

## SOLAR COMBO



### **Solar Panels**

DCR: 335Wp

Polycrystalline: 335Wp

Mono Perc: 400Wp

Mono Perc Halfcut: 535Wp

### **Batteries**

12v, 150 Ah C10 (60 months)

12v, 150 Ah C20 (36 months)

12v, 220 Ah C20 (36 months)

### **On-Grid Solar Inverters**

1 KW to 60 KW String Inverters

### **Off-Grid Solar Inverters**

900 VA to 20 KVA

### **Hybrid Solar Inverters**

5 KVA to 20 KVA

KIRLOSKAR SOLAR OFFGRID INVERTER				
MODEL NUMBER	KCOA90012PI	KCOA110012PI	KCOA160024PI	KCOA210024PI
Rating of Model	900VA	1100VA	1600VA	2100VA
INPUT PARAMETERS				
Battery Charging Current I <sub>max</sub> (Solar +Grid)	20	20	20	20
System Voltage	12		24	
Max. DC I/P Voltage	25		45	
Solar Max Range	500		1000	1500
Efficiency of SCC	>90%			
VOLTAGE LIMITS (UPS MODE)				
Mains AC Low Cut / Recovery	(180 +/- 10 V)/ (190 +/- 10 V)			
Mains AC High Cut / Recovery	(265 +/- 10 V)/ (255 +/- 10 V)			
VOLTAGE LIMITS (NORMAL MODE)				
Mains AC Low Cut/ recovery	(100 +/- 10 V)/ (110 +/- 10 V)			
Mains AC High Cut/ recovery	(280 +/- 10 V)/ (270 +/- 10 V)			
AC MAIN MODE				
Grid Input Range (UPS)/ (Normal)	(180 - 265 +/- 10 V)/( 100 - 280 +/- 10 V)			
Grid Charging (TUB, FL) HI Mode	16A 1A / 14A 1A			
Grid Charging (TUB, FL) LO Mode	12A, 1A, 10A, 1A			
Boost Voltage (TUB, FL) HI Mode	14.4 V / 14.2 V (+/-0.1V)		28.8 V /28.4 V(+/-0.2V)	
Float Voltage (TUB, FL)	13.8 V / 13.6 V (+/-0.1V)		27.6 V /27.2 V(+/-0.2V)	
Change Over Time Normal/ UPS	< 40 ms/< 10 ms			
BACK UP MODE (SOLAR POWER)				
Output Voltage Regulation (AC)	195 V to 220 V			
Battery Low Voltage Warning	10.8 V +/- 0.1 V		21.6 V +/- 0.2 V	
Battery Low Voltage Cut	10.5 V +/- 0.1 V		21 V +/- 0.2 V	
Load Reconnect Voltage	12.7 +/- 0.1 V		25.4 +/- 0.2 V	
Float Voltage Setting	13.7 V		27.4 V	
PROTECTION				
Protection :	Over Current, Battery Over Charge, Pv Reverse Polarity, Reverse Current Flow, Battery Deep Discharge, Short Circuit, Overload Protection, Over Temperature.			
Display	LCD			

- HC Mode: Charging current = 20A 1A : Solar + Mains when Battery Voltage < float voltage and when battery voltage > float voltage charging current = 15A 1A
- EC Mode: Mains Charging current is zero if solar current > 13A, Charging current will be maximum at below float voltage, when battery voltage is > float voltage charging current is 15A 1A, system will cut off the mains when battery voltage reaches boost voltage level and output load is transferred to Solar+ Battery and reconnect below 11.8V per battery.
- SC Mode: Charging current = 20A Solar + Mains till boost voltage, System will cut off the mains when battery voltage reaches boost voltage level and output load is transferred to Solar + Battery and Grid reconnected <= 12.0V per Battery or Solar fails or if Solar < 5A check if Solar < discharging connect grid.

KIRLOSKAR SOLAR BATTERY			
Rating of Model	12V 150Ah @C10	12V 150Ah @C20	12V 220Ah @C20
INPUT PARAMETERS			
Nominal Voltage	12	12	12
Battery Ah	150@C10	150@C20	220@C20
DIMENSIONS			
Height (+/-2mm)	416	416	416
Width (+/-1mm)	189	189	189
Length (+/-1mm)	505	505	505
Specific Gravity	1.240-1.260	1.245-1.260	1.245-1.260
Open Circuit Voltage	12.55-12.70	12.55-12.7	12.55-12.7
Model Number	KBC12DBTC1015060	KBC12DBTC2015036	KBC12DBTC2022036
Weight (kg)± 3%	61.200	55.800	65.000

