

• **Power from 25 to 10000 watts High density**

• **Wide range of voltage**

inputs AC : 85Vac...260Vac

output DC : 12Vdc....72Vdc

AC : 230Vac 50Hz/60Hz

• **Protection**

short circuit, overload, thermal

• **Up to 96% efficiency**

• **2500V input/output isolation**

• **Wall , DIN rail or Rack mounting**

• **Application**

- Solar, battery, Fuel cells

- Automatism, renewable energies

WRUHD-DC/DC



WRHD-DC/DC



WRUHD-AC/DC



WRHD-AC/DC



WRHD-DC/AC



The WRHD series is a range of shielded integrated switching mode DC-DC converters. This products are designed for applications needing high power in a small volume.

Description :

Heat sink aluminium housing, shield on the 6 faces
 protection rating : IP20 min
 wall mounting or optional DIN rail mounting
 Conformal coating in option
 wiring on screw terminal, section according to power
 overload protected (current limitation)
 continuous short circuit protected
 thermal protection (output power limitation)
 under voltage protection (locking)
 adjustable voltage output in option
 low no-load consumption
 forced air cooling or by natural convection
 built-in EMC filter (EN55022 class A)
 parallel connection with current sharing is possible
 (specific manufacturing on request).
 wide input range (2:1 or 4:1 depends of model)
 burn-in test with full load on manufacture (increased reliability)
 embedded power factor correction

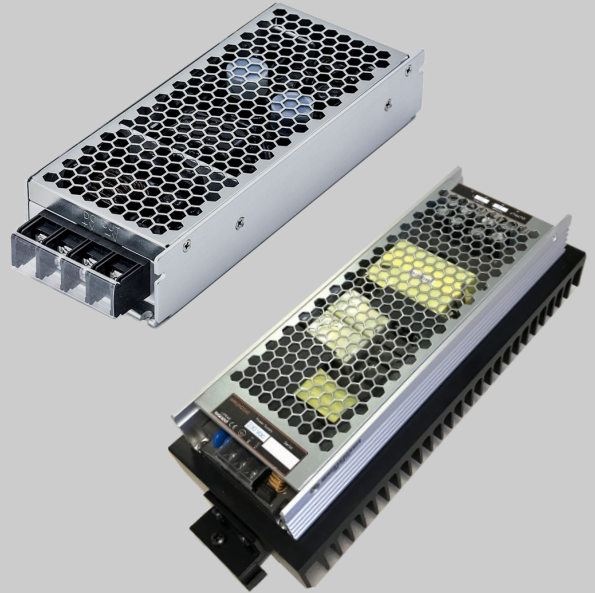
DC-DC CONVERTER

ultra high density

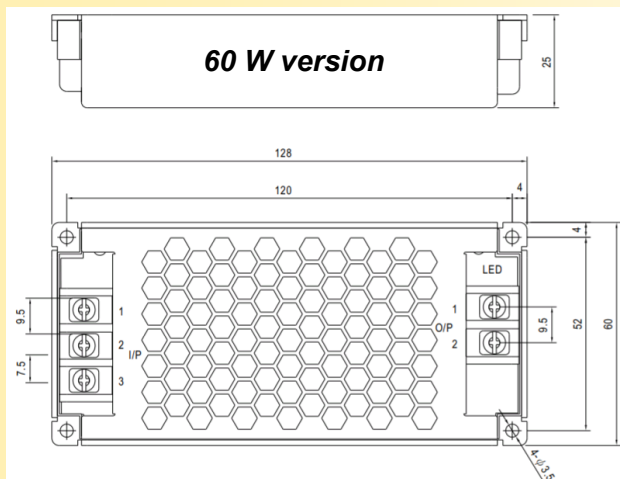
WRUHD-DC/DC

LOREME

- **Power range : 60 to 500 watts**
- **Input : 12Vdc, 24Vdc, 48Vdc,...96Vdc**
- **Output : 3.3 to 48Vdc**
- **Protection : short circuits, overload, thermal**
- **High efficiency: up to 92%**
- **2500V Input / output isolation**
- **Wall or DIN rail mounting**



Low profile DC-DC high density convert. fanless design, free air convection cooling.
Wide operating temperature -30°C to +80°C (HT version mounted on heatsink)
Enclosure with half moulded silicone for components protection



Version and order code:

[Request a quote](#)

WRUHD-DC/DC in / out / pwr : DC-DC converter

in : Wide range input DC voltage 2:1 or 4:1 up to 12:1
(nominal voltage: 12Vdc, 24Vdc, 48Vdc,)

out : Output DC voltage
(nominal voltage: 3.3Vdc, 5Vdc, 12Vdc, 24Vdc, 48Vdc)

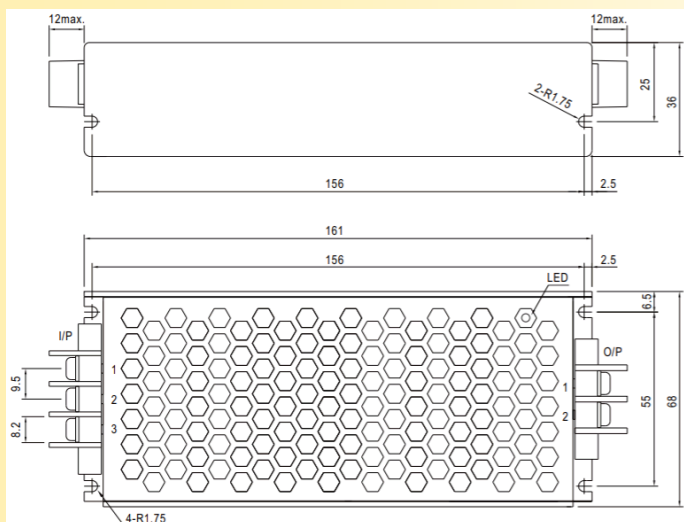
pwr : Output power
(60W, 100W, 150W, 200W, 300W, 500W)

Mounting : -RD DIN rail mounting (option)

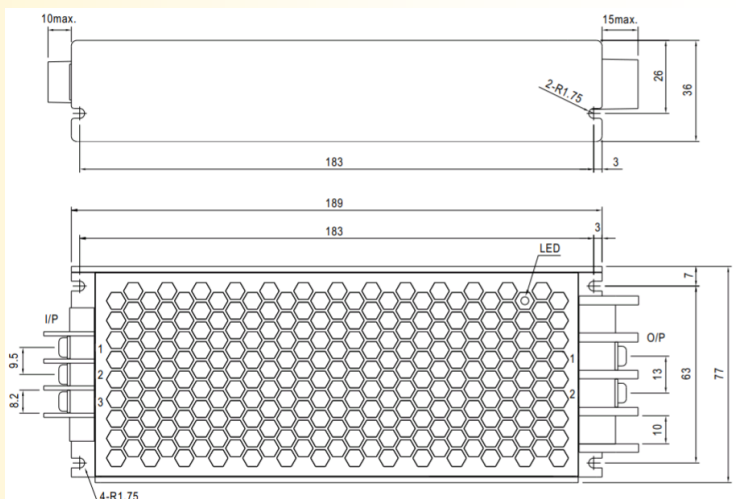
-WM wall mounting (in standard)

Option : -HT high temperature version (+70°C) with heatsink

100 W version

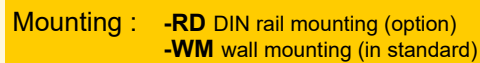


150 W version



LOREME

-
- A silver, rectangular power supply unit (PSU) is shown from a three-quarter perspective. The top surface features a circular fan with a black grille. The front panel has several ventilation slots and a row of output connectors, including a large multi-pin connector and several smaller ones. The unit is mounted on a black base.

