

- **Power up to 3000 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 (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
- **Application:** Photovoltaic, test bench, fuel cell, industries, ...



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.

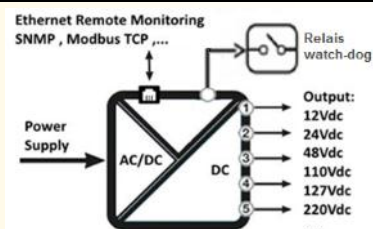
Technical specifications:

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:

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 :

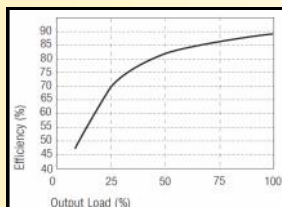
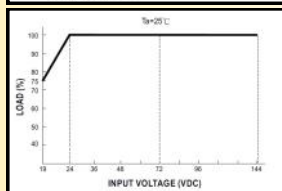
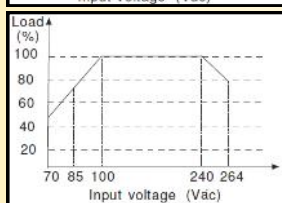
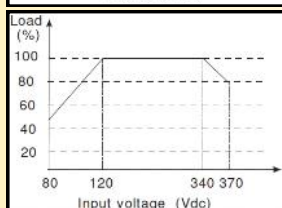
- R : redundant version (double power supply)
- WD : Watchdog output relay (normally closed)
- D : internal ORing diode for parallel coupling. (Redundancy)
- C : battery charger model (current limiter)
- S : analog output : 0..10V, 4-20mA (Power monitoring signal)
- ADJ : Adjustable output +/-10%
- VAR : 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

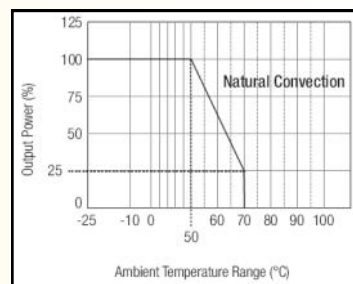
Efficiency vs output load
(typical value)**Output power vs DC input voltage****Output power vs AC input voltage****POWER SUPPLY** (must be defined)

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
 Protection rating

Dielectric strength
 Insulation resistance
 input/output capacity

Safety standards
 Typical efficiency

Vibration

Weight

Switching frequency
 MTBF (+25°C)

95 % (not condensed)
 IP20 (enclosure and connectors)
 IP40 (electronic)
 2500 Vrms continuous
 > 100 Mohms at 1000Vdc
 1200pf typical
 EN 60950-1
 between 81 and 90%.
 10-55Hz, 1G, 30 minutes X,Y,Z.
 5 to 10Kg depend of model
 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:**