

RHI-1P(5-10)K-HVES-5G

Solis PV Storage Inverter



Model:

RHI-1P5K-HVES-5G RHI-1P6K-HVES-5G RHI-1P7.6K-HVES-5G RHI-1P10K-HVES-5G

Features:

- ► Top-of-class 98.0% efficiency (CEC efficiency 97.5%)
- ▶ Dynamic MPPTs (2 MPPTs w/ 4 DC inputs)
- ▶ 3 operating modes: self-consumption; time-of-use; off-grid backup
- ► Compatible with LG and BYD High Voltage Li-Ion batteries
- ► High DC to AC ratio of 1.4
- ► Rule 21 Compliant
- ▶ Integrated MLRSD transmitter options
- ► Ready for NEC 2017-2020
- ► AFCI protection, proactively reduces fire risk
- ► Sealed enclosure with built-in AC/DC wiring box and ATS
- ► Large color LCD for easy programming
- ▶ 24-hour intelligent energy management system



Ordering: RHI-1P(5-10)K-HVES-5G-DC-Meter

- SPRT (SunSpec MLRSD Transmitter)
- RGM-SPRT (Revenue Grade Meter and Transmitter)
- RSS (Tigo MLRSD Transmitter)
- RGM-RSS (Revenue Grade Meter and Tigo MLRSD Transmitter)



