

Rack mount AC-DC Power supply DC-AC inverter 2U or 3U 19 inch rack

- **Power up to 4000 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)

Wide range of fixed or variable output voltage
5V250Vdc

- **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



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
Dual EMC shielding
Highly resistant to vibration and shocks
Wiring on screw terminal 25mm² / 35mm²
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, ...250V
or symmetrical: +/-5, +/-12, +/-15, +/-24,+/- 250
or multiple outputs on request.

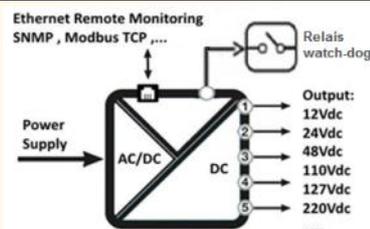
Technical specifications:

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)
Setpoint signal to defined : 0-10V, 4-20mA, potentiometer, ...

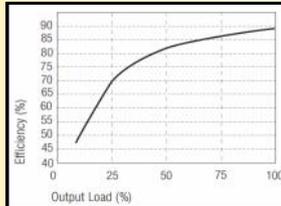
Communication : (remote monitoring of voltage and current output)

- **SNMP** (Ethernet link with SNMP protocol)
- **CMTCP** (Ethernet link with Modbus-TCP protocol)
- **CM** (RS485 link with Modbus protocol)

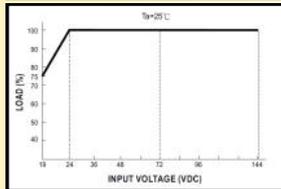
OUTPUTS (voltage on request)

Single voltage output : 3 Vdc to 250 Vdc
 Symmetrical output : +/- 5 Vdc to +/-250 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

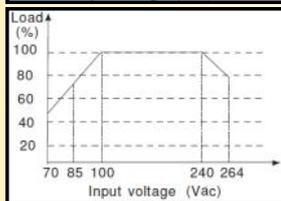
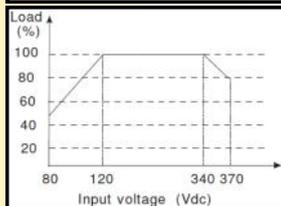
Efficiency vs output load
(typical value)



Output power vs DC input voltage



Output power vs AC input voltage



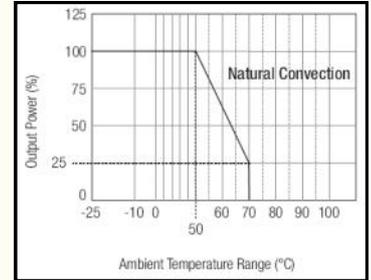
POWER SUPPLY (must be defined)

DC input voltage: 24V...300Vdc or 85 to 265Vac
 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 95 % (not condensed)
 Protection rating IP20 (enclosure and connectors)
 IP40 (electronic)
 Dielectric strength 2500 Vrms continuous
 Insulation resistance > 100 Mohms at 1000Vdc
 input/output capacity 1200pf typical
 Safety standards EN 60950-1
 Typical efficiency between 81 and 90%.
 Vibration 10-55Hz, 1G, 30 minutes X,Y,Z.
 Weight 5 to 10Kg depend of model
 Switching frequency 100 KHz to 330 kHz typical
 MTBF (+25°C) 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 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC clips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC clips	



WIRING AND OUTLINE DIMENSIONS:

