HYD
3k~6k-ES

3000/3600/4000/5000/6000

Single-Phase
Energy storage integrated inverter

- Outdoor IP65 design
- Compatible with the two functions of the 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

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Datasheet	HYD 3000-ES	HYD 3600-ES	HYD 4000-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	3000W				
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 PV input power	3500W	4000W	4400W	5500W	6600W
Max DC power for single MPPT	2000W	2400W	2600W	3000W	3500W
The max DC input voltage	600V				
Start-up DC voltage	120V				
Nominal DC Voltage	360V				
MPPT operating voltage range	90-580V				
Full load DC voltage range	160V-520V	180V-520V	200V-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	5000W	6000W
Max. Output Power	3000VA	3680VA	4000VA	5000VA	6000VA
Nominal Grid Voltage	L/N/PE, 220, 230, 240				
Operation phase	Single (L-N-PE)				
Max. Input / Output current	13.7A	16A	18.2A	22.8A	27.3A
AC voltage Range	180V～276V (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%	98.0%
European efficiency of solar Inverter	97.2%	97.2%	97.2%	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℃～+60℃ (Above 45℃ Derating)				
Standby Losses	<5W				
Topology	High frequency insolation (for bat)				
DC-Switch	Yes				
Degree Of Protection	IP65				
Allowable Relative Humidity Range	0～100%				
Communication	RS485, Wifi/Ethernet/GPRS, SD, CAN2.0				
Protective class	Class I				
Max. Operating Altitude	2000m				
Current Sensor Connection	External				
Noise	<25dB				
Weight	20.5kg				
Cooling	Natural				
Dimension (W*H*D)	566*394*173 mm				
Display	LCD dislay				
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, IEC61727, IEC-61683, IEC60068(1,2,14,30)				
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50438/EN50549, G83/G59/G98/G99, UTE C15-712-1, UNE 206 007-1				