

	SMARTEN POWER SYSTEMS LIMITED	
	PRODUCT SPECIFICATION	
Model Name	1050/12V SAVER	
Mains Input mode		
Mains AC low cut UPS mode	175VAC ± 10VAC	
Mains AC low cut recovery UPS mode	185VAC ± 10VAC	
Mains AC high cut UPS mode	265VAC ± 10VAC	
Mains AC high cut recovery UPS mode	255VAC ± 10VAC	
Mains AC low cut WUPS mode	90VAC ± 10VAC	
Mains AC low cut recovery W.UPS mode	110VAC ± 10VAC	
Mains AC high cut WUPS mode	295VAC ± 10VAC	
Mains AC high cut recovery W.UPS mode	285VAC ± 10VAC	
Input Frequency Range	48Hz to 52Hz	
Voltage Output in Mains Mode	Same as input	
Frequency Output in Mains Mode	Same as input	
Battery		
Battery Type	LA / Tubular / SMF	
DC input voltage	12V	
Battery Quantity 12V 100Ah to 220Ah	1	
Float charging voltage	13.7V±0.2V	
Bulk absorption Voltage	14.8±0.2V	
Boost charging voltage for LA Battery	14.0V±0.2V	
Boost charging voltage for Tubular and SMF Battery	14.5V±0.2V	
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)	
Charging Current at Grid priority/Battery priority	15A±2A	
Backup Mode		
Output voltage	220VAC +5% -10% (until battery low alarm)	
Output frequency	50Hz ± 0.2 Hz	
Output waveform	Pure Sine Wave ≤ 5% THD	
Discharging current @ full load	50A ± 2A	
Low Battery Warning	10.8±0.2V	
Low Battery Cut	10.4V±0.2V	
Change over time UPS mode	< 10msec	
Change over time WUPS mode	< 25msec	
Protections		
Overload in backup mode	Yes provided, system will indicate on display at 101% load	
Short Circuit in Backup Mode	System will shutdown after 3 - retries in case of output short circuit	
Short Circuit in Mains Mode	Mains Fuse will blown	
Back feed	System will shutdown in case of back feed and there is no retry	
Over temperature	Yes provided, if heat sink temperature goes above