

# RA.Store-K-F

Data Sheet  
Rev. 1.05



# Technical datasheets

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

Maximum discharge current [A]	62,5	75	100
Minimum number of battery modules		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%	
Minimum number of working cycles @ 25°C		4000	
Number of battery modules at maximum capacity <sup>(1)</sup>		6 (8)	
Maximum permissible energy at maximum capacity [kWh] <sup>(1)</sup>		14,4 (19,2)	
<b>Efficiency</b>			
Maximum conversion efficiency		95,5%	
<b>Protections</b>			
Anti-islanding		Yes	
Overvoltage protection		Yes	
Short circuit protection in output		Yes	
Overtemperature protection		Yes	
AC lines protection		Magneto-thermal breaker	
Battery protection		Magneto-thermal breaker	
External protections on the PV generator side (DC)		SPD	
<b>General data</b>			
Working temperature range for normal functioning [°C]		from -5 to +45	
Inverter type		HF insulated	
Relative humidity		0 % ÷ 95 %	
Maximum altitude [m]		< 2000	
Cooling		Natural convection (Fanless)	
Noise annoyance [dB]		< 25	
Weight [kg] (standard nr. of batteries)	85	85	109
Dimensions size [Length x width x H.]		650x550x1400	
Dimensions with expansion [Length x width x H.]		350x550x1700	
Assembly		On the floor	

Protection type	IP20
Pollution degree	4
Room conditions of use	Indoor
AC overvoltage category	III
DC overvoltage category	II
Torque of the terminals [Nm]	1,7
Connection of a pole of the strings on earth	Not allowed
Minimum insulation resistance towards the floor of the string (Vdc test: 1000 Vdc) [MΩ]	1
<b>Interfaces</b>	
GPRS (standard)	2G Dual band
WiFi (optional)	2.4 GHz IEEE Std. 802.11 b/g
LAN (optional)	10/100 Mbps
Wireless home automation (optional)	EnOcean 868 MHz
<b>Certifications and Regulations</b>	
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

Note:

- (1): Expandable up to 19.2 kWh with 1 expansion modules (2 battery modules).