



W-HES | W-HHS

Single-Phase Hybrid Inverters

W-HES | 3-6K

Single-Phase Low-Voltage Hybrid Inverters

Integrated monitoring
with *my Leonardo*
web portal and app



Features



10 Years
Warranty



Peak Efficiency
99%



Max. DC Overload
50%

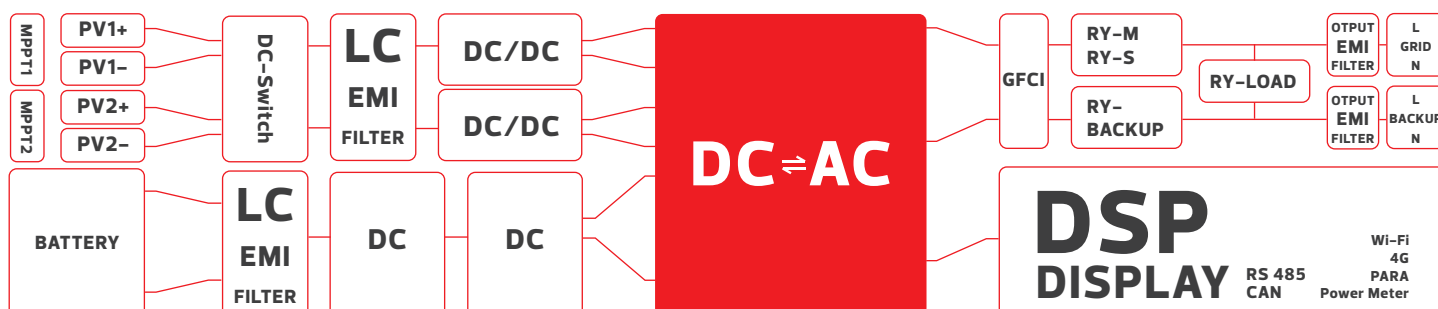


Aluminum Alloy
Die Casting



Easy to
Install and Service

Block Diagram



MODEL	W-HES 3000	W-HES 3680	W-HES 4000	W-HES 5000	W-HES 6000
BATTERY INPUT DATA					
Battery Type	Lithium/Lead-Acid				
Battery Voltage Range / V	40-60				
Start Up Voltage / V	48				
Max. Charging/Discharging Current / A	70	70	80	120	120
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
Charging strategy for lead-acid battery	3 Stages Curve				
INPUT / DC					
Max. PV Power / Wp	6000	7360	8000	10000	12000
Max. Input Voltage / V	600				
MPP Voltage Range / V	80-550				
Start Up Voltage / V	70				
Nominal DC-Input Voltage / V	360				
Max. Input Current / A	16				
Max. DC Short Circuit Current / A	20				
No. of Independent MPPT Inputs	2				
No. of PV Strings per MPPT	1				
OUTPUT (AC TO GRID)					
Rated Power to Grid / W	3000	3680	4000	5000	6000
Max. Apparent AC Power to Grid / VA	3300	4048	4400	5500	6600
Max. Apparent AC Power from Grid / VA	6600	8096	8800	10000	10000
Rated Grid Voltage / Vac	220/230/240				
Rated Power Frequency / Hz	50/60				
Max. Output Current to Grid / A	14,3	17,6	19,1	23,9	28,7
Max. AC Current from Grid / A	28,7	35,2	38,3	40	40
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THDi@ Rated Power	<3%				
OUTPUT (AC TO LOADS)					
Max Apparent Output Power / VA	3300	4048	4400	5500	6600
Peak Apparent Output Power / VA	6000	7360	8000	10000	12000
Rated Power Frequency / Hz	50/60				
Max. Output Current / A	14,3	17,6	19,1	23,9	28,7
Automatic Switch Time / ms	<10				
Nominal Output Voltage / V	230				
Nominal Ouput Frequency / Hz	50/60				
THDv @ Linear Load	<2%				
EFFICIENCY					
Max. Efficiency	98%				
Med. Efficiency	97,6%				
PV Max MPPT Efficiency	99,9%				
Battery Charged by PV Max. Efficiency	96%				
Battery Charge/Discharge from/to AC Max. Efficiency	95%				

PROTECTION FUNCTION	
Anti-Islanding Protection	Integrated
Insulation Resistance Detection	Integrated
Residual Current Monitoring	Integrated
Output Over Current Protection	Integrated
Output Short Circuit Protection	Integrated
Over Voltage Protection	Integrated
Surge Protection	DC Type II, AC Type III
GENERAL DATA	
Dimensions (W*H*D) / mm	485*365*180
Weight / kg	20
User Interface	LCD&LED
DC Connection Type	MC4
Battery Connection Type	Plug-in
AC Connection Type	OT Terminal+Shell
Communication with Cloud	Wi-Fi Stick included
Communication with BMS	CAN, RS485
Communication with Power Meter	RS485
Cooling Method	Fanless
Operating Ambient Temperature / °C	-30 ~ +60
Relative Humidity	0% - 100%
Max. Operating Altitude / m	3000 (> 3000 Derating)
Protection Class (IEC 60529)	IP65
Climatic Category (IEC 60721-3-4)	4K4H
Topology	Transformerless
Night Consumption / W	<5

Compatible with:

