

# WIT 50-100kW US Hybrid Inverter

WIT 50-100K-HU-US

- Scalable system configuration, extend to 300kW
- Support UPS function and black start
- 100% unbalanced load when backup
- 110% continuous AC overloading capacity
- Support remote control of DG
- Multiple MPPTs input
- Grid-support functions



Preliminary Version

P O W E R  
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Datasheet	WIT 50K-HU-US	WIT 63K-HU-US	WIT 75K-HU-US	WIT 100K-HU-US
<b>Input Data (PV)</b>				
Max. recommended PV power(for module STC)	109.2kW	124.8kW	156kW	156kW
Start voltage			195V	
Max. input voltage			1100V	
Max. open circuit voltage of PV*1			1000V	
MPPPT nominal voltage/range			550V, 180V-800V	
Max. input current per MPP tracker			32A (16A per string)	
Max. short-circuit current per MPP tracker			40A (20A per string)	
No. of PV strings per MPP tracker			2	
No. of MPP trackers	7	8	10	10
<b>Output Data (AC)</b>				
AC nominal power	50kW	63kW	75kW	100kW
Max. AC apparent power	55kVA	69.3kVA	82.5kVA	110kVA
Nominal AC voltage/range			277/480V, -15%~+10%	
AC grid frequency/range			50/60Hz, 45-55Hz/55-65Hz	
Max. output current	66.2A	83.4A	99.3A	132.4A
Adjustable power factor			-1...+1	
THDi			<3% (@100% load)	
AC grid connection type*2			3P3W+PE/3P4W+PE	
<b>Input Data (AC)</b>				
AC nominal power	100kW	126kW	150kW	200kW
Max. AC apparent power	100kVA	126kVA	150kVA	200kVA
Nominal AC voltage/range			277/480V, -15%~+10%	
Nominal AC grid frequency/range			50/60Hz, 45-55Hz/55-65Hz	
Max. input current	120.3A	151.6A	180.5A	240.7A
<b>Battery Data (DC)</b>				
Continuous charging and discharging power	56.7kW	71.4kW	85.1kW	113.5kW
Battery voltage range*3			750-1000V for 3P3W / 820-1000V for 3P4W	
Max charging and discharging current	75.6A	95.2A	113.5A	151.3A
BMS communication			RS485/CAN	
Types of battery			Lithium /Lead-acid (Check third-party battery compatibility in the Approved Battery List)	
<b>Backup Power (AC)</b>				
Rated AC output power	50kW	63kW	75kW	100kW
Max. AC apparent power	60kVA	75.6kVA	90kVA	120kVA
Max. single phase power	16.6kW	21kW	25kW	33.3kW
Nominal AC voltage			277V(L-N) / 480V(L-L)	
Nominal AC output frequency			50/60Hz	
Load connection*3			3P3W+PE/3P4W+PE	
Max. output current	72.2A	91A	108.3A	144.4A
THDv			<3% (Linear load)	
Load unbalance			100% three-phase unbalanced	
Overload capacity			≤110%: Continues; 110%~<120%: <10min; >120%: 200ms	
On/off grid transfer time			≤16.6ms	
<b>Efficiency</b>				
Max. efficiency			98.2%	
<b>Protection Devices</b>				
DC reverse polarity protection			Yes	
Battery reverse protection			Yes	
AC/DC surge protection			Type II	
Insulation resistance monitoring			Yes	
Ground fault monitoring			Yes	
Grid monitoring			Yes	
Residual-current monitoring unit			Yes	
AC short-circuit protection			Yes	
Strings monitoring			Yes	
Anti-islanding protection			Yes	
PID protection			Yes	
AFCI function			Opt	
<b>General</b>				
Dimensions (W/H/D)			33.5/53.1/20.1 inch (850/1350/510mm)	
Weight		337.3 lbs (153kg)		352.7 lbs (160kg)
Operating temperature range			-22°F~+140°F, >122°F derating	
Relative humidity			0~100%	
Altitude			≤13123ft(4000m)	
Topology			Transformerless	
Cooling			Smart air cooling	
Enclosure			IP66/NEMA 4X	
Display			OLED+LED/WIFI+APP	
Interfaces: RS485/CAN			Yes	
Interfaces: WIFI/4G/LAN			Opt	
Warranty (5/10 years)			Yes/Opt	

UL1741:2021, UL1741 SA/SB:2020, IEEE1547:2018, IEEE1547.1:2020, HECO Rule14, E-5000, CSIP, SA17-SA18, UL1998:2018, CEC, FCC Part 15, CSA C22.2.107.1

\*1 The maximum open circuit voltage of PV string must be lower than the maximum input voltage of the battery system connected to the inverter.

\*2 For 3P4W connection type, the inverter is only compatible with APX commercial battery.

\*3 Derating may occur above 900V. For safe operation above this range, please contact Growatt for guidance.