

WRHD-DC-AC-1500

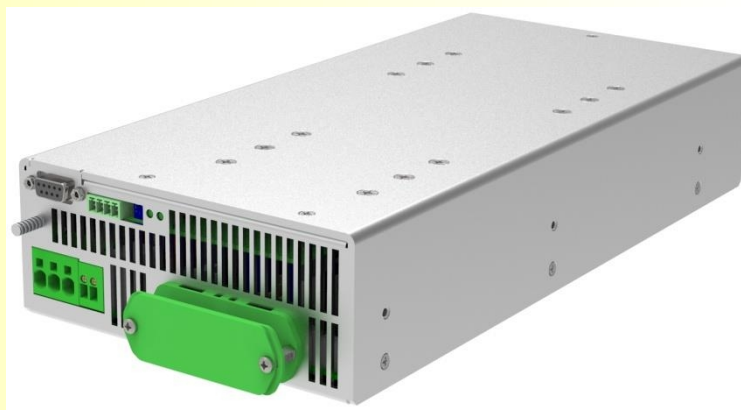


1200...1500 VA DC/AC SINE INVERTER

GENERAL FEATURES:

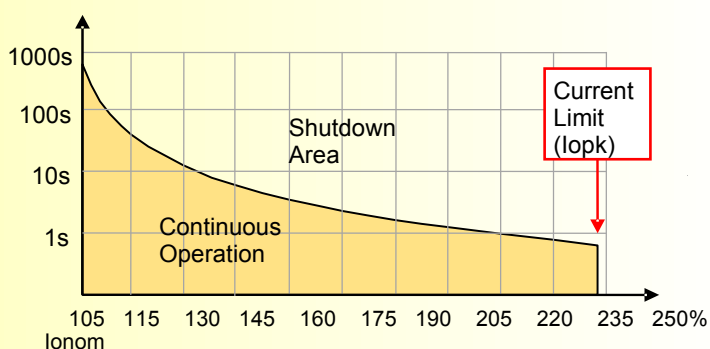
Sine wave output voltage
 Selectable output frequency: 50/60Hz
 Adjustable output voltage
 High input-output isolation 3000Vrms
 Remote inhibit

Alarm by isolated relay contacts
 Remote off opto-coupled
 Efficiency up to 91%



OVERLOAD PROTECTION

Protection against overloads and short-circuits	By current limiting at I_{opk} By I^2t . The unit shutdowns when the current-time is over the continuous operation curve
Overload protection recovery	Every 2 seconds after shutdown, the unit tries to restart up to 3 times. If the overload persists, the unit reminds shutdown until an input reconnection .



	12Vdc 10 ... 15V	24Vdc 16.8 ... 30V	36Vdc 25.2 ... 45V	48Vdc 33.6 ... 60V	72Vdc 50.4 ... 90V	110Vdc 77 ... 138V
120Vac	1200 W	1500 W	1500 W	1500 W	1500 W	1500 W
230Vac	1200 W	1500 W	1500 W	1500 W	1500 W	1500 W

Version and order code:

WRHD-DC/AC in / out / pwr : DC-AC Sine converter
 output 110Vac ou 230Vac single phase

in : Input DC voltage (12Vdc, 24Vdc, 48Vdc, 110Vdc, 127Vdc) +/-20%

out : Output AC voltage 110Vac, 230Vac (50Hz standard)

pwr : Output power (1500W)

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

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WRHD-DC-AC-1500



INPUT

Input voltage range	-30, +25% Vin nom,
Maximum input ripple	5% Vin nom (Vrms, 100Hz)

OUTPUT

Output voltage	120 / 230Vac sinusoidal
Output frequency	50 / 60Hz \pm 0.25Hz
Load regulation	< 4%
Line regulation	< 2 % Vin -25% ... +25%, < 10% Vin -30% ... +30%
Output wave distortion THD	< 2% (average of 16 samples)
Output HF ripple	< 2.5%

ENVIRONMENTAL

Storage temperature	-25 ... 80°C
Operating temperature full load	-25 ... 55°C(EN50155 OT1)
Operating temperature 50% load	-25 ... 70°C(EN50155 OT3)
Relative humidity without condensation	5 ... 95%
Cooling	Controlled internal fan
MTBF (MIL-HDBK-217-E; G _b , 25°C)	130.000 h

