



AF01 Model

Air cleaning HV power supply



Specification Summary

The AF01 range of power supplies are specifically designed for application in air and oil purification systems. They are available with either single or dual outputs, and with a wide range of output voltages. The power supplies are protected from overload, short circuit and sparks. They are able to be used off-load without any changes in output voltage.

Input specifications

Input voltage range	115VAC (105 - 125VAC) 220VAC (200 - 240VAC)
Input current	Less than 400mA at 220VAC

Output voltage

AF01 7/3.5	Ionizer / Collector	7kV / 3.5kV
AF01 8/4	Ionizer / Collector	8kV / 4kV
AF01 9/4.5	Ionizer / Collector	9kV / 4.5kV
AF01 10/5	Ionizer / Collector	10kV / 5kV
AF01 11/5.5	Ionizer / Collector	11kV / 5.5kV
AF01 12/6	Ionizer / Collector	12kV / 6kV

Output specifications

Output power	20W, 30W, 40W, 50W
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Load regulation	Less than 0.1%
Line regulation	Less than 0.1%
Temperature drift	Less than 400ppm/°C when operating under 55°C
Voltage ripple	Less than 0.3% at full load

Circuit protection

1. When a short circuit is applied to the output, the output current is limited to 2.5 times the rated current.
2. In the event of a spark, the power supply will be switched off for about 0.35s then restart automatically.

Environment details

Operating temperature	0 to 55°C
Storage temperature	-20 to 80°C

Mechanical details

Dimensions	200mm X 80mm X 40mm
Weight	0.6kg
Enclosure material	Aluminium alloy



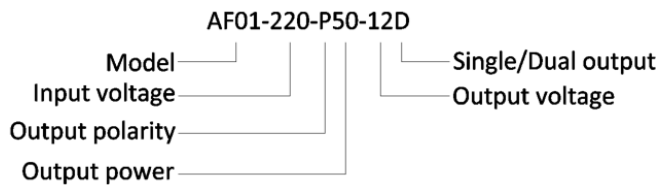
Power input connector

Legend		Definition
L		Live
N	Mains input	Neutral
E		Earth
COM		Common
NC	Relay contacts	Normally closed
NO		Normally open