Input DC (PV side) Recommended max. PV power Max. input voltage Rated voltage Start-up voltage MPPT voltage range Max. input current Max. short circuit current MPPT number/Max. input strings number Battery Battery type Battery type Battery capacity Rated continuous charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency	7 kW	8.4 kW	RHI-1P7.6K-HVES-5G 10.6 kW 500 V 330 V 120 V 90-450 V 26 A / 26 A 40 A / 40 A 2/4 Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms 240 V	12.6 kW	RHI-1P10K-HVES-50		
Recommended max. PV power Max. input voltage Rated voltage Start-up voltage MPPT voltage range Max. input current Max. short circuit current MPPT number/Max. input strings number Battery Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input AC (Grid side) Rated output power Max. apparent output power Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi	7 kW	8.4 kW	500 V 330 V 120 V 90-450 V 26 A / 26 A 40 A / 40 A 2/4 Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms	12.6 kW	14 kW		
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Start-up voltage MPPT voltage range Max. input current Max. short circuit current MPPT number/Max. input strings number Battery Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input AC (Grid side) Rated output power Max. apparent output power Packed output current Though (Grid side) Rated output current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			120 V 90-450 V 26 A / 26 A 40 A / 40 A 2/4 Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
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Max. input current Max. short circuit current MPPT number/Max. input strings number Battery Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (11) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input AC (Grid side) Rated output power Max. apparent output power Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Max. apparent output power Operation phase Rated grid voltage (12) Rated grid frequency Rating grid output current Max. output current Power factor THDi			26 A / 26 A 40 A / 40 A 2/4 Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Max. short circuit current MPPT number/Max. input strings number Battery Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (11) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (12) Rated grid frequency Rating grid output current Max. output current Power factor THDi			40 A / 40 A 2/4 Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
MPPT number/Max. input strings number Battery Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			2/4 Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Battery Battery type Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (11) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (12) Rated grid frequency Rating grid output current Max. output current Power factor THDi			Li-ion 120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Battery type Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (11) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (12) Rated grid frequency Rating grid output current Max. output current Power factor THDi			120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Battery voltage range Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (11) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (12) Rated grid frequency Rating grid output current Max. output current Power factor THDi			120-500 V 50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (11) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (12) Rated grid frequency Rating grid output current Max. output current Power factor THDi			50-2000 Ah 6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Battery capacity Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			6 kW 7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Rated continuous charge/discharge power Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Max. charge/discharge power Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi			7 kW 20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Max. charge/discharge current Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			20 A CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Communication Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			CAN 6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Output AC (back-up) Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (1) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			6 kW 7 kW, 1.2 s <10 ms < 300 ms				
Rated output power Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi			7 kW, 1.2 s <10 ms < 300 ms				
Max. apparent output power Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (1) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			7 kW, 1.2 s <10 ms < 300 ms				
Back-up switch time Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (1) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			<10 ms < 300 ms				
Back-up switch time with ATR Rated output voltage (L-L) Rated output voltage (L-N) (1) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			< 300 ms				
Rated output voltage (L-L) Rated output voltage (L-N) (1) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi							
Rated output voltage (L-N) (1) Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			240 V				
Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi							
Rated frequency Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			120 V				
Rated output current THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			60 Hz				
THDv (@linear load) Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			25 A				
Input AC (Grid side) Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			<3%				
Input voltage range Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor THDi			370				
Max. input current Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi			190-280 V				
Frequency range Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor							
Output AC (Grid side) Rated output power Max. apparent output power Operation phase Rated grid voltage (2) Rated grid frequency Rating grid output current Max. output current Power factor			48 A				
Rated output power Max. apparent output power Operation phase Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi			59.5-60.5 Hz				
Max. apparent output power Operation phase Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi							
Operation phase Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi	5 kW	6 kW	7.6 kW	9 kW	10 kW		
Rated grid voltage ⁽²⁾ Rated grid frequency Rating grid output current Max. output current Power factor THDi	5 kW	6 kW	7.6 kW	9 kW	10 kW		
Rated grid frequency Rating grid output current Max. output current Power factor THDi			1Ф/РЕ				
Rating grid output current Max. output current Power factor THDi			208 V / 240 V				
Max. output current Power factor THDi			60 Hz				
Max. output current Power factor THDi	24 A / 21 A	28.8 A / 25 A	36.5 A / 31.7 A	43.3 A / 37.5 A	48 A / 41.7 A		
Power factor THDi	24 A	28.8 A	36.5 A	43.3 A	48 A		
THDi		>0	0.99 (0.8 leading - 0.8 laggir	ıσ)			
			<3%	-6/			
Linciency			370				
			98.0%				
Max. efficiency							
CEC efficiency			97.5%				
Protection							
Ground fault monitoring			Yes				
Integrated AFCI (DC arc-fault circuit protection)			Yes				
DC reverse-polarity protection	Yes						
Rapid Shutdown NEC 2017	Built-in MLRSD Sunspec or Tigo Transmitter						
Compliant MLRSD Products	TS4-A-F/2F, APSmart RSD-S-PLC						
Protection class/Over voltage category			I/II				
General data			,				
Dimensions (W*H*D)		21.3	3*28 3*9 8 in(540*720*250r	nm)			
	21.3*28.3*9.8 in(540*720*250mm)						
Weight	62.6 lbs (28.4 kg)						
Topology	Transformerless						
Operating temperature range	-13°F to 140°F (-25°C to 60°C)						
Ingress protection	TYPE 4X						
Cooling concept	Natural convection						
Max. operation altitude	6, 560 ft (2000 m)						
Grid connection standard		IEEE1547A, U	JL 1741 SA, ISO-NE, CA Rule	e 21 phase III			
Safety/EMC standard L	UL 1741 CRD, IEEE 1547, UL 1699B, UL 1998, UL 9540, CAN/CSA C22.2.107.1-1, FCC, Part 15 Class B, SRD-UL1741						
Compatible batteries		BYD B-Box H5.0/7	7.5/10, LG Energy Solutions	RESU10H Type R			
Features			- -				
DC connection		2 knockout for 1" co	onduit at side and hottom	Fuse screw terminal			
AC connection	2 knockout for 1" conduit at side and bottom, Fuse screw terminal 3 knockout for 1" conduit at side and bottom, Screw clamp terminal						
Display		7.0"LCD color screen display					
Display Communication			RS485, Optional: Wi-Fi, Cellular				