

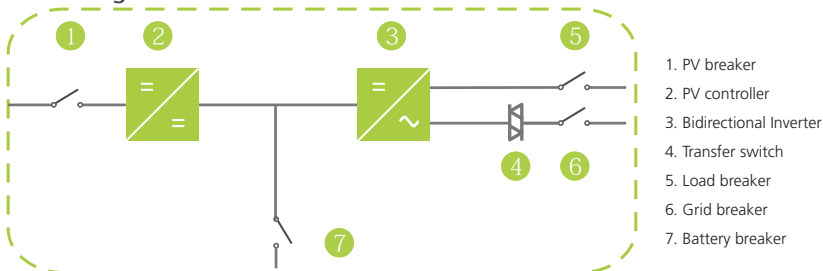
Growatt HPS30/HPS50/HPS100 HPS120/HPS150



Leading - edge Technology

- ▶ All in one solution with PV, battery, load and grid integrated
- ▶ Expandable PV controller for flexible PV capacity design
- ▶ Touch Screen LCD
- ▶ Flexible Battery Type(li-ion,lead-acid)
- ▶ Comprehensive Protection for Inverter and Battery
- ▶ Multiple Working Mode Presetable
- ▶ Battery Forecast (discharge time, capacity, etc)
- ▶ CAN and RS485 Communication Interface, Modbus Protocol
- ▶ Seamless transfer between on and off grid via build in transfer switch
- ▶ Build-in transformer for grid isolation

Block Diagram



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Datasheet	HPS 30	HPS 50	HPS 100	HPS 120	HPS 150
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AC(Grid-connected)

Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
Voltage range	360V-440V	360V-440V	360V-440V	360V-440V	360V-440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz
THDI	<3%	<3%	<3%	<3%	<3%
PF	0.8lagging-0.8leading	0.8lagging-0.8leading	0.8lagging-0.8leading	0.8lagging-0.8leading	0.8lagging-0.8leading
AC connection	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE
Transformer	Yes	Yes	Yes	Yes	Yes

AC(Off-grid)

Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
THDU	≤2% linear	≤2% linear	≤2% linear	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10min 120%-1min	110%-10min 120%-1min	110%-10min 120%-1min	110%-10min 120%-1min	110%-10min 120%-1min

DC(battery and PV)

Max PV Open-circuit voltage	1000VDC	1000VDC	1000VDC	1000VDC	1000VDC
Recommended PV power	30kW	50kW	100kW	120kW	150kW
PV MPP voltage range	480VDC-800VDC	480VDC-800VDC	480VDC-800VDC	480VDC-800VDC	480VDC-800VDC
Battery voltage	*	*	*	*	*
Max charging power	30kW	50kW	100kW	120kW	150kW
Max charging current	85A	142A	285A	340A	425A

General Data

Dimension(W/D/H)	950*750*1860	950*750*1860	1200*800*1900mm	1200*800*1900mm	1400*800*1900mm
Weight	440kg	620kg	900kg	1024kg	1250kg
Environmental temperature	-25℃ to +55℃	-25℃ to +55℃	-25℃ to +55℃	-25℃ to +55℃	-25℃ to +55℃
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Protection degree	IP20	IP20	IP20	IP20	IP20
Noise emission	65dB(A)@1m	65dB(A)@1m	65dB(A)@1m	65dB(A)@1m	65dB(A)@1m
Maximum altitude	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)
Standby consumption	<30W	<30W	<30W	<30W	<30W
Cooling	Forced-air	Forced-air	Forced-air	Forced-air	Forced-air

Communication

Display	Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
Communication interface	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

* Battery voltage is determined by the following equation:

$$V_{min} = 352 \times V_n / V_1, V_{max} = (V_{mpp} - 100) \times V_n / V_2, V_{max} < 600VDC$$

V1 is battery cell discharge cut-off voltage, V2 is battery cell boost charge voltage, Vn is battery cell nominal voltage.

