PulseDC

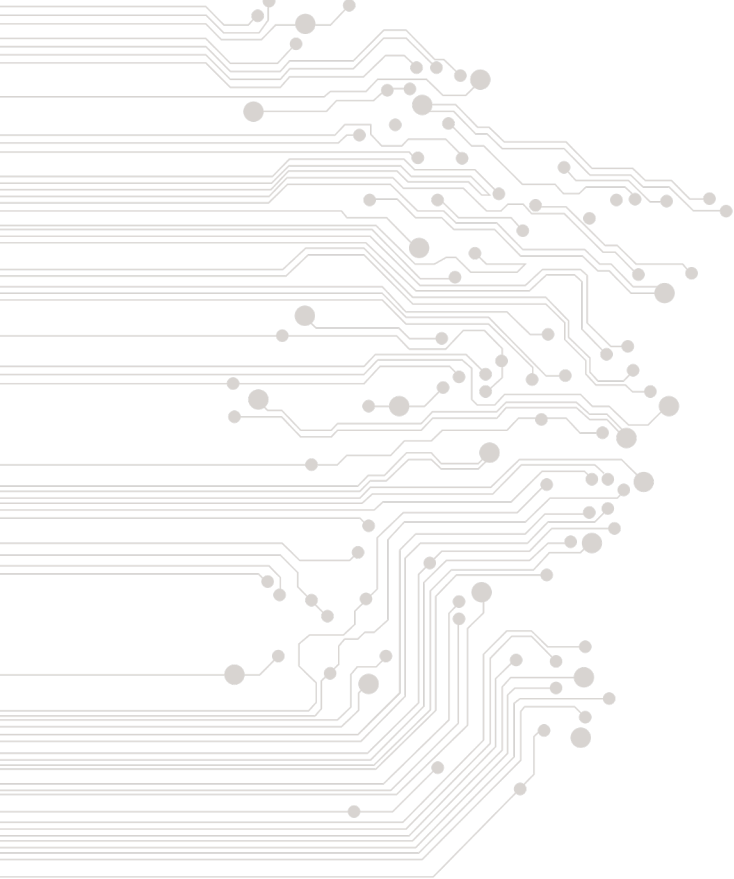
plasma power supply



NEW
IMPROVEMENT

**PulseDC output power up
up to 1500W
with 3A output current !**

EDFelectronics



PPS 1500U - DC and PulseDC plasma power supply

The PPS 1500U is a versatile dual source power supply combining DC and PulseDC operating modes available for R&D coating & cleaning applications. Unit is available with two frequency ranges: 120kHz or 300kHz. It can control up to two sources which may be any combination of compact magnetron sputter heads or glow discharge heads. Sputter sources can even be positioned in separate chambers.

The PPS 1500U is only 2U height and also features a vacuum gauge interlock. It can be used as a standalone table-top device or rack mounted.

Remote control is possible via Analog, Serial or LAN/Ethernet interface and a remote mobile application is currently under development. This unique feature allows the user to observe the plasma whilst adjusting the source parameters with a handheld mobile device.

Low-Ripple Noise Technology, the elimination of high-voltage transistor switching using resonant converter technology and current-diversion circuits, results in superior reliability as well as excellent process performance in the form of high output-

voltage consistency.

Arc Detection and Suppression are guaranteed by fast response

loop in less than 2 μ s.

Applications

- Coating for moulds and tools
- Semiconductor wafer sputtering
- Oxide TFT LCD & Colour filter
- TFT LCD
- OLED LTPS sputter metal & TCO deposition
- Thin film for solar cells
- ITO deposition for touch panels
- BIPV, data storage, FCCL
- Automotive wheels and head lamps
- Ion nitriding
- Mobile phone cases

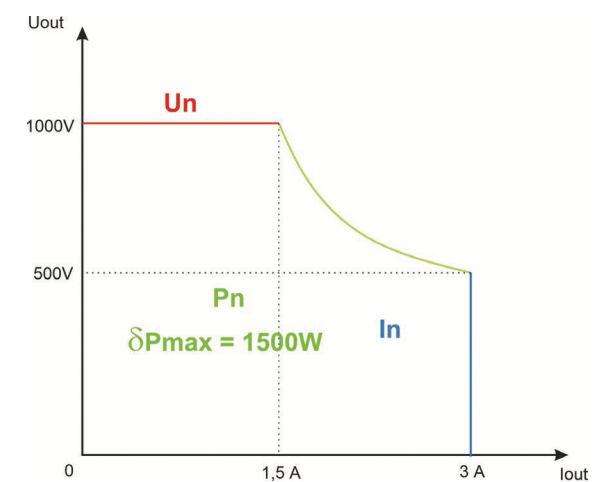
Stability and control

Extremely stable output allows for operating the sources even at powers less than 2W, which makes this device unique in its own class and in comparison, to competitor offerings. It is ideal for R&D applications!

