RA.Store-K-F

Data Sheet

Rev. 1.04

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Technical datasheets

Model	RAK3K2SHxFL	RAK4K2SHxFL	RAK5K2SHxFL
DC Input			
Maximum input power DC [W]	4000	4600	6000
Maximum input voltage DC [V]	580	580	580
MPP voltage range [V]	125-550	125-550	125-550
Maximum current for string input DC [A]	11	11	11
Maximum current of short circuit for each DC entry [A]	13,8	13,8	13,8
Number of MPP independent strings	2	2	2
Maximum power to battery [W]	3125	3750	5000
AC Output			
Wave form	Sinusoidal single phase	Sinusoidal single phase	Sinusoidal single phase
Maximum output power [W]	3000	3680	4600
Rated voltage [V]	230	230	230
Rated frequency [Hz]	50/60	50/60	50/60
Maximum output current [A]	14	16	24.5
Total harmonic distortion (THD)	<3%	<3%	<3%
Adjustable displacement factor	0,8 overexcited 0,8 underexcited	0,8 overexcited 0,8 underexcited	0,8 overexcited 0,8 underexcited
Contribution to the short circuit current[A]	21	24	36.5
AC Output (EPS-Back up)			
Wave form	Sinusoidal single phase	Sinusoidal single phase	Sinusoidal single phase
Maximum apparent power in discharge [VA]	3000	3680	4600
Maximum apparent peak power in discharge (10 sec) [VA]	4500	5520	6900
Rated voltage [V]	230 (+/-2%)	230 (+/-2%)	230 (+/-2%)
Rated frequency [Hz]	50/60 (+/-0.2%)	50/60 (+/-0.2%)	50/60 (+/-0.2%)
Maximum discharge power [A]	14	16	20
Total harmonic distortion (THD)	<3%	<3%	<3%
Battery			
Battery type	LiFePO4	LiFePO4	LiFePO4
Rated voltage [V]	48	48	48
Maximum charge current [A]	62,5	75	100

Maximum discharge current [A]	62,5	75	100
Minimum number of battery modules	0	0	0
Nr. of battery modules standard configuration	2	2	3
Maximum permissible energy for each battery module [kWh]	4,8	4,8	7,2
Usable energy for each battery module [kWh]	3,84	3,84	5,76
DoD [%]	80%	80%	80%
Minimum number of working cycles @ 25°C	>4500->8000, for details please refer to the Pylontech battery datasheet		
Number of battery modules at maximum capacity	6	6	6
Maximum permissible energy at maximum capacity [kWh]	2,4	2,4	2,4
Efficiency			
Maximum conversion efficiency	95,5%	95,5%	95,5%
Protections			
Anti-islanding	Yes	Yes	Yes
Overvoltage protection	Yes	Yes	Yes
Short circuit protection in output	Yes	Yes	Yes
Overtemperature protection	Yes	Yes	Yes
AC lines protection	Magneto-thermal breaker	Magneto-thermal breaker	Magneto-thermal breaker
Battery protection	Magneto-thermal breaker	Magneto-thermal breaker	Magneto-thermal breaker
External protections on the PV generator side (DC)	SPD	SPD	SPD
General data			
Working temperature range for normal functioning [°C]	from -5 to +45	from -5 to +45	from -5 to +45
Inverter type	HF insulated	HF insulated	HF insulated
Relative humidity	0 % ÷ 95 %	0 % ÷ 95 %	0 % ÷ 95 %
Maximum altitude [m]	< 2000	< 2000	< 2000
Cooling	Natural convection (Fanless)	Natural convection (Fanless)	Natural convection (Fanless)
Noise annoyance [dB]	< 25	< 25	< 25
Weight [kg] (standard nr. of batteries)	85	85	109
Dimensions [Length x width x H.]	650x550x1400	650x550x1400	650x550x1400
Assembly	On the floor	On the floor	On the floor

Protection type	IP20	IP20	IP20
Pollution degree	4	4	4
Room conditions of use	Indoor	Indoor	Indoor
AC overvoltage cathegory	III	III	III
DC overvoltage cathegory	II	II	II
Torque of the terminals [Nm]	1,7	1,7	1,7
Connection of a pole of the strings on earth	Not allowed	Not allowed	Not allowed
Minimum insulation resistance towards the floor of the string (Vdc test: 1000 Vdc) [MΩ]	1	1	1
Interfaces			
GPRS (standard)	2G Dual band	2G Dual band	2G Dual band
WiFi (optional)	2.4 GHz IEEE Std. 802.11 b/g	2.4 GHz IEEE Std. 802.11 b/g	2.4 GHz IEEE Std. 802.11 b/g
LAN (optional)	10/100 Mbps	10/100 Mbps	10/100 Mbps
Wireless home automation (optional)	EnOcean 868 MHz	EnOcean 868 MHz	EnOcean 868 MHz
Certifications and Regulations			
Certifications	CE; CEI0-21/2017; IEC62109-1 : 2010; IEC62109-2 : 2011; EN62109-1 : 2010; EN62109-1 : 2011; Direttiva Bassa Tensione (LVD) 2014/35/EU; VDE-AR-N4105/08.11, DIN VDE V 0124-100/10.13; UTE C 15-712-1/07.13; ERDF-NOI-RES_13E; DIN V VDE V 0126-1-1:2006+A1; VFR 2014; SEI REF 04: 2010; CRAE Annexe 14.		
Safety Regulations	IEC62477 & IEC62040		
EMC Compatibility	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4		