FIRESTAR SERIES: Solar Offgrid Inverters

- Hassle free installation and user friendly design
- LCD Display for easy viewing
- DSP based technology with interleaved MPPT switching
- Multiple AC/DC, load and battery related protections
- Compatible with grid and genset with automatic changeover.
- Equipped with remote monitoring facility
- 4-stage charger enhances battery life by 1-2 years
- MPPT efficiency at 99%
  System efficiency at 92-95%

TECHNICAL SPECIFICATIONS

Power Rating (KVA)	5	10	15	20	25	30	40	50	60	100
Power in Watts (KW)	4	8	12	16	20	24	32	40	48	80
Battery voltage (V)	72|96	120|144	180|240	180|240	240|360	240|360	360|480	360|480	360|480	480|600

- Mains Charger: PWM controlled SMPS based 4-Stage Charger
- Control Device: Digital Signal Processor (DSP)
- Power Device: IGBT
- MPPT Power Topology: 4-Phase Interleaved MPPT
- Solar Charge Topology: 4 stage: CCCV to battery, Release & Trickle; and MCCV to load

INPUT AND OUTPUT DATA

- PV Input Voltage (Vmp): 280V - 380V | 500V - 650V
- AC Input / Output Configuration: 3-Phase to 3-Phase
- AC Input Voltage Range: 120V – 290V Each Phase
- Battery Charging Current: 10% of Battery Ah Capacity (Settable)
- Output Voltage: 230V AC +/-2% Each Phase
- Output Wave Shape: Pure Sine Wave
- Output T.H.D: <2%
- Crest Factor: 4:1
- Output Frequency: 50 Hz / 60 Hz (Settable)
- Phase Displacement for 3-Phase output: 120 degrees +/-1%

EFFICIENCY

- Max. Inverter Efficiency: 92 – 95%
- Max. MPPT Efficiency: >99%

PROTECTION DEVICES

• Isolated sensing of mains • Output Short Circuit Protection • Protection against 440V mains input • Dynamic short circuit protection with fold-back current limiting • Protections against errors like battery-low, over-load, heavy load, short circuit etc; cutoff and auto restart with permanent cut off after 5 consecutive cutoff • Panel input high current protection • DC surge protection • MPPT output over-current protection • Panel reverse polarity protection • Battery full charge cut off • Galvanic Isolation • Battery Fuse Protection • Mains Input MCB • Output MCB

GENERAL DATA

- Operating Temperature Range: -10C to 60 C
- Noise Emission: Less than 45db at 1 meter
- Topology: Transformer based
- Battery Low: Settable
- Switchover time: 60msec
- Minimum Wattage Detection: 15W
- Cooling concept: Forced convection with fan
- Environmental Protection Rating: IP 21 (IEC 60529)

FEATURES

• Inbuilt Lightning Arrestor • Multiple Built-in Protections • RS 232 port for data reading, Remote monitoring system via Zigbee/GSM /Wifi (Optional) • Display–16 x 4 LCD * 2 nos. • Warranty – 2 years, extendable to 5 years • Battery Management System (Optional) • Optional switch available for charging battery via solar or solar + mains configuration

STANDARDS

- Efficiency: IEC 61683
- Environmental: IEC 60068-2-1, IEC60068-2-2, IEC 60068-2-14, IEC 60068-2-30
- Safety: IEC 62109-1, IEC 62109-2

Specifications subject to change without prior notice

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