WRHD-DC-AC-3000

3000VA SINE INVERTER
24Vdc, 48Vdc, 72Vdc to 230Vac

4000VA SINE INVERTER
110Vdc, 115Vdc, 127Vdc and 300Vdc to 230Vac

GENERAL FEATURES:

Sine wave output voltage
Selectable output frequency: 50/60Hz
Adjustable output voltage
High input-output isolation 3000Vrms
Remote inhibit
Remote control via RS232
Alarm by isolated relay contacts
Remote off opto-coupled
Optional railway version EN50155
Fire and smoke: EN45545-2 approved
Efficiency up to 91%

Available models

	24Vdc 16.8 ... 30V	36Vdc 25.2 ... 45V	48Vdc 33.6 ... 60V	72Vdc 50.4 ... 90V	110Vdc 77 ... 138V	300Vdc 290 ... 330V
120Vac	2400 W	2500 W	2500 W	2500 W	2500 W	-
230Vac	2400 W	3000 W	3000 W	3000 W	3000 W	-
	-	-	-	-	4000 W	4000 W

Version and order code:

Request a quote

WRHD-DC/AC in / out / pwr : DC-AC Sine converter
output 120Vac or 230Vac single phase

in : Input DC voltage (24Vdc, 48Vdc, 72Vdc, 110Vdc, 127Vdc, 300Vdc) +/-20%

out : Output AC voltage 120Vac, 230Vac (50Hz standard)

pwr : Output power (3000W, 4000W)

Mounting : **-WM** Wall mounting (standard)

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INPUT		
Input voltage range	77 … 138Vdc	
Maximum input ripple	5% Vin nom (Vrms, 100Hz)	
OUTPUT		
Output voltage	120 / 230Vac sinusoidal	
Output frequency	50 / 60Hz ± 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		
	Options B and T	**Option L** (Note-1)
Storage temperature	-25 … 80°C	-40 … 80°C
Operating temperature at full load	-25 … 55°C (EN50155 OT1)	-40 … 55°C (EN50155 OT2)
Operating temperature at 62.5% load	-25 … 70°C (EN50155 OT3)	-40 … 70°C (EN50155 OT4)
Relative humidity without condensation	5 … 95%	
Cooling	Controlled internal fan	
MTBF (MIL-HDBK-217-E; G_b, 25°C)	100.000 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 / Earth	1500 Vrms / 50Hz / 1min	
Dielectric strength: Input / Earth	500 Vrms / 50Hz / 1min	
Safety according to	EN60950-1, EN62368-1	
Fire and smoke	EN45545-2 approved	
MECHANICAL		
Weight	< 6000 g	
Protection degree	IP20	
PROTECTIONS		
Against overloads	Current and I^2T 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	
Status and programming	RS232 port	

Note:1 The unit can start up and work at an ambient temperature between -40°C and -25°C without connectors handling.

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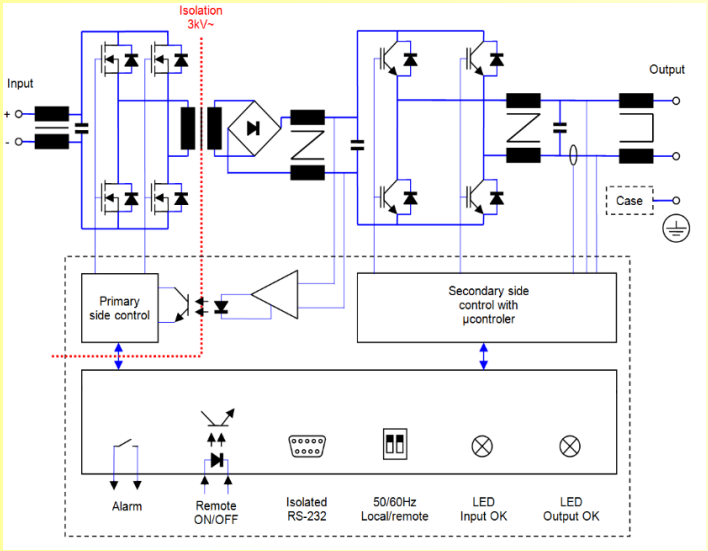
WRHD-DC-AC-3000