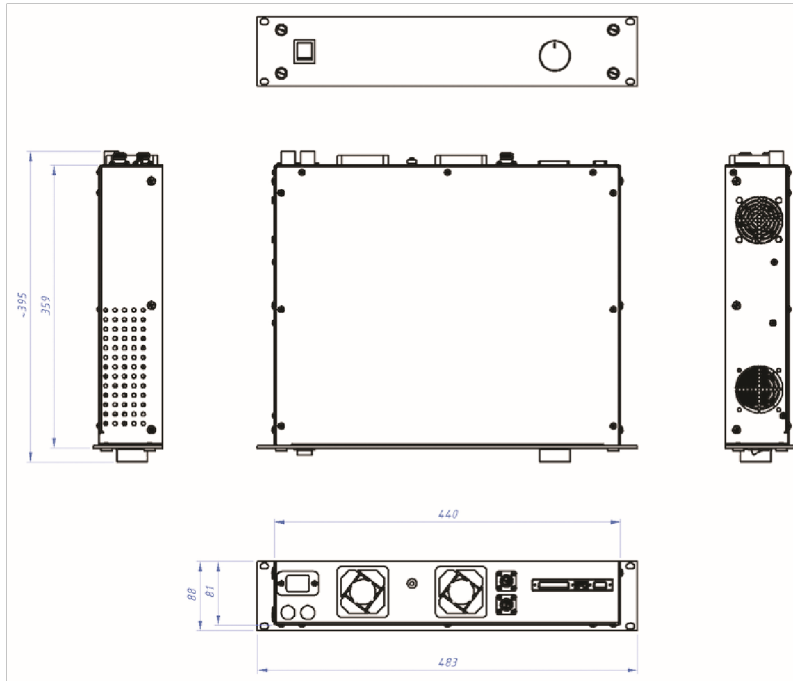
Fast Ramp Response
guarantees fast arc detection
– negates the need for arc suppression!

Features and benefits

- DC or PulseDC operating mode in one unit
- Two HV outputs for dual magnetron operation – selectable operation; no external switch box needed
- Suppression & arc detection
- Selectable voltage
- Current & power regulation mode
- Clear output power LED indicator
- Timer mode operation
- Stable operation from 2W only
- Large impedance range – different size magnetron operation
- Ideal for 2", 3" and higher magnetron operation
- User friendly interface with LCD display with keyboard and rotary encoder operation,
- Easy to install with compact design and high-power density
- Self-diagnosis functions (protection, limit)
- Overtemperature protection
- Shortcut and overvoltage protection



PPS1500U – Specifications



Electrical	
Input Voltage	195 to 250 Vac (43 ... 63 Hz), 1 phase operation *
Input current	Max 8A; Power factor = min 0.90
Mode of operation	DC and Unipolar PulseDC
Frequency in PulseDC operation	10 kHz ... 120 kHz or 10 kHz ... 300 kHz **
Duty Cycle in PulseDC operation	2...99% (2us min)
Output Power	1500W max in DC and PulseDC mode
Output Voltage/Current/Power	0 – 1000 VDC negative (ignition voltage 1200V) 0 – 3000 mA (1 mA step)
Regulation type	Power, Current and Voltage
Ripple noise	Switching: 2% p-p (50kHz) Line: 1% p-p (100/120 Hz)
Ramp timer	Programmable
Communication Interface	Analogue, Serial (RS232 or RS485**) and Ethernet 10/100Mb
Methods of control	Local or remote through Communication Interface
Arc Detection	< 2 us Response Time
Dimensions	483 x 395 x 88 mm (W x D x H) - 2U Rack Mounting Standard
Weight	10.8 kg
* alternatively, operation is also possible from two hot wires 3 phase systems, providing the voltage between them which does not exceed more than 250 VAC; 110VAC operation is possible as well, but with limited output power (1000 W)	
I/O Control	
Analog Interface	25 Dsub male connector isolated (up to 2000 V RMS, 0...5V Analogue, 0/24 VDC Digital)
Serial Communication Options	RS232 or RS485 with ModBUS EDF's protocol **; Ethernet IP, with ModBUS TSP EDF's protocol
** configurable with order only	

Regulatory Compliance

PPS 1500U units are CE marked and conform to Low Voltage Directive 73/23/EEC and Electromagnetic Compatibility Directive 89/366/EEC—meeting EN55011 (emissions), EN61000-6-2 (immunity), and EN50178 (safety).



EDFelectronics Sp. z o.o. PL-44310 Radlin, ul. Rybnicka 64

e-mail: edf@edfelectronics.eu
web: www.edfelectronics.eu
tel: +48 604 343 504

VAT ID: PL 6472575952, Regon: 365747029