[Request a quote](#) 

Technical drawing of the SPS 1000 power supply unit, showing dimensions in mm.

Front View (Left):

- Overall width: 41
- Overall height: 127
- Terminal block labels: DC OP, +V, -V, TB1, 3, 2, 1.
- Connector: CN51.
- Switch: SVRS1.

Top View (Right):

- Overall length: 295
- Overall width: 59
- Mounting hole diameter: $\phi 18.5$
- Mounting hole spacing: 18.5
- Mounting hole offset: 90
- Mounting hole diameter: $\phi 3-M4$
- Mounting hole length: L=4

Side View (Bottom):

- Overall length: 277.7
- Mounting hole diameter: $\phi 3-M4$
- Mounting hole length: L=6
- Mounting hole offset: 20.5
- Mounting hole diameter: $\phi 7.8$
- Mounting hole length: L=25.4

AC-DC CONVERTER *fanless, natural convection* *Ultra high density*

WRUHD-AC/DC

LOREME

- **Output power : 200, 350, 500, 750, 1000, 1500, 2500 watts**

Natural air cooling on plane surface

Heatsink embedded for high temperature version

- **Input : 90.....264Vac**

- **Output : 24Vdc, 36Vdc, 48Vdc,**

- **Protection :**

- Short circuits
- Overload
- Thermal

- **High efficiency: up to 96%**

- **2500V Input / output isolation**

- **Wall or DIN rail mounting**

- **Optional parallel coupling of 2 modules**



Low profile and high density converter. Fanless, free-air convection cooling.

Wide operating temperature -30°C to +70°C
(HT version : mounted on heat sink)

Withstand 300 VAC surge input for 5 seconds

Version and order code:

[Request a quote](#)

WRUHD-AC/DC in / out / pwr : AC-DC converter

in : Wide range of AC-DC input voltage
(rating voltage: 90.....264Vac)

out : Output DC voltage, +/-5% adjustable
(rating voltage: 5Vdc, 12Vdc, 15Vdc, 24Vdc, 36Vdc, 48Vdc)

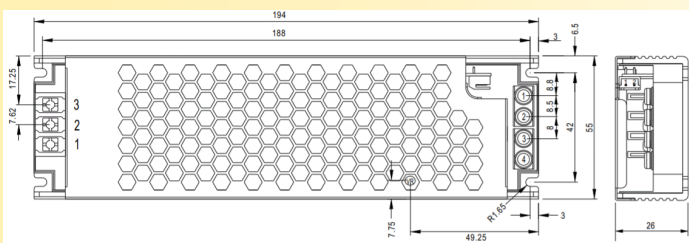
pwr : Output power
(200, 350, 500, 750, 1000, 1500, 2500W)

Mounting : -RD DIN rail mounting (option)
-WM wall mounting (in standard)

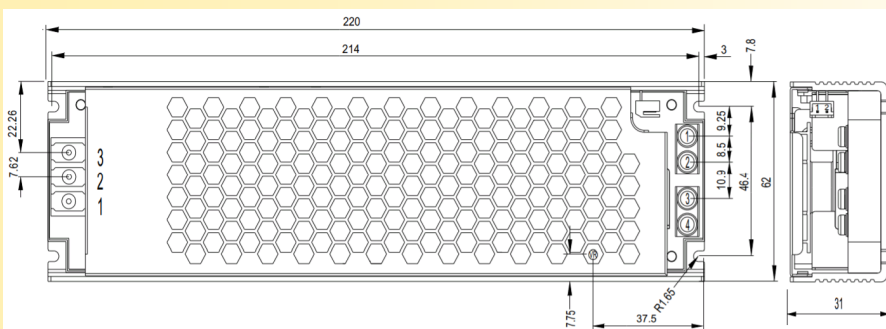
Option : -R version with redundancy function
allowing the parallel coupling of 2 modules
-HT High temperature version (+70°C) with heat sink