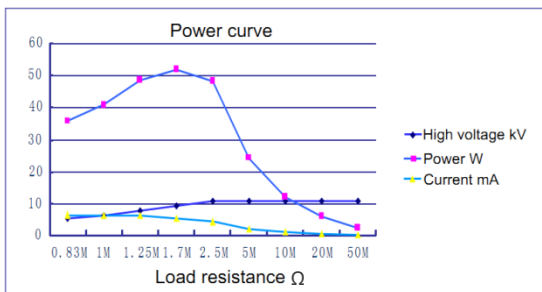
HV output connector

Legend		Definition
IONIZER		Full HV output
COLLECTOR		Half HV output

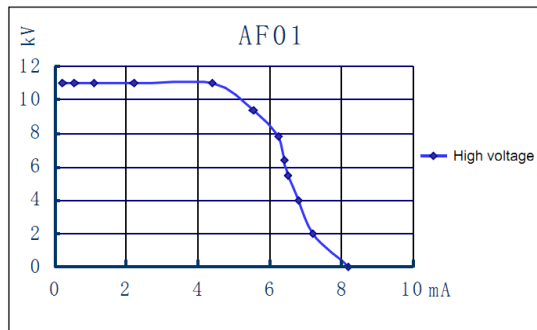
Model number



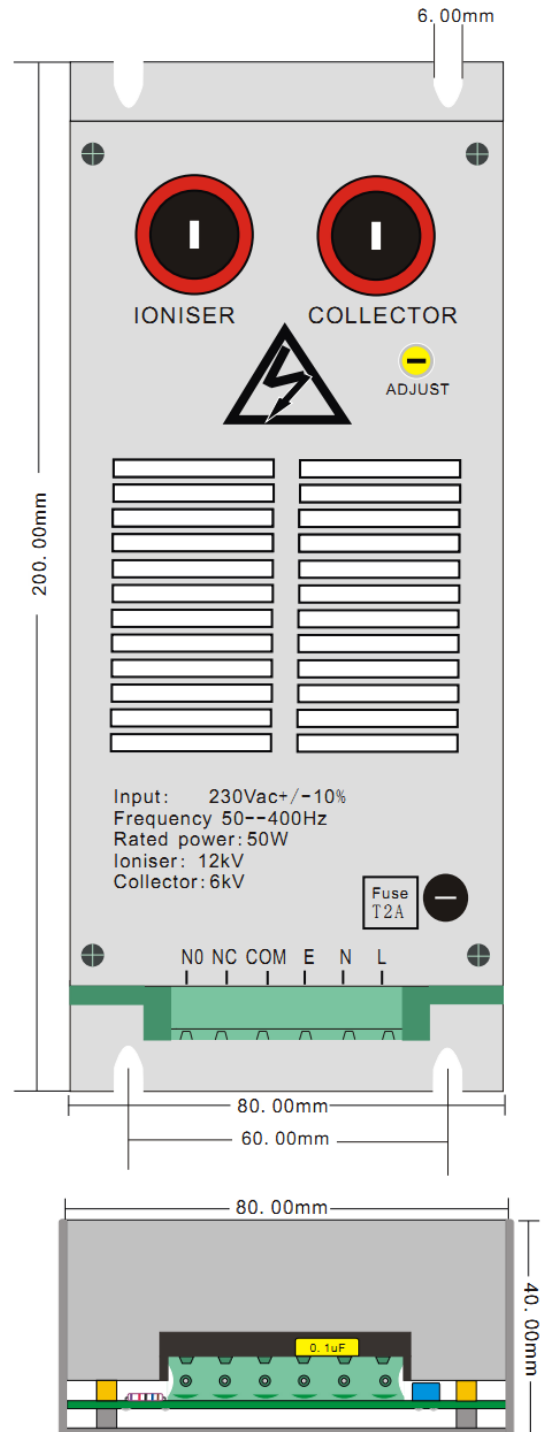
Power curve



Output current versus voltage curve



Dimensions



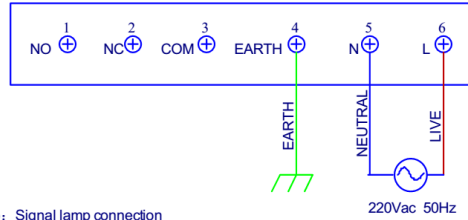
For requirements other than those specified, please do not hesitate to contact the factory. Please note that design improvements may lead to specification changes.



AF01 wiring diagram

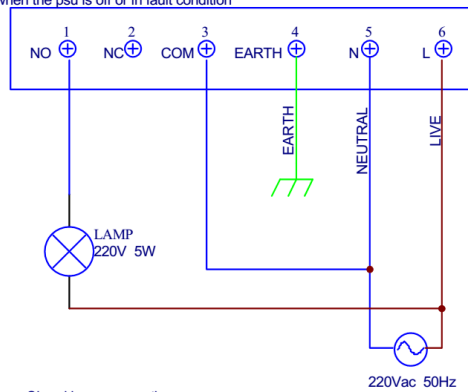
Three voltage free relay contacts are available on the connector (pin1, 2 and 3). These may be used for status indication. Examples are shown below.

Example one: Input connection



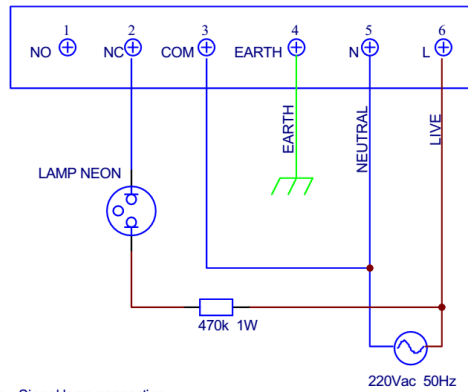
Example two: Signal lamp connection

A 220V 5W lamp is connected. The lamp is ON when the psu is operated and IS OFF when the psu is off or in fault condition



Example three: Signal lamp connection

An neon lamp is connected. The lamp is OFF when the psu is operated and is ON when the psu is off or in fault condition



Example four: Signal lamp connection

Use an extra 5V power supply. Both RED and GREEN LEDs are connected, the GREEN LED is ON when the psu is operated The RED LED is ON when the psu is off or in fault condition

