HIGH POWER PLATING RECTIFIER

USER MANUAL

VOLTEQ

CE

Please read the user manual carefully before operating this rectifier.

Warning: Do not connect any load to the rectifier before it's turned on. Likewise, make sure to disconnect the load before shutting down the rectifier. Damages to the rectifier may occur if you do not follow this. Such damages are not under warranty.

Warning: If you are running inductive load like magnetic coils, DC motors, stepper motors, etc., make sure to change the voltage/current slowly, and NEVER turn the rectifier on or off with a inductive load connected!

Warning: Do not attempt to inspect or repair the rectifier unless it has been powered off for at least one minute.

Warning: The copper wires/terminals maybe be hot after the rectifier has been turned on.

Warning: Vapors from plating tank can be corrosive to the electronic components, damages caused by corrosion is not under warranty.

I. Overview

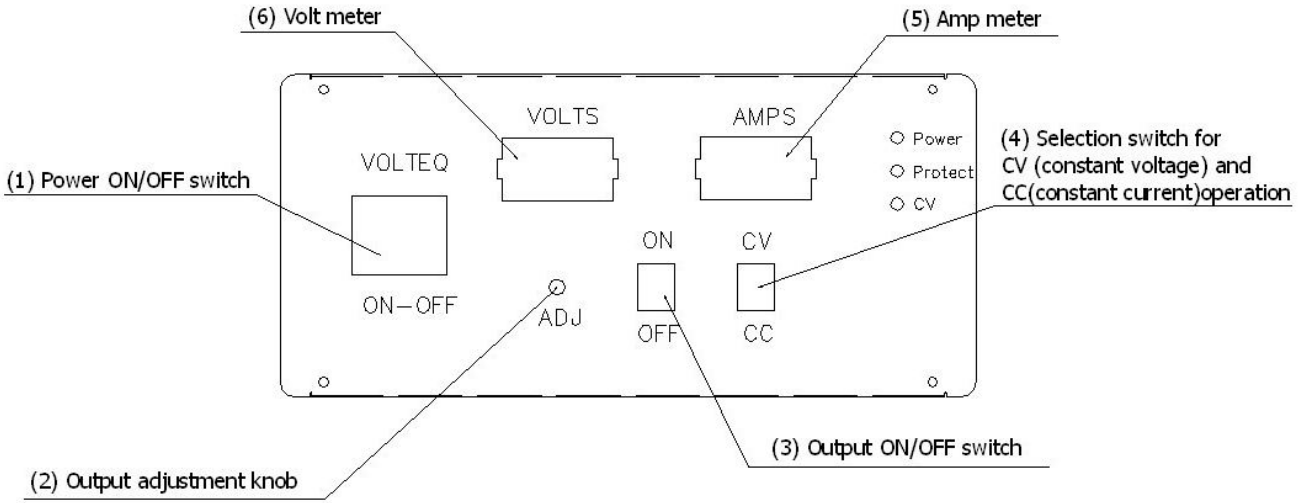
HY series high power plating rectifiers are specialized rectifiers made for plating industry. The rectifiers have high efficiency, high output, and are designed for continuous operation. The rectifiers have built-in over current, over voltage, and over temperature protection. They can act as constant voltage as well as constant current DC rectifier. These rectifiers are great choice for anodizing, plating, electrolysis, hydrogen generation, and other applications that require high output power. The table below list the current models available from Volteq.

Model	Output Voltage	Output Current	AC Voltage	Maximum AC Current
HY10500EX	0-10V	0-500A	AC220V±10% 50/60Hz	30A
HY15200EX	0-15V	0-200A	AC220V±10% 50/60Hz	20A
HY30200EX	0-30V	0-200A	AC220V±10% 50/60Hz	35A

II. Panel layout and specifications

2.1 Panel layout

(1) Power ON/OFF switch
(2) Output adjustment knob
(3) Output ON/OFF switch
(4) Selection switch for CV (constant voltage) and CC operation
(5) Amp meter
(6) Volt meter



2.2 Technical specifications

Ripple and noise : ≤5%
Voltage regulation : ≤0.5%
Current regulation : ≤1%
Load regulation : ≤0.5%
Display accuracy: ±1%±1 digit
Control accuracy: ≤1%
Protection: Over-current, Over-voltage, Over-temperature
Input voltage: AC220V±10% 50/60Hz
Working conditions: -100C -400C, relative humidity<90%, no condensation
Storage conditions: -200C-800C, relative humidity<80%
Ventilation: minimum of 50cm of open space around the rectifier is required for good ventilation
Elevation: ≤1500 Meters

III. The operation procedures

1. Check to ensure the AC plug is secure and wired correctly for the polarity. Check to ensure the output is connected correctly and securely.
2. Check to ensure power switch and output switch are in "OFF" state, and the output adjustment knob

at the minimum position.
3. Plug into AC outlet, and then turn on the power switch (1). Check to make sure the fan is working.
4. Turn on the output (3). Select switch (4) to either "CV" or "CC" as your operating mode. If "CV" is selected, the output voltage will be stable while the output current will change with the load; likewise, if "CC" is selected, the output current will be stable while the voltage will change with the load.
5. Adjust knob (2) to set the output to the desired level.

IV. Maintenance

Routine inspection and maintenance is required for prolonged working life of the rectifiers:

1. Clean dust off the inside of the rectifier and cooling fan.
2. Clean off the oxide layer that may occur on the output copper wires and connectors.
3. Check to ensure that cooling fan is in good working condition all the time, replace the fan if it fails.
4. Regularly check and ensure that switch and circuit breaker are in good working condition and all connectors are secure and firm.
5. The rectifier should not sit idle for more than a year, as the capacitor may change its characteristics if not charged for a long time.

V. Troubleshooting

Symptoms	Possible Cause
Indicator light flashes, no voltage output	• there maybe a short between output terminals • fan may not be working properly or the rectifier may have over-heated • over-current protection maybe trigged
Voltage output is normal, but no current output	• connection to the positive and negative terminals maybe loose
Circuit breaker jumps during operation	• some components may have failed internally
Output voltage or current is not stable	• voltage or current meter may have gone bad
Case is not grounded and is electrically hot	• the environment maybe too humid • some internal components may have failed

All products from Volteq come with 1 year full manufacturer's warranty. For technical questions or warranty service, please contact us at support@volteq.com or call us at 408-622-9851.