

• **Power up to 10000 watts** high efficiency up to 95%,  
Low residual ripple, excellent regulation

• **Increase power with parallel coupling**

• **Modular design in 2U or 3U 19 inch rack**

**Wide range of input voltage (DC or AC single, two, three phase)**

85...265Vac 180...550Vac ( 50Hz , 60Hz , 400Hz )

18..75Vdc; 40..160Vdc; 110..370Vdc; 254...780Vdc; 200..1500Vdc

**Wide range of output voltage**

5V , 12V , 15V , 24V , 48V , 72V , 110V , 115V , 125V , 127Vdc or 230Vac

• **Protection**

- Short circuit, overload, thermal

• **Option**

- Watchdog relay output, internal ORing diode

- Battery charger (current limiter)

- Output analog signal : 0..10V / 4..20mA  
(copy of power, current or voltage)

- Communication RS485 / Ethernet  
( Modbus , SNMP )

• **Isolation** - 2500V

• **Application:** Photovoltaic, wind power, regulation  
of a fluctuating voltage for inverters, ...

Model without options



Model with option : relay, output, communication



The WRKmod series is a range of AC-DC power supplies, DC-DC converter, DC-AC or AC-AC inverters. These high density and high power modular switching power supplies are suitable for a wide range of custom applications.

#### Description:

19 inch rack, 2U or 3U high depending of power (up to 5000 W)

Dual EMC shielding

Highly resistant to vibration and shocks

Wiring on screw terminal 25mm<sup>2</sup> / 35mm<sup>2</sup>

Overload protected

Continuous short circuit protected

Thermal protection (output power limitation)

Forced air cooling by internal fans

Built-in EMI filter (EN55022 class A)

Parallel coupling with current sharing is possible.

(specific manufacturing on request)

Input voltage from 24Vdc to 500Vdc or ac

Wide input range (2:1)

Single output voltage : 5, 12, 15, 24, 30, 48, 72, 110, 127, ....

or symmetrical: +/-5, +/-12, +/-15, +/-24, +/- 127....

or multiple outputs on request.

#### Technical specifications:

Output voltage accuracy: +/-2% typical

Line voltage regulation (input variation) : +/-0.5%

Load voltage regulation (output current variation) : +/-1%

Temperature coefficient : +/- 0.08% / °C

Power derating 2.5% / °C above 50°C

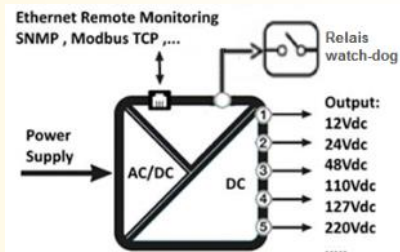
Output current limitation : 110%

#### Mounting recommendations:

Allow a free space (44mm :1U ) above the rack to facilitate the hot air flow.

Do not cover the fresh air inputs at rear, or the hot air output on top in order to have an adequate cooling of the power supply.

#### Synoptic of an internal stage :



Version and order code:

[Request a quote](#)

**WRKmod** (in / out / pwr)

**in** : DC or AC input voltage

**out** : DC or AC (230Vac) output voltage

**pwr** : Output power

19" rack in 2U or 3U height according to power

- Connection on front face in standard, possibility to have it in rear face (option -AR)

#### Option :

-**R** : redundant version (double power supply)

-**WD** : Watchdog output relay (normally closed)

-**D** : internal ORing diode for parallel coupling. (Redundancy)

-**C** : battery charger model (current limiter)

-**S** : analog output : 0..10V, 4-20mA (Power monitoring signal)

-**ADJ** : Adjustable output +/-10%

-**VAR** : variable output 0V to rated voltage (350Vdc max)

Communication : (remote monitoring of voltage and current output)

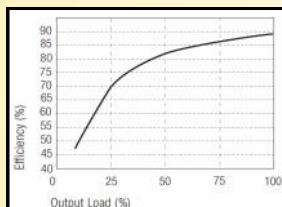
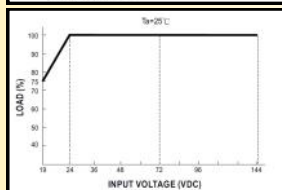
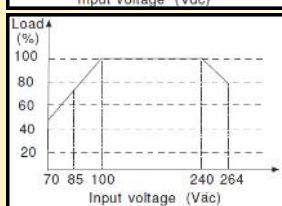
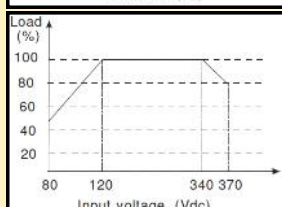
- **SNMP** (Ethernet link with SNMP protocol)

- **CMTCP** (Ethernet link with Modbus-TCP protocol)

