

Storage

HES^{LV}

3-6K

SINGLE PHASE HYBRID



PV Ratio Up to 2.0



Grid Independence



Shadow Scan Algorithm



String-level Monitoring via HYPON.CLOUD

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HES		MODEL	HES-3000	HES-3680	HES-4000	HES-5000	HES-6000	
PV INPUT								
Max. PV Power / W	HES-3000	6000	Max.Input Voltage / V		600	Max. Short Circuit Current / A		20/20
	HES-3680	7360	Start Up Voltage / V		70	No. of MPPTs/No. Strings Per MPPT		2/1
	HES-4000	8000	MPP Voltage Range / V		80-550			
	HES-5000	10000	Rated Input Voltage / V		360			
	HES-6000	12000	Max. Input Current / A		16/16			
BATTERY INPUT								
Battery type		Li-ion/Lead-Acid			Rated Battery Voltage [V]		48	
Input voltage range[V]		40-60			Max.Charging/Discharging voltage [V]		<=60 (Adjustable)	
Max.charging/discharging current[A]	HES-3000 HES-3680		70		Charging strategy for Li-ion battery		Self Adaption to BMS	
	HES-4000		80		Charging strategy for lead-acid battery		3 Stages Curve	
	HES-5000 HES-6000		120		Temperature sensor		Optional (for Lead-Acid)	
AC OUTPUT								
Rated Power / W		3000	3680	4000	5000	6000		
Max. Apparent Power / VA		3300	4048	4400	5500	6600		
Max. Apparent Power from Grid / VA		6600	8096	8800	10000	10000		
Rated Grid Voltage / V		220/230/240	220/230/240	220/230/240	220/230/240	220/230/240		
Rated Grid Frequency / Hz		50/60	50/60	50/60	50/60	50/60		
Rated Output Current / A		13.0	16.0	17.4	21.7	26.1		
Max. Output Current / A		14.3	17.6	19.1	23.9	28.7		
Max. Current from Grid / A		28.7	35.2	38.3	40.0	40.0		
Power Factor		0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap	0.8ind - 0.8cap		
THDi @ Rated Power		<3%	<3%	<3%	<3%	<3%		
Grid Connection		L-N-PE	L-N-PE	L-N-PE	L-N-PE	L-N-PE		
AC OUTPUT (BACK-UP)								
Rated Power / W		3000	3680	4000	5000	6000		
Rated Output Voltage / V		230	230	230	230	230		
Rated Output Frequency / Hz		50/60	50/60	50/60	50/60	50/60		
Peak Output Apparent Power / VA		2 times of rated power for 3000-4000W@10s; 1.5 times for 5000-6000W@10s						
Rated Output Current / A		13.0	16.0	17.4	21.7	26.1		
Switch Time / ms		<10	<10	<10	<10	<10		
THDV@ Rated Power		<2%	<2%	<2%	<2%	<2%		
EFFICIENCY								
MPPT Efficiency	99.90%	Max. Efficiency	98.00%	Charged Efficiency@PV-Battery		96.00%		
Euro Efficiency			97.60%	Charged/Discharged Efficiency@Battery<->Grid/Load		95.00%		
PROTECTION								
Anti-Islanding Protection	Integrated	Output Over Circuit Protection	Integrated	Battery Reverse Protection		Integrated		
PV String Input Reverse Polarity Protection	Integrated	Output Short Circuit Protection	Integrated	Battery Terminal Temp Protection		Integrated		
Insulation Resistor Detection	Integrated	Over Voltage Protection	Integrated					
Residual Current Monitoring Unit	Integrated	Surge Protection	DC Type II, AC Type III					
GENERAL DATA								
Dimensions (W*H*D) / mm		455*365*182		Communication with Meter		RS485		
Weight / kg		18.4		Operating Ambient Temperature / °C		-30 ~ +60		
User Interface		LCD&LED		Allowable Relative Humidity Range / %		0-100		
PV Connection Type		MC4		CT Connection Type		Plug-in Connector		
AC Connection Type		OT Terminal + Shell		Max. Operating Altitude / m		3000 (>3000 Derating)		
Battery Connection Type		Plug-in		Degree of Protection		IP65		
Communication with Cloud		RS485/Wi-Fi/4G/LAN (optional)		Climatic Category (IEC 60721-3-4)		4K4H		
Communication with BMS		CAN/RS485		Topology		Transformerless		
Cooling Method		Natural Cooling		Night Consumption / W		<5		
Max. Parallel Number		9						