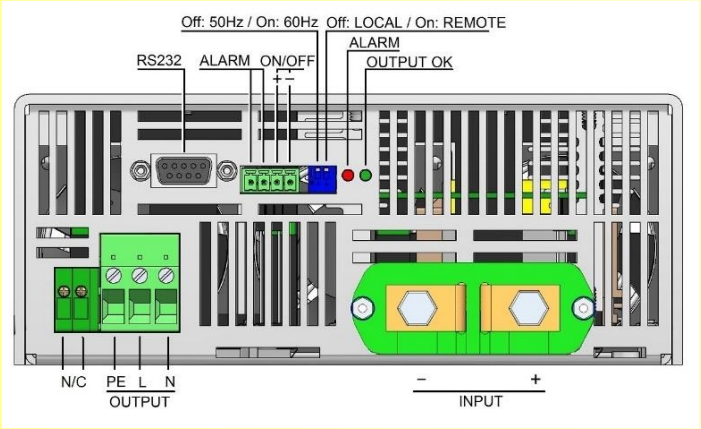
DESCRIPTION

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 (RS-232) 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
- Remote alarm. Open contacts when output voltage is not OK

CONNECTIONS

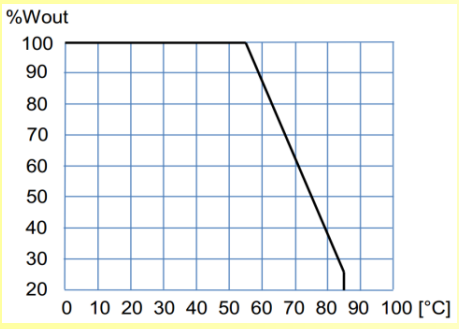


The WRHD-DC-AC are equipped with a maximum average power protection as well as maximum output peak current protection. This protects the unit even when an output short-circuit occurs. It also features a disable function for input under-voltage, which allows protecting the batteries from harmful discharges.

START-UP

- 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.

POWER DERATING vs AMBIENT TEMP.



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 a time lag input fuse o current breaker curve D with a rating immediately higher than the maximum input current.
- Use cables of adequate cross-section to connect inputs and outputs.

Recommended	Input 24V	Input 36V	Input 48V	Input 72V	Input 110V	Output 120V	Output 230V
Current protection [A]	**175**	**150**	**110**	**70**	**50**	**25**	**15**
Cable cross-section [mm²]	**50**	**50**	**25**	**16**	**10**	**2.5**	**1.5**

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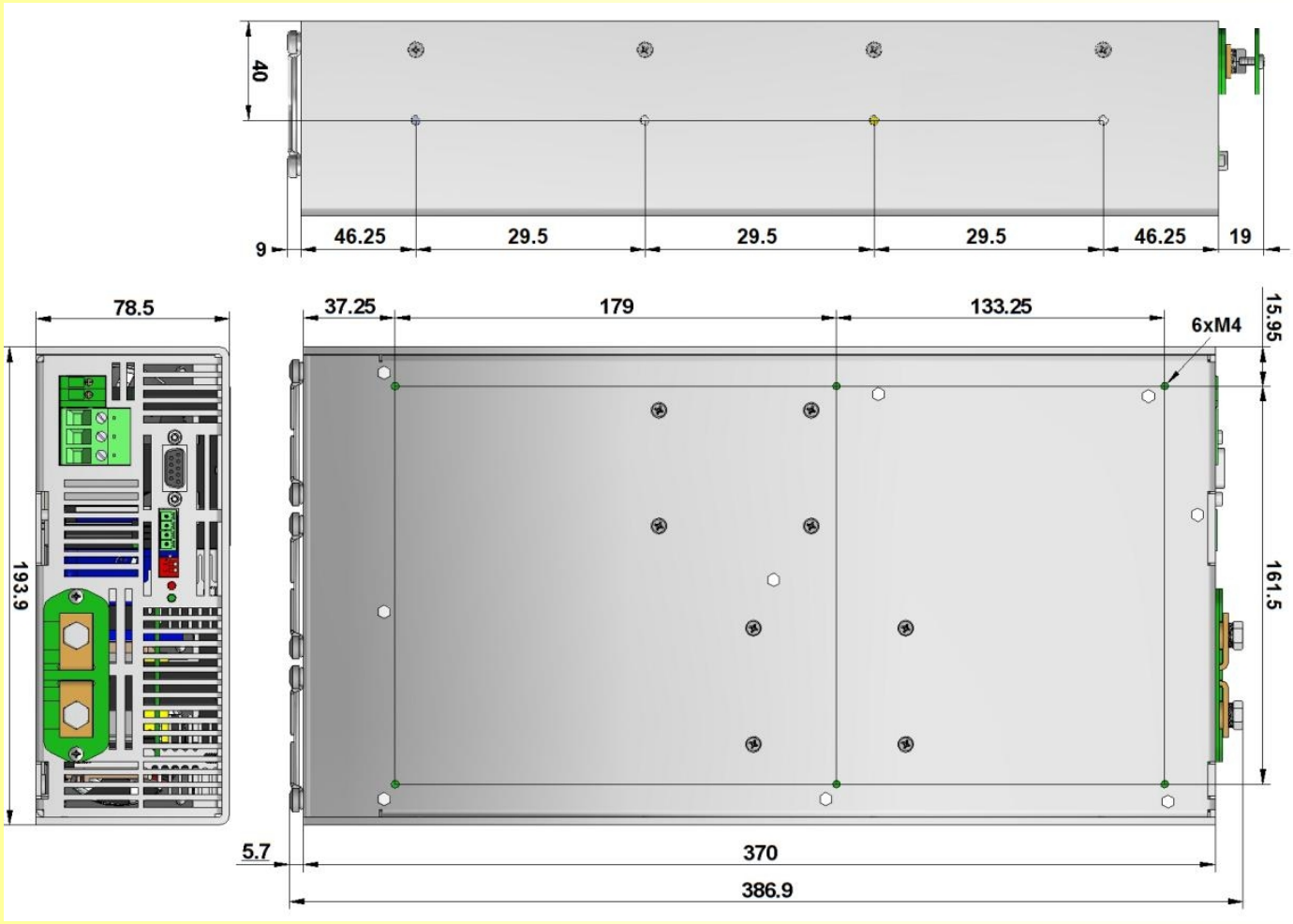
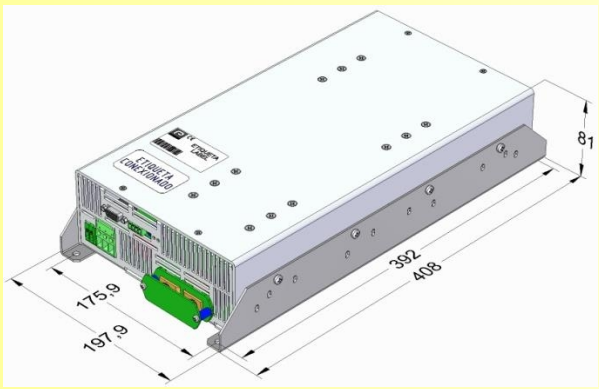
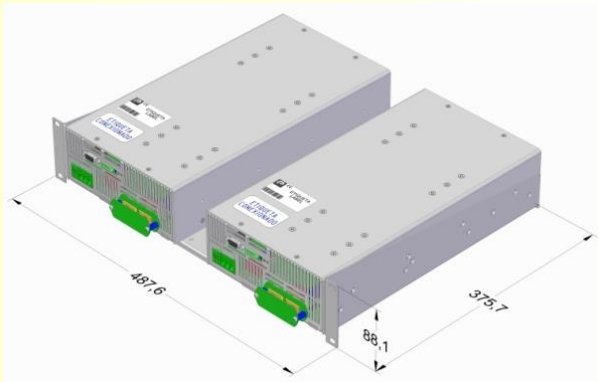
DIMENSIONS







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