- **CM** (RS485 link with Modbus protocol)

**OUTPUTS** (voltage on request )

Single voltage output : 3 Vdc to 250 Vdc  
 Symmetrical output : +/- 5 Vdc to +/- 127 Vdc  
 or multiple outputs on request ( 5 maxi).  
 Power range from 1000 W to 5000 W.  
 Accuracy of output +/- 2% typical  
 Regulation of output +/- 2% max (full load)  
 Ripple on output < 0.5% (20MHz bandwidth)  
 Continuous short circuit protected, automatic restart.  
 Overload protection 110% typical  
 Output hold time 50ms typical

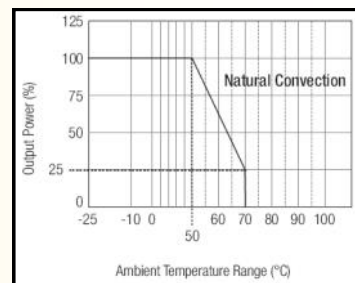
**Efficiency vs output load**  
(typical value)**Output power vs DC input voltage****Output power vs AC input voltage****POWER SUPPLY** (must be defined )

DC input voltage: 24V, 48 V, 110V, 125 V, 200V, ...300V.  
 Wide range, with under voltage lockout  
 and overvoltage protection (rated 2U during 500ms).

**ENVIRONMENT**

Operating temperature:  
 -20 to 70 °C (with derating)

Storage temperature:  
 -20 to 105 °C



Humidity  
 Protection rating

95 % (not condensed)  
 IP20 (enclosure and connectors)  
 IP40 (electronic)

Dielectric strength  
 Insulation resistance  
 input/output capacity  
 Safety standards

2500 Vrms continuous  
 > 100 Mohms at 1000Vdc  
 1200pf typical

Typical efficiency  
 Vibration

between 81 and 90%.  
 10-55Hz, 1G, 30 minutes X,Y,Z.

Weight

5 to 10Kg depend of model

Switching frequency  
 MTBF (+25°C)

100 KHz to 330 kHz typical  
 400 000 hours

**Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE**

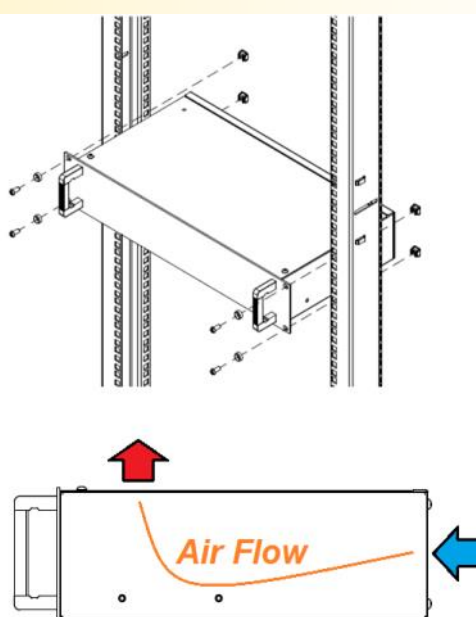
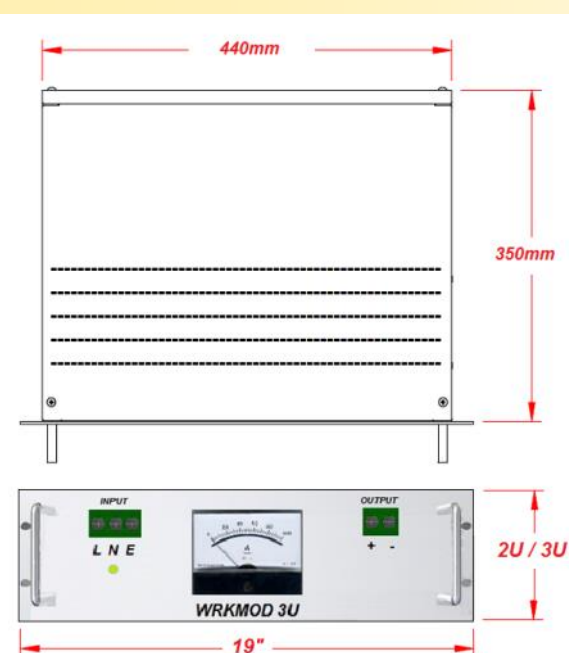
Immunity standard for  
 industrial environments  
**EN 61000-6-2**