KIRLOSKAR SOLAR OFFGRID / HYBRID INVERTER									
MODEL NUMBER	KSOE124MI/ KSOE148MI	KSOE248MI	KSOE348MI	KSOE548MI	KSOE596MI	KSOE896MI	KSOE10120MI	KSOE15120MI	KSOE20240MI
Rating of Model	1KVA,1Ph	2KVA,1Ph	3KVA,1Ph	5KVA,1Ph	5KVA,1Ph	8KVA,1Ph	10KVA,1Ph	15KVA,1Ph	20KVA,1Ph
INPUT PARAMETERS									
Battery VDC	24/48	48	48	48	96	96	120	240	240
Solar Charge Controller	MPPT								
Max. Solar Power Input	1	2	3	5	5	8	12.5	15	20
Solar Input Range	30-55/65-120	65-120	65-120	65-120	130-200	130-200	165-250	165-250	290-400
Solar Voc Max.	150	150	150	150	250	250	300	300	500
Solar Panels in Series	1 / 3	3	3	3	5	6	6	6	6
Solar Panels in Parallel	3 / 1	2	3	5	3	4	6	8	8
AJB	1in1out, 16A	2in1out, 32A	3in 1out, 40A	5in1out, 40A	3in1out, 32A	6in1out, 63A	6in1out, 100A	8in1out, 120A	8in1out, 100A
Switching By	MOSFET					IGBT			
Battery Configuration	2x 12V150Ah 4x 12V150Ah	4x 12V150Ah	4x 12V150Ah	4x 12V150Ah	8x 12V150Ah	8x 12V150Ah	10x 12V150Ah	10x 12V150Ah	20x 12V150Ah
Efficiency of SCC	> 94 % < 98 %								
INPUT/OUTPUT									
Mains I/P AC Range	(170-260 +/- 10 V)								
Inverter AC Output Range	230V (+/-2%)								
Frequency	50Hz (+/-6%)								
Current	3.5	7	11	17	17	28	35	52	70
PROTECTION									
Protection	Over current, Battery over charge, PV reverse polarity, Reverse current flow, Battery Deep Discharge Short circuit, Overload Protection, Anti Islanding								
Modes	3: Hybrid, Grid Export (above5KW) Standalone								
Operating Ambient Temp.	0 to 50 Degree C								
Relative Humidity	95%								
Weight	10	20	30	40	75	115	125	170	350
Communication	GSM(Optional)								
Display	LCD Display								
LED	Grid On, PV On, Grid Charger On, Load On Grid, Load On Battery, Fault								
LCD	Current Status Input : Voltages Currents Frequency Power W Power VA Import KWH Export KWH. Output: Voltages Currents Frequency. Inverter: Voltages Currents Frequency Power KW Power VA. Solar: PV Vol, Currnt PV Power PV Energy Panel Temp PV Radiation. Battery: Voltage Current, Batt Temp Batt %. Faults: Recent 9 fault since last.								
Certifications	as per IEC / BIS Standards								

KIRLOSKAR SOLAR HYBRID INVERTER			
MODEL NUMBER	KSHE10120M3	KSHE15240M3	KSHE20240M3
Rating of Model	10KVA,3Ph	15KVA,3Ph	20KVA,3Ph
INPUT PARAMETERS			
Battery VDC	120	240	240
Solar Charge Controller	MPPT		
Max. Solar Power Input	10	15	20
Solar Input Range	165-250	290-400	290-400
Solar Voc Max.	300	500	500
Solar Panels in Series	6	10	10
Solar Panels in Parallel	5	5	6
AJB	5in1out, 75A	5in1out, 75A	6in1out, 100A
Switching By	IGBT		
Battery Configuration	10x 12V150Ah	20x 12V150Ah	20x 12V150Ah
Efficiency of SCC	> 94% < 98%		
INPUT/OUTPUT			
Mains I/P AC Range	(170-260 +/- 10 V)		
Inverter AC Output Range	400V (+/-2%)		
Frequency	50Hz (+/-6%)		
Current	11	17	23
PROTECTION			
Protection	Over current, Battery over charge, PV reverse polarity, Reverse current flow, Battery Deep Discharge Short circuit, Overload Protection, Anti Islanding		
Modes	3: Hybrid, Grid Export (above5KW) Standalone		
Operating Ambient Temp.	-10 to 50 Degree C		
Relative Humidity	95%		
Weight	125	125	350
Communication	GSM (Optional)		
Display			
LED	Grid On, PV On, Grid Charger On, Load On Grid, Load On Battery, Fault		
LCD	Date, Time, Total Up Time, Total Down Time, Current Up Time, Current Down Time, Current Status. Input : Voltages Currents Frequency Power W Power VA Import KWH Export KWH. DG: Power W Power VA KWH Run Hr. Output: Voltages Currents Frequency Power W Power VA Load% Energy. Power: Total I/P KW, KVA Total O/P KW, KVA Input PF Output PF. Inverter: Voltages Currents Frequency Power KW Power VA, Solar: PV Vol, Current PV Power PV Energy Panel Temp PV Radiation. Battery: Voltage Current I/P KWH O/P KWH Batt Temp Battery %. Faults: Recent 9 fault since last reset.		
Certifications	as per IEC /BIS Standards		

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