EMC

Immunity according	EN61000-6-2 (EN50121-3-2)
Emissions according	EN61000-6-4 (EN50121-3-2)

SAFETY

Dielectric strength: Input /output	3000 Vrms / 50Hz / 1min
Dielectric strength: Output / ground	1500 Vrms / 50Hz / 1min
Dielectric strength: Input / ground	500 Vrms / 50Hz / 1min
Safety according to	EN60950-1, EN62368-1
Fire and smoke	EN45545-2 approved

MECHANICAL

Weight	3800 g
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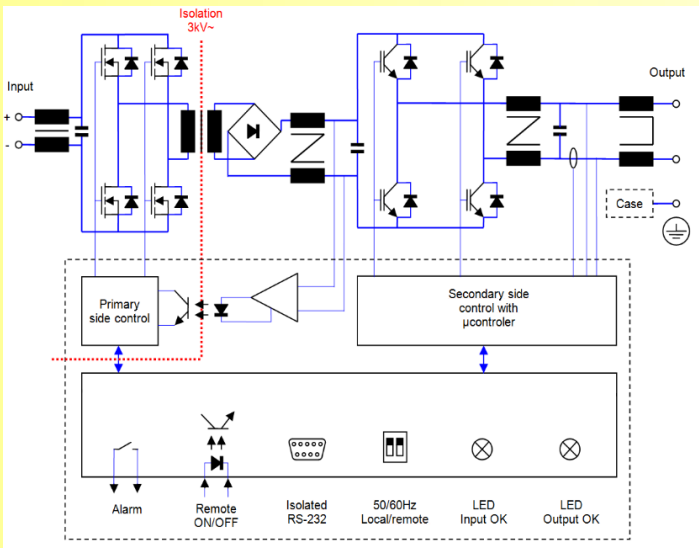
PROTECTIONS

Against overloads	Current and I ² T limited (see overload protection)
Against over-temperature	Shutdown with auto-recovery

CONTROL

Output OK LED	Green
Alarm LED	Red
Output failure alarm	Isolated contact relay open when alarm (<0.3A at 150Vcc)
Remote OFF	Off applying 4...24 Vdc, Impedance > 3k3Ω

BLOCKS DIAGRAM



DESCRIPTION

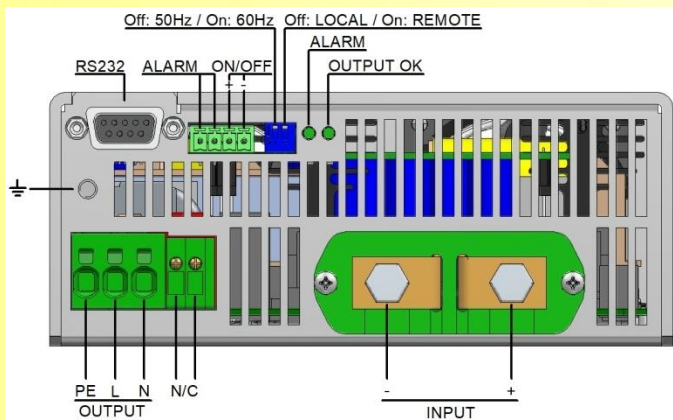
The WRHD-DC-AC-1500 consists of single phase sine-wave DC/AC inverters with galvanic isolation between input and output

The unit allows:

- Select 50 / 60Hz by means of DIP-switch.
- Select local / remote by means of DIP-switch
- Shutdown applying voltage on pins 3 and 4 of signal connector
- Local signalization of Output OK by means of green LED
- Local alarm. Red LED ON when:
 - Output voltage is not OK
 - Output current > OUTPUT CURRENT ALARM
 - Input voltage out of margins
 - Unit shutdowns by over-current or remote OFF
- Alarm. Open contacts when output voltage is not OK

The WRHD-DC-AC-1500 are equipped with a maximum average power protection as well as maximum output peak current protection. This protects the unit even when an output short-circuit occurs. It also features a disable function for input under-voltage, which allows protecting the batteries from harmful discharges.