Emission standard for  
 industrial environments  
**EN 61000-6-4**

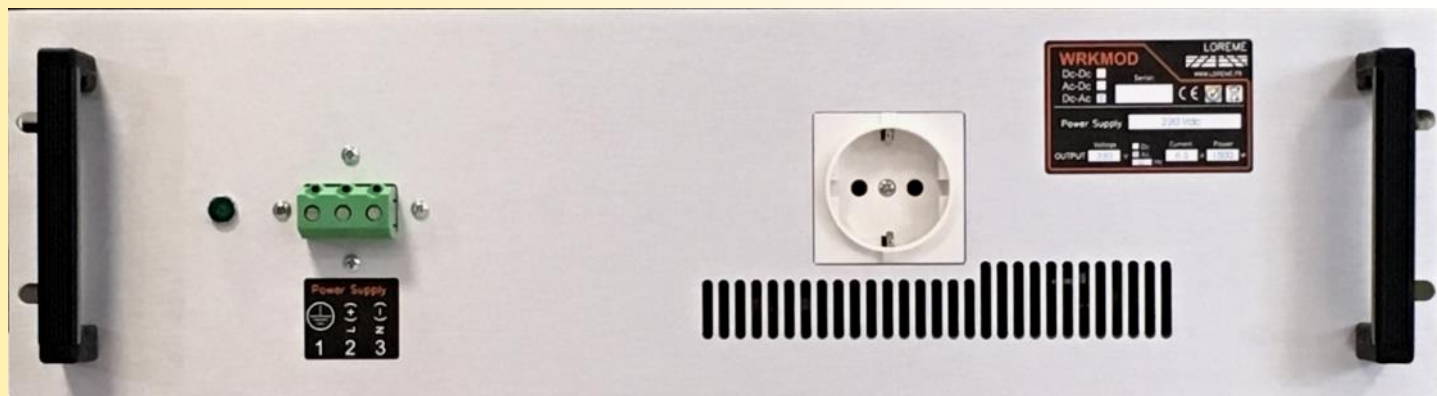
|                  |                         |
|------------------|-------------------------|
| EN 61000-4-2 ESD | EN 61000-4-8 AC MF      |
| EN 61000-4-3 RF  | EN 61000-4-9 pulse MF   |
| EN 61000-4-4 EFT | EN 61000-4-11 AC dips   |
| EN 61000-4-5 CWG | EN 61000-4-12 ring wave |
| EN 61000-4-6 RF  | EN 61000-4-29 DC dips   |

EN 55011

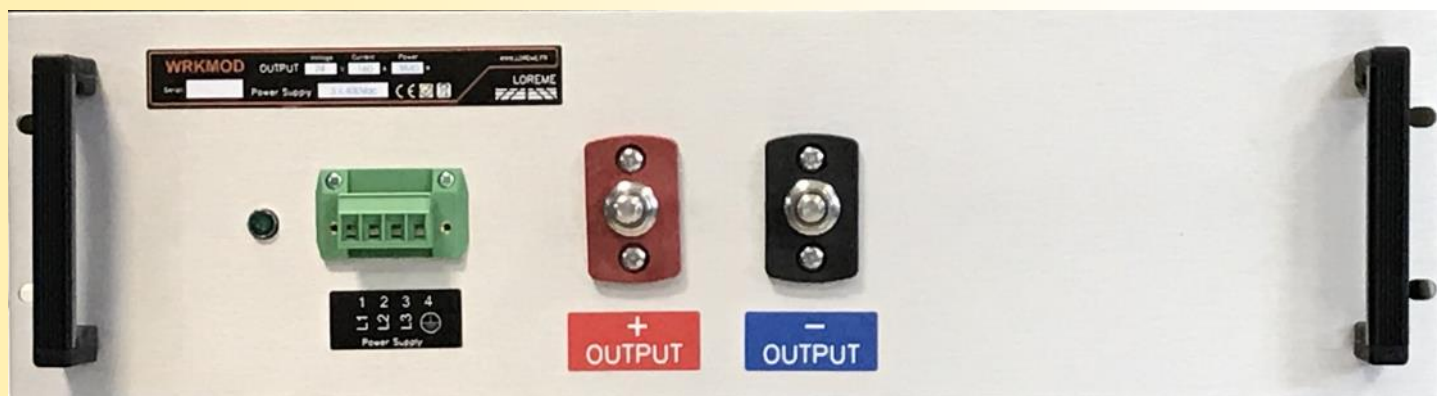
group 1  
 class A

**WIRING AND OUTLINE DIMENSIONS:**

**DC --> AC version. 3U 19" rack**



**AC --> DC version. 3U 19" rack. 4kWatts output, 200A on threaded rod**



**AC --> DC version. 3U 19" rack**



**AC --> DC version. 3U 19" rack with Modbus - Ethernet - SNMP communication**



**AC --> DC version. 2U 19" rack. variable output 0...220Vdc, 0...10A**



**DC --> DC version. 2U 19" rack. 2kWatts version with watchdog relay**



**DC --> DC version. 3U 19" rack. 3kWatts version with watchdog relay**