WIRING AND OUTLINE DIMENSIONS:

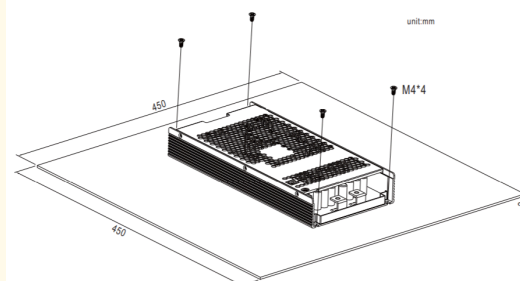
200 W version



350 W version



Implementation of free-air convection cooling



AC-DC CONVERTER

High density

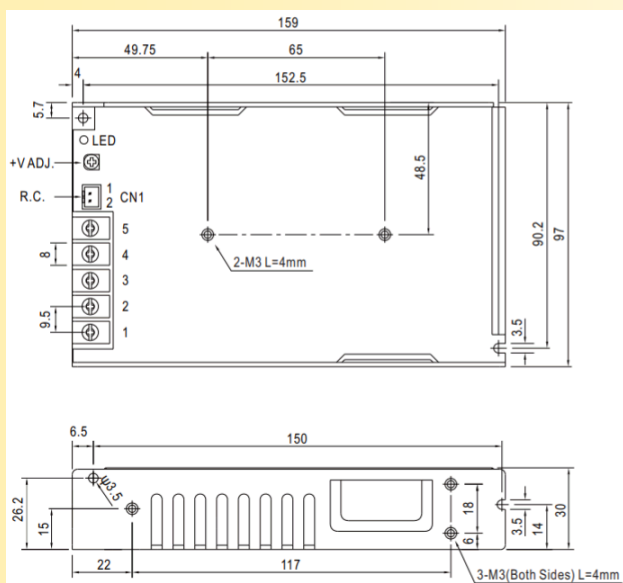
WRHD-AC/DC

LOREME

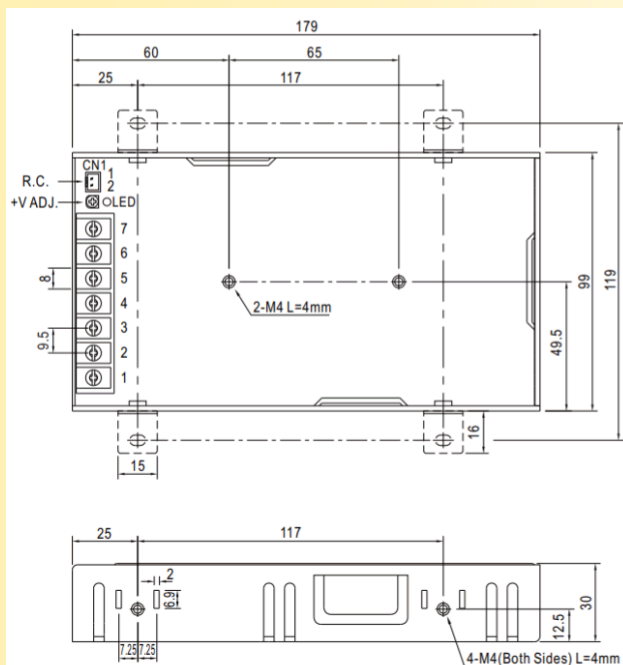
- **Power range : 75 watts to 1000 watts**
- **Input : 90.....264Vac**
- **Output : 3.3 to 48Vdc,**
- **Protection : short circuits, overload, thermal**
- **High efficiency: up to 92%**
- **2500V Input / output isolation**
- **Wall or DIN rail mounting**



