DATASHEET Single Phase Hybrid / AC Inverter KH7 / KH8 / KH9 / KH10 / KH10.5 KA7 / KA8 / KA9 / KA10 / KA10.5





## KSERIES SINGLE PHASE INVERTER

Harness the power of the sun day and night with the ground-breaking range of Hybrid & AC inverters from FOX. Full of advanced features and compatible with our very own range of high-voltage batteries, the hybrid range from FOX is a new class of Inverter.



**Remote Monitoring** 

Monitor your system

remotely via smartphone

app or web portal.

FOX storage solutions are available with advanced and intuitive app based remote control and monitoring functionality.

IP65 Rated

Engineered to last with maximum flexibility. Suitable for outdoor installation.



Flexible configuration, plug and play set-up, built-in fuse protection.



**High Voltage** 

Connects to high-voltage

batteries for maximum

round-trip efficiency.

## BATTERY EXPANSION EASY UPGRADE

Expand your system easily by simply adding additional batteries. Eight batteries can be installed in series, providing up to 32.8kWh of storage capacity.

> For more about the FOX range, visit: WWW.FOX-ESS.COM



## TECHNICAL SPECIFICATIONS

Model	KH7 KA7		KH8 KA8	КН9 Ка9	КН10 КА10	KH10.5 KA10.5
ELECTRICAL CHARACTERISTICS						
Battery Type				Li-Ion		
Battery Voltage Range [V]				85-450		
Recommended Battery Voltage [V]				300VDC		
Max. Charge Current [A]				50		
Max. Discharge Current [A]				50		
Communication Interfaces				CAN/ RS485		
Reverse Connect Protection				YES		
NPUT PV (FOR KH ONLY)						
fax. Recommended DC Power [W]	9100		10400	11700	13000	15000
Max. DC Voltage [V]	0100		10400	600	10000	13000
0 1 1				360		
Norminal DC Operating Voltage [V]		10/10/10		300		
/ax. Input Current (Input A / Input B) [A]		16/16/16			16/16/16	
/ax. Short Circuit Current (Input A / Input B) [A]		20/20/20			20/20/20/20	
Nax. Inverter Backfeed Current to the Array [mA]				0		
MPPT Voltage Range [V]				80-500		
Start-up Voltage [V]				75		
No. of MPP Trackers		3			4	
Strings Per MPP Tracker				1		
OC Disconnection Switch				Optional		
DUTPUT AC						
Iorminal AC Power [VA]	7000		8000	9000	10000	10500
Max. Apparent AC power [VA]	7700		8800	9900	10500	10500
Rated Grid Voltage (AC Voltage Range) [V]				220/230/240 (180 to 270)		,0000
Rated Grid Frequency [Hz]				50/60,±5		
Norminal AC Current [A]	30.4		34.8	39.1	43.5	45.7
Max. AC Current [A]						
	33.5		38.3	43.0 0.8 Leading to 0.8 Lagging	45.7	45.7
Displacement Power Factor				0.8 Leading to 0.8 Lagging < 3%		
Fotal Harmonic Distortion (THDi, Rated Power)				53%		
NPUT AC	14000		10000	10000	10000	10000
Max AC Power [VA]	14000		16000	18000	18000	18000
Max. AC Current [A]	60.9		69.6	78.3	78.3	78.3
Rated Grid Voltage (AC Voltage Range) [V]				220/230/240 (180 to 270)		
Rated Grid Frequency [Hz]				50/60,±5		
PS OUTPUT (WITH BATTERY)						
Iax. EPS Power [VA]	7000		8000	9000	10000	10500
PS Rated Voltage [V], Frequency [Hz]				230VAC. 50/60		
Aax. EPS Current [A]	30.4		34.8	39.1	43.5	45.7
PS Peak Power [W]	50.4	10000 200	54.0	55.1		40.7
		10000, 30s		<20ms	12000, <b>6</b> 0s	
Switch Time [s]						
Total Harmonic Distortion (THDv, Linear Load)				<2%		
Parallel Operation				Yes @max10PCS		
FFICIENCY						
MPPT Efficiency				99.90%		
Euro-efficiency				97.40%		
Max. Efficiency				97.80%		
Max. Battery Charge Efficiency (PV to BAT) (@Full Load)				98.50%		
Max. Battery Charge / Discharge Efficiency (BAT to AC)	(@Full Load)			97.00%		
PROTECTION						
V Reverse Polarity Protection				YES		
Battert Reverse Protection						
				YES		
Anti-islanding Protection				YES		
Dutput Short Protection				YES		
eakage Current Protection				YES		
nsulation Resistor Detection				YES		
Over-current Protection / Over-temperature Protection				YES		
Over Voltage Category				III (AC side), II (DC side)		
C/DC Surge Protection				Туре II / Туре II		
				Optional		
FCI Protection						
POWER CONSUMPTION				< 15		
AFCI Protection POWER CONSUMPTION Standby Consumption [W] (Ldle) TANDARD				<15		
VOWER CONSUMPTION Itandby Consumption [W] (Lale) ITANDARD						
VOWER CONSUMPTION Itandby Consumption [W] (Lale) ITANDARD Itafety				IEC62109-1 / -2 / IEC62040 / IEC 62477		
POWER CONSUMPTION Itandby Consumption [W] (Lale) ETANDARD Itafety MC			EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6	)-3	
OWER CONSUMPTION tandby Consumption [W] (Lale) TANDARD afety MC cetification		698 / 69	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477	)-3	
OWER CONSUMPTION tandby Consumption [W] (Lale) TANDARD afety MC cetification NVIRONMENT LIMIT		G98 / G9	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 /	)-3	
OWER CONSUMPTION tandby Consumption [W] (Ldle) TANDARD afety MC Cetification NVIRONMENT LIMIT ngress Protection		G98 / G9	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65	)-3	
POWER CONSUMPTION Attandby Consumption [W] (Ldle) ATANDARD Affety MC Cetification ENVIRONMENT LIMIT Ingress Protection		G98 / G	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I	)-3	
