KENT
New Energy

Next-Gen
Solar Hybrid Inverters



M1 Series

1-Phase • IP66
3KW • 5KW • 6KW

10 YEARS WARRANTY

IP66 PROTECTION RATING
Sealed against dust & moisture for worry free performance

2 × PV SOLAR
Dual MPPT-oversize the array up to 200% of rating

200% OVERLOAD
Handles 200% overload for up to 10 seconds

HIGH EFFICIENCY
>97% efficient - high-frequency IGBT design

< 5 MS SWITCH-OVER
Near-instant switchover, no compressor restart

ON-GRID MODE
Runs in pure on-grid mode without battery requirement

SMART LOAD
Sheds non-essential load based on battery SOC diverts surplus solar

GENERATOR PORT
Dedicated DG input for seamless backup power

PARALLEL READY
Up to 3 units in parallel for higher load

LOWER BILLS
Time-of-Use ready-shift heavy loads to cheap hours

KENT CENTCOM™ CLOUD
For seamless monitoring, configuration, & remote diagnosis

4G DATA LOGGER
Data on Indian server with 5-year 4G data pack

* Standard 5 years/ 10 years when installed with KENT F1 Lithium Battery.

Technical Specifications

Model	M1-3KW	M1-5KW	M1-6KW
Product Code	131001	131002	131013
Suitable Load	1 Inverter AC + Lighting load	2 Inverter ACs + 1 Submersible + Lighting Load	2 Inverter ACs + 1 Submersible + Extra Lighting Load
Battery Input Data			
Battery Type	Lead-acid or Lithium-ion		
Battery Voltage Range (V)	40-60		
Max. Charging/Discharging Current (A)	70/70	120/120	135/135
Charging Strategy for Li-ion Battery	Self-adaption to BMS		
Number of Battery Inputs	1		
PV String Input Data			
Max. PV access power (W)	6000	10000	12000
Max. PV Input Power (W)	4800	8000	9600
Max. PV Input Voltage (V)	500		
Start-up Voltage (V)	125		
MPPT Voltage Range (V)	230-425		
Rated PV Input Voltage (V)	370		
Max. Operating PV Input Current (A)	18		
Max. Input Short-Circuit Current (A)	27		
No. of MPP Trackers/No. of Strings per MPP Tracker	2/1+1		
AC Output Data			
Rated AC Output Power (W)	3000	5000	6000
Max. AC Output Power (W)	3300	5500	6600
Rated/Max. AC Output Current (A)	14	24	29
Peak Power (W)	2 times of rated power @ 10 sec		
Rated output voltage (V)	220/230		
Rated Output Frequency (Hz)	50/60		
DC Injection Current	0.50%		
Output Voltage Waveform	Pure Sine Wave		
Total current Harmonic Distortion ThDi	<3%		
AC Input Data (Grid and Generator)			
Max. Input Power to Battery (W)	3000	5000	6000
Rated Input Voltage (V)	230		
Rated Input Frequency (Hz)	50/60		
Grid Input Current (A)	27	43	43
Generator Input Current (A)	30		
Efficiency			
Max. Efficiency	96.90%	97.30%	
Euro Efficiency	96%	96.20%	
MPPT Efficiency	99.90%		
Equipement Protectiom			
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Insulation Impedance Detection		
Surge Protection Level	TYPE II(DC), TYPE II(AC)		
Interface			
LCD/LED Display	LCD		
Communication Interface	WIFI, 4G, RS485, CAN		
4G Data logger	Included with 5-year data pack		
General Data			
Operating Temperature Range (°C)	-40 to +70		
Permissible Ambient Humidity	0-100%		
Permissible Altitude (m)	2000		
Noise (db)	<35		
Ingress Protection (IP) Rating	IP66		
Inverter Topology	Non-Isolated (solar), Isolated (battery)		
Over Voltage Category	OVC II(DC), OVC III(AC)		
Cabinet Size (WxHxD) (mm)	228 x 470 x 340		
Weight (kg)	19		
Type of Cooling	Natural convection		
Warranty	Standard 5 years/ 10 years when installed with KENT F1 Lithium Battery		
Safety/EMC Standard	IEC62109-1/-2, EN61000-6-1,EN61000-6-2,EN61000-6-3,EN61000-6-4		
Certifications	IS 16221 (PART 2): 2015/IEC 62109-2: 2011, IS 16169: 2019/IEC 62116: 2014, IS 17980: 2022/IEC 62891:2020		

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