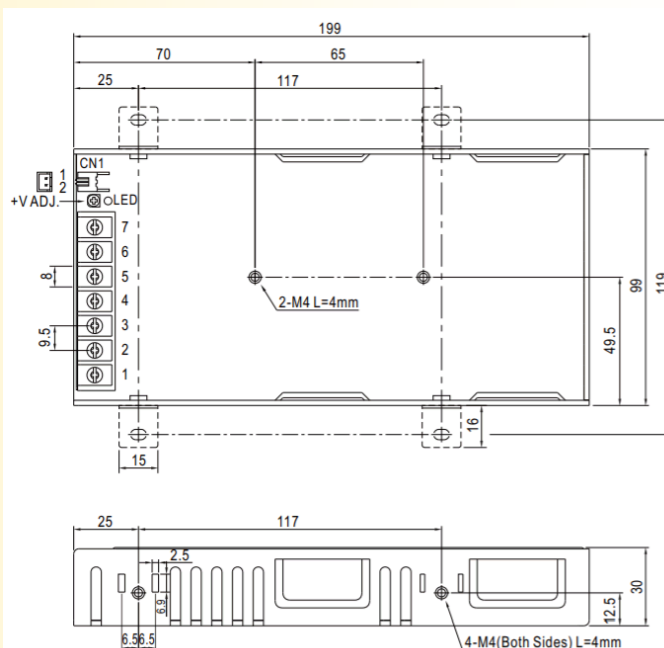
75W version



100W version



150W version



Version and order code:

[Request a quote](#)

WRHD-AC/DC in / out / pwr : DC-DC converter

- in** : Wide range AC-DC voltage input
(nominal voltage: 90.....264Vac)
- out** : Output DC voltage, +/-5% adjustable
(nominal voltage: 5Vdc, 12Vdc, 15Vdc, 24Vdc, 27Vdc 36Vdc, 48Vdc)
- pwr** : Output power: (75W, 100W, 150W, 200W, 320W, 500W, 750W, 1000W, 1500W, 2000W, 2400W, 3000W)

Mounting : -RD DIN rail mounting (option)
-WM wall mounting (in standard)

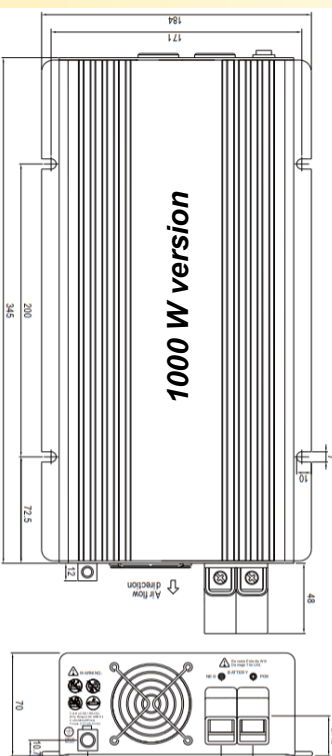
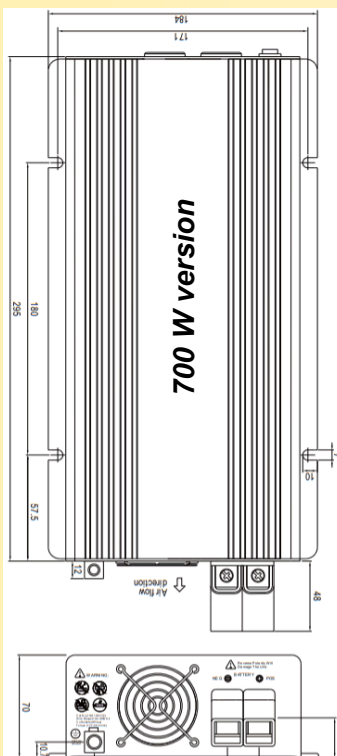
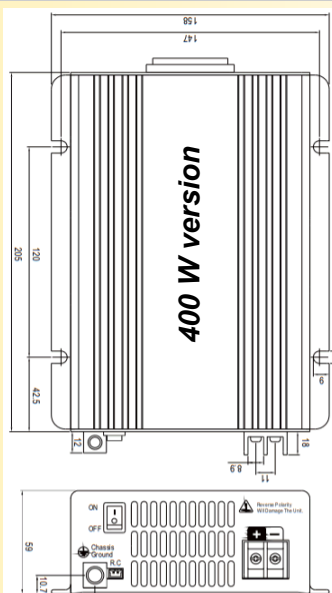
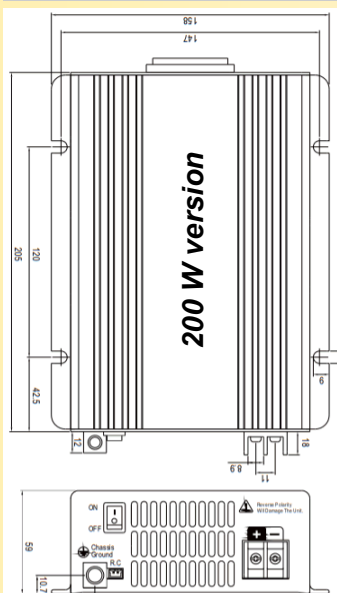
DC-AC PURE SINE WAVE INVERTER

