

TECHNICAL SPECIFICATION
MODEL-REN M1P150012SOLAR
FHUPS0642X0-1050VA-12V-50A MPPT-L SMART

S.No	TECHNICAL PARAMETERS	SPECIFICATIONS
A	BATTERY MODE	
A.1	No Load Current (Switch OFF)	$\leq 180 \text{ mA}$
A.2	Nominal Battery Voltage	12V
A.3	Output Voltage at No LOAD	$225 \pm 7V$
A.4	Output Frequency	$50 \pm 1 \text{ Hz}$
A.5	Fan Run @ every First Start Up/ON-OFF switch ON Time	Fan Operates Properly (Fan Runs for 3 sec only)
A.6	Discharging Current @Full Load	$75 \pm 1 \text{ Amp}$
A.7	Harmonic distortion in O/P waveform(Resistive load)	$\leq 3\%$

B	UPS MODE	
B.1	Low Cut With Phase Match	$180 \pm 10V$
B.2	Low Cut Recovery With Phase Match	9-12V Hysterisis from $>$ Low Cut Voltage
B.3	High Cut With Phase Match	$270 \pm 10V$
B.4	High Cut Reovery With Phase Match	9-12V Hysterisis from $<$ High Cut Voltage
B.5	Change Over Time From Mains To UPS	$\leq 10\text{msec}$
B.6	Change Over Time From UPS To Mains	$\leq 10\text{msec}$

C	NORMAL MODE	
C.1	Low Cut With Phase Match	$90 \pm 10V$
C.2	Low Cut Recovery With Phase Match	9-12V Hysterisis $>$ Low Cut Voltage
C.3	High Cut With Phase Match	$290 \pm 10V$
C.4	High Cut Reovery With Phase Match	9-12V Hysterisis $<$ High Cut Voltage
C.5	Change Over Time From Mains To UPS	$\leq 20\text{msec}$
C.6	Change Over Time From UPS To Mains	$\leq 10\text{msec}$

D	CHARGING MODE	
D.1	Low Charging Current @ 220V AC (NC)	$13.5 \pm 1.0A$
D.2	High Charging Current @ 220V AC (HC)	$18 \pm 1.0A$
D.3	Boost Charging Voltage (HC/NC)	$14.4 \pm 0.2V$
D.4	Float Charging Voltage (HC/NC)	$13.7 \pm 0.2V$

E	Solar Charge Controller With Real Time Clock	
E.1	Solar Charge Controller	MPPT CHARGE CONTROLLER (50 Amp)
E.2	Charge Controller Type	SINGLE CHANNEL INTERLEAVED MPPT
E.3	Max PV input Power	550-850 Watt
E.4	Max Solar Input Voltage (Vmp)	25-50
E.5	Max Solar DC Input Voltage (Voc)	60V
E.6	Max Solar Input current	$30 \pm 1 \text{ Amp}$
E.7	Solar Battery Charging Current (settable)	40 Amps.(default) (Settable 5A to 50A)

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F	PROTECTIONS	
F.1	Over Load Protection with Alarm	Over Load Shut Down After 6 Auto Retries
F.2	Over Load Shut Down Reset	Through ON/OFF Switch or Mains
F.3	Battery Low Alarm	10.8±0.2V
F.4	Battery Low Protection	Battery Low Shut Down After 4 Auto Retries
F.5	Battery Low Shut Down Reset	Through ON/OFF Switch , Mains or Solar
F.6	Over Temperature Protection With Alarm	should be OK(95 ± 5 °C);
F.7	Short Circuit Protection (Battery Mode)	Yes
F.8	Short Circuit Retry	One
F.9	Short Circuit Reset	Through ON/OFF Switch or Mains
F.10	Mains Fuse Trip Protection	Should be functional
F.11	P.V. Reverse Protection	Available

Accessible Parameters Via Operating Display	
1. AC Mains voltage	7. Warnings or Protections Status
2. O/P Load in %	i) Overload
3. Battery input voltage	ii) Short Circuit
4. Battery Charging/ Discharging current (Bar Graph)	iii) Fuse Trip (Off and ON the system after reset the resetable switch to reset the protection)
5. Solar KWH used	iv) Over Temp.
6. Solar Status	v) Empty 'Battery' Blinking
	vi)PV Reverse Protection
Logic:	Smart Solar Selection Logic based on built in Real Time Clock (SL-1,SL-2,SL-3,SL-4).
	Provision for Charging by Solar Power Only.
	Provision for setting Critical Parameters of Solar.
	Ability to provide rated output power directly from solar panels (if solar is available) in addition charges the battery.
	Intelligently give the priority to solar power and take the balance from Mains.