

# 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-1P9K-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)

## Datasheet

Model Name	RHI-1P5K-HVES-5G	RHI-1P6K-HVES-5G	RHI-1P7.6K-HVES-5G	RHI-1P9K-HVES-5G	RHI-1P10K-HVES-5G
<b>Input DC (PV side)</b>					
Recommended max. PV power	7 kW	8.4 kW	10.6 kW	12.6 kW	14 kW
Max. input voltage	500 V				
Rated voltage	330 V				
Start-up voltage	120 V				
MPPT voltage range	90-450 V				
Max. input current	26 A / 26 A				
Max. short circuit current	40 A / 40 A				
MPPT number/Max. input strings number	2/4				
<b>Battery</b>					
Battery type	Li-ion				
Battery voltage range	120-500 V				
Battery capacity	50-2000 Ah				
Rated continuous charge/discharge power	6 kW				
Max. charge/discharge power	7 kW				
Max. charge/discharge current	20 A				
Communication	CAN				
<b>Output AC (back-up)</b>					
Rated output power	6 kW				
Max. apparent output power	7 kW, 1.2 s				
Back-up switch time	<10 ms				
Back-up switch time with ATR	< 300 ms				
Rated output voltage (L-L)	240 V				
Rated output voltage (L-N) <sup>(1)</sup>	120 V				
Rated frequency	60 Hz				
Rated output current	25 A				
THDv (@linear load)	<3%				
<b>Input AC (Grid side)</b>					
Input voltage range	190-280 V				
Max. input current	48 A				
Frequency range	59.5-60.5 Hz				
<b>Output AC (Grid side)</b>					
Rated output power	5 kW	6 kW	7.6 kW	9 kW	10 kW
Max. apparent output power	5 kW	6 kW	7.6 kW	9 kW	10 kW
Operation phase	1Φ/PE				
Rated grid voltage <sup>(2)</sup>	208 V / 240 V				
Rated grid frequency	60 Hz				
Rating grid output current	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
Max. output current	24 A	28.8 A	36.5 A	43.3 A	48 A
Power factor	>0.99 (0.8 leading - 0.8 lagging)				
THDi	<3%				
<b>Efficiency</b>					
Max. efficiency	98.0%				
CEC efficiency	97.5%				
<b>Protection</b>					
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				
<b>General data</b>					
Dimensions (W*H*D)	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, UL 1741 SA, ISO-NE, CA Rule 21 phase III				
Safety/EMC standard	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 H5.0/7.5/10, LG Energy Solutions RESU10H Type R				
<b>Features</b>					
DC connection	2 knockout for 1" conduit at side and bottom, Fuse screw terminal				
AC connection	3 knockout for 1" conduit at side and bottom, Screw clamp terminal				
Display	7.0"LCD color screen display				
Communication	RS485, Optional: Wi-Fi, Cellular				

(1) Needs to be used with ATR.

(2) Solis Hybrid inverter is designed to operate with a 1P Split Phase 120/240 V configuration.