VOWER CONSUMPTION Attandby Consumption [W] (tdle) ATANDARD Attafety MC Cetification ENVIRONMENT LIMIT Ingress Protection Irotective Class		G98 / G9	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65	)-3	
OWER CONSUMPTION         tandby Consumption [W] (tdle)         tandby Consumption [W] (tdle)         tandby Consumption [W] (tdle)         afety         MC         cetification         NVIRONMENT LIMIT         argerss Protection         rotective Class         Operating Temperature Range [°C]		G98 / G4	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I	)-3	
POWER CONSUMPTION         itandby Consumption [W] (Ldle)         STANDARD         iafety         MC         Setification         INVIRONMENT LIMIT         Ingress Protection         rotectice Class         Deperating Temperature Range [°C]         tumidity [%]		G98 / G9	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C)	)-3	
POWER CONSUMPTION         itandby Consumption [W] (Ldle)         ETANDARD         itafety         MC         Setification         ENVIRONMENT LIMIT         Ingress Protection         irotective Class         Operating Temperature Range [°C]         lumidity [%]         Vitude [m]		698 / 69	EN	IEC 62109-1 / -2 / IEC 62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0~95 (Non-condensing) <2000	)-3	
OWER CONSUMPTION         tandby Consumption [W] (Ldle)         TANDARD         afety         MC         betification         NVIRONMENT LIMIT         negress Protection         rotective Class         operating Temperature Range [°C]         lumidity [%]         lititude [m]         torage Temperature [°C]		G98 / G	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0 ~95 (Non-condensing) <2000 -40 +70°C	)-3	
OWER CONSUMPTION tandby Consumption [W] (Ldle) TANDARD afety MC tetification NVIRONMENT LIMIT rotective Class operating Temperature Range [°C] umidity [%] lititude [m] torage Temperature [°C] loise Emission (Typical) [dB]		G98 / G	EN	IEC 62109-1 / -2 / IEC 62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0~95 (Non-condensing) <2000	)-3	
OWER CONSUMPTION tandby Consumption [W] (Ldle) TANDARD afety MC setification NVIRONMENT LIMIT ngress Protection rotective Class operating Temperature Range [°C] umidity [%] Lititude [m] torage Temperature [°C] loise Emission (Typical) [dB] MENSION AND WEIGHT		G98 / G1	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0 ~95 (Non-condensing) <2000 -40 +70°C <30	)-3	
OWER CONSUMPTION         tandby Consumption [W] (Ldle)         TANDARD         afety         MC         teltification         NVIRONMENT LIMIT         tigress Protection         rotective Class         uperating Temperature Range [°C]         umidity [%]         tittude [m]         torage Temperature [°C]         oise Emission (Typical) [dB]         IMENSION AND WEIGHT         emensions (W * H * D) [mm]		G98 / G9	EN	IEC 62109-1 / -2 / IEC 62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0~95 (Non-condensing) <2000 -40 +70°C <30 450*527*203mm	)-3	
OWER CONSUMPTION         tandby Consumption [W] (Ldle)         TANDARD         afety         MC         tetification         NVIRONMENT LIMIT         ngress Protection         rotective Class         operating Temperature Range [°C]         umidity [%]         ltitude [m]         torage Temperature [°C]         torage Temperature [°C]		G98 / G	EN	IEC62109-1 / -2 / IEC62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0 ~95 (Non-condensing) <2000 -40 +70°C <30	)-3	
OWER CONSUMPTION         tandby Consumption [W] (Ldle)         TANDARD         afety         MC         betification         NVIRONMENT LIMIT         ngress Protection         rotective Class         Operating Temperature Range [°C]         lumidity [%]         lititude [m]         torage Temperature [°C]         loise Emission (Typical) [dB]         DIMENSION AND WEIGHT         Demensions (W * H * D) [mm]         Veight [kg]         cooling Concept		698 / 69	EN	IEC 62109-1 / -2 / IEC 62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0~95 (Non-condensing) <2000 -40 +70°C <30 450*527*203mm	)-3	
OWER CONSUMPTION         tandby Consumption [W] (Ldle)         TANDARD         afety         MC         betification         NVIRONMENT LIMIT         ngress Protection         rotective Class         Operating Temperature Range [°C]         lumidity [%]         lititude [m]         torage Temperature [°C]         loise Emission (Typical) [dB]         DIMENSION AND WEIGHT         Demensions (W * H * D) [mm]         Veight [kg]         cooling Concept		G98 / G	EN	IEC 62109-1 / -2 / IEC 62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0~95 (Non-condensing) <2000 -40 +70°C <30 450*527*203mm 29Kg	)-3	
POWER CONSUMPTION		G98 / G1	EN 39 / AS4777.2 /	IEC 62109-1 / -2 / IEC 62040 / IEC 62477 61000-6-1 / EN 61000-6-2 / EN 61000-6 EN50549-1 / CEI 0-21 / VDE-AR-N 4105 / IP65 Class I -25 +60°C (Derating at +45°C) 0 ~95 (Non-condensing) <2000 -40 +70°C <30 450°527°203mm 29Kg Natural	5-3 / NRS 097-2-1 and so on	

\* More technical characteristics are available on demand and customized.