Direct to alternating converter

WRHD-DC/AC

LOREME

- **Power range** : 200 VA to 3000 VA
- **Input** : 12Vdc, 24Vdc,
- **Sine output** : 230Vac single phase
- **Frequency**: 50Hz - 60Hz
- **Protection** : short circuit, overload, thermal
- **High efficiency**: up to 92%, THD < 3%
- **Insulation**: 2500V Input / output
- **Mounting**: Wall or DIN rail



Version and order code:

WRHD-DC/AC in / out / pwr : DC-AC sine wave inverter

output: 110Vac or 230Vac single phase
or 400Vac three-phases

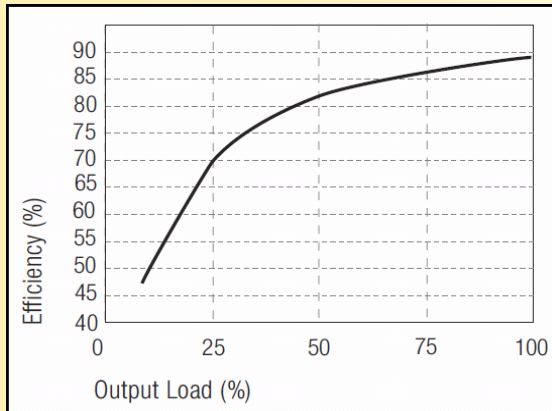
in : Input DC voltage
(12Vdc, 24Vdc, +/-20%)

out : Output AC voltage (50Hz in standard)
230Vac

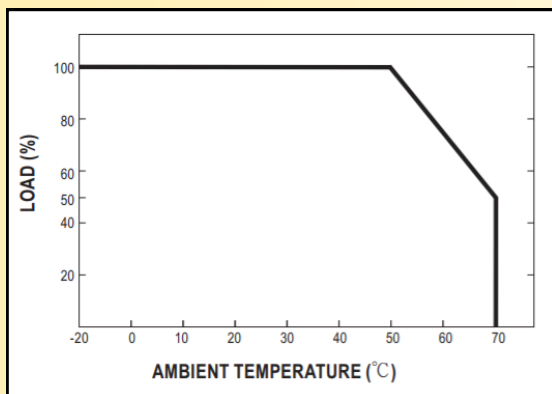
pwr : Output power
(200W, 400W, 700W, 1000W, 1500W, 3000W)

Mounting : **-RD** DIN rail mounting (option)
-WM wall mounting (in standard)

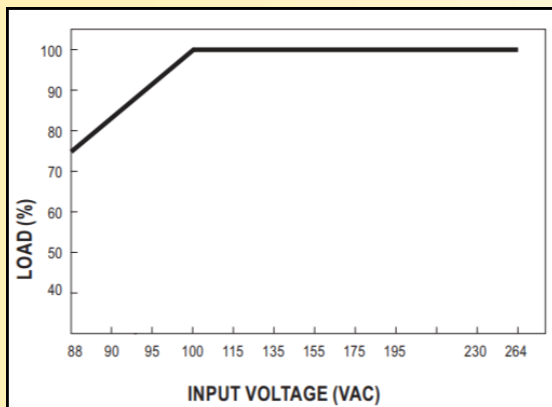
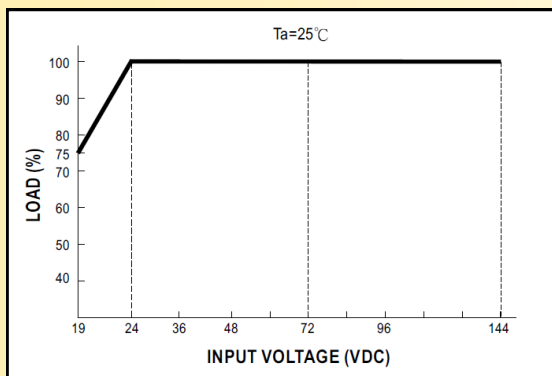
Efficiency as function of load (typical)



Output power as function of temperature



Output power as function of input voltage



ENVIRONMENT

Operating temperature	-20 to 50 °C (without derating)
Temperature derating	2.5% / °C above 50°C
Thermal protection	100°C internal
Storage temperature	-40 to 85 °C
Humidity	85 % (not condensed)
Protection rating	IP20 (enclosure and connectors)
Dielectric strength	2500 Vrms continuous
Insulation resistance	> 100 Mohms at 1000Vdc
Input / output capacity	1200pf typical
Safety standard	EN 60950-1
Typical efficiency	84 to 96% model dependant
Vibration	10-500Hz, 2G, 10 minutes X,Y,Z.
Weight	0.2kg to >5kg dependant of model
Switching frequency	65 to 120kHz typical
MTBF (+25°C)	> 500 000 hours
(according to MIL-HDBK-217F @ 25 °C)	

Technical specification for output

DC-DC and AC-DC models:

Output voltage accuracy : +/-1%
Line regulation (input variation) : +/-0.5%
Load regulation (output current variation) : +/-1%
Noise and output ripple : < 100mVpp (20MHz bandwidth)
Thermal stability : +/-0.02% / °C
Output current limitation: 110%
Start up time : 600ms
Hold time : ~ 20ms at full load

DC-AC models: True sine wave output, distortion < 3%

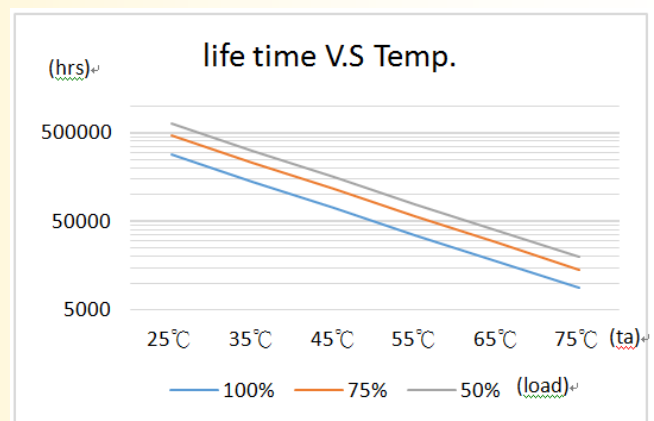
Frequency : 50Hz +/- 0.1Hz or 60Hz +/-0.1Hz

Permissible overload at start-up : 200%

Technical specification for input

Power factor > 0.94 @230Vac at full load

Life time function of temperature



Electromagnetic compatibility 2004/108/CE / Low Voltage Directive 2006/95/EC

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
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	group 1 class A
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	

