



HYD 3k~6k-ES

3000/3600/4000/4600/5000/6000



Single-Phase Energy storage integrated inverter

- Outdoor IP65 design
- Compatible with on grid and off grid
- Avariety of work modes are optional
- EPS function, switching time is less than 10ms
- Built-in zero export fuction
- Flexible configuration of lead acid or lithium battery
- Integrated fanless self-recognition heat dissipation design

Datasheet	HYD 3000-ES	HYD 3600-ES	HYD 4000-ES	HYD 4600-ES	HYD 5000-ES	HYD 6000-ES
Battery Parameters						
Battery Type				Lithium-ion, Lead-acid		
Nominal battery voltage				48V		
Battery voltage range				42-58V		
Battery Capacity				50-2000Ah		
Maximum charging / Discharging Power				3500W		
Maximum Charging Current				65A (Programmable)		
Maximum Discharging Current				70A (Programmable)		
Charging curve(Lithium-ion)				BMS		
Charging curve(Lead-acid)				3-Stage adaptive with maintenance		
Depth of discharge				Lithium-ion: 0-90% DOD adjustable, Lead-acid: 0-50% DOD adjustable		
Input DC(PV side)						
Recommended Max. PV input power	3900W	4790W	5320W	6120W	6650W	7800W
Max DC power for single MPPT	2000W	2400W	2600W	2800W	3000W	3500W
Max. input voltage				600V		
Start-up voltage				120V		
Nominal DC Voltage				360V		
MPPT operating voltage range				90-580V		
Full power MPPT voltage range	160V-520V	180V-520V	200V-520V	230V-520V	250V-520V	300V-520V
MPPT number				2		
The max DC input current				12A/12A		
The max DC input short current				15A/15A		
Output AC(Grid side)						
Rated Power	3000W	3680W	4000W	4600W	5000W	6000W
Max. Output Power	3000VA	3680VA	4000VA	4600VA	5000VA	6000VA
Nominal Grid Voltage				LN/PE, 220, 230, 240		
Operation phase				Single (L-N-PE)		
Max. Input / Output current	13.7A	16A	18.2A	21.0A	22.8A	27.3A
AC voltage Range				180V-270V (According to local standard)		
Grid Frequency range				44-55Hz/54-66Hz (According to local standard)		
THD				< 3%		
Power factor				1 default (+/- 0.8 adjustable)		
Output AC(Emergency Power Supply)						
EPS rated power				3000VA		
Operation phase				Single (L-N-PE)		
EPS rated voltage, Frequency				230V, 50/60Hz		
EPS rated current				13A		
Peak Output Apparent Power				4000VA, 10s		
THD				180-276Vac (According to local standard)		
Switch time				10ms default		
Efficiency						
MPPT efficiency				99.9%		
Max efficiency of solar inverter	97.6%	97.6%	97.6%	97.8%	97.8%	98.0%
European efficiency of solar inverter	97.2%	97.2%	97.2%	97.3%	97.3%	97.5%
Max. Charging efficiency of battery				94.6%		
Max. Discharging efficiency of battery				94.6%		
Protection						
PV reverse polarity protection				Yes		
PV insulation detection				Yes		
Ground fault monitoring				Yes		
Over current protection				Yes		
Over voltage protection				Yes		
Battery soft start protection				Yes		
General Data						
Ambient temperature range				-30°C ~ +60°C (Above 45°C Derating)		
Standby Losses				< 10W		
Topology				High frequency insulation (for bat)		
DC-Switch				Yes		
Degree Of Protection				IP65		
Allowable Relative Humidity Range				0 ~ 100%		
Communication				RS485, Wi-Fi/Ethernet/GPRS, SD, CAN2.0		
Protective class				Class I		
Max. Operating Altitude				2500m		
Current Sensor Connection				External		
Noise				< 25dB		
Weight				20.5kg		
Cooling				Natural		
Dimension (W*H*D)				564*194*173 mm		
Display				LCD display		
Warranty				5 Years or more		
Standard						
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Safety standards	IEC62109-1/2, IEC62040-1, IEC62116, IEC61737, IEC-61683, IEC600681, 2, 14, 30					
Grid standards	AS/NZS 4777, VDE V0124-100, V0126-111, VDE-AR-N1015, CEI 0-21, EN50438/EN50505, GB/TSG19/GB/T, UTE C15-712-1, UNE 006 007-1					