CONNECTIONS



Input	Terminals M6 (Rec. torque 6 Nm)
Output	Cable up to 4 mm ²
Earth	Bolt M5 (Rec. torque 3.8 Nm)
Alarm	Phoenix Contact MC1.5/4-G-3.81
ON/OFF	(See accessories)
RS232	DB9

INSTALLATION

- The unit has 6 threaded holes for the fixation on a mounting surface.
- The unit has internal fans. For an appropriate cooling, the air input and output should be free of elements that cause and an air flow reduction (minimum recommended distance to other objects 50mm).
- Make connections as shown in the figure.
- The default output frequency is 50Hz. For 60Hz simply actuate the dip-switch as indicated in the figure.

For safety reasons, the following requirements must be met:

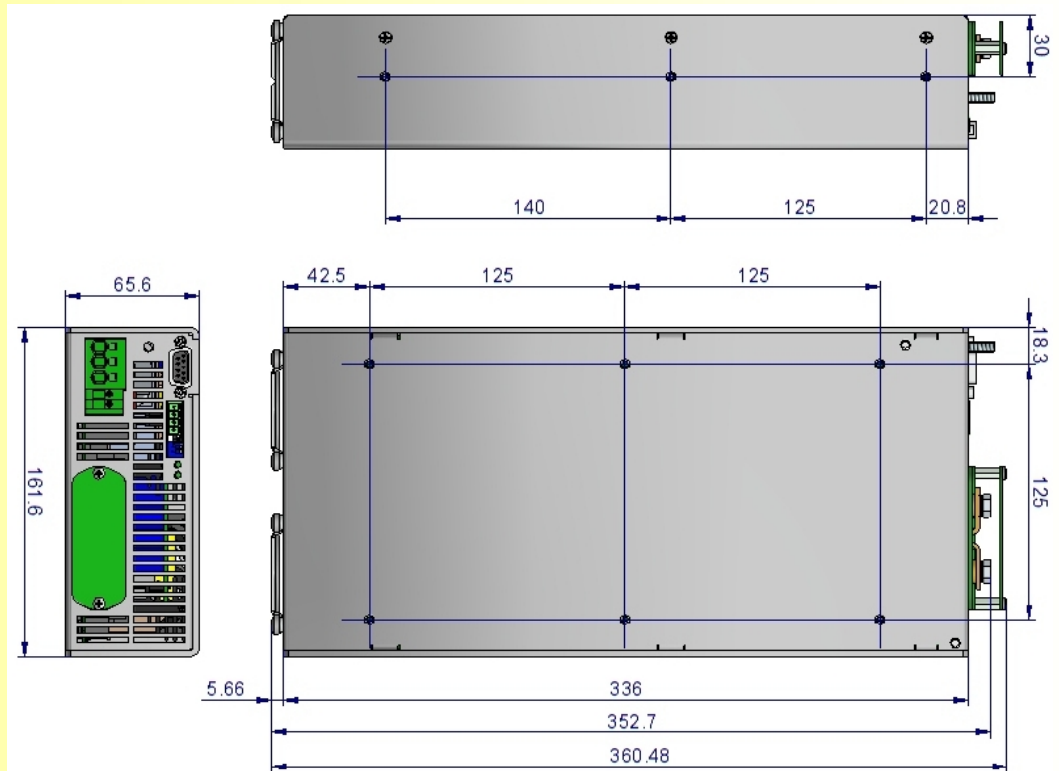
- Provide the equipment with some kind of protective enclosure that complies with the electrical safety directives in effect within the country where the equipment is installed.
- Include an input fuse with a rating immediately higher than the maximum input current.
- Use cables of adequate cross-section to connect inputs and outputs. The following table lists the maximum currents and the minimum cross-sections for the cables used for each power connection.

	Input 12V	Input 24V	Input 36V	Input 48V	Input 72V	Input 110V	Output 120V	Output 230V
Max. current	140 A	100 A	75A	50 A	33 A	22 A	13 A	6.7 A
Cable cross-section	35 mm²	16 mm²	16 mm²	10 mm²	6 mm²	2.5 mm²	1.5 mm²	1.0 mm²

POWER DERATING vs AMBIENT TEMPERATURE



DIMENSIONS



ACCESSORIES

DESCRIPTION	NOTES	CODE
DIN rail assembly kit	Screws included	9339
	It allows to install one or two units	9353
Signals female connector	Phoenix contact MC1.5/4-ST-3.81	2601-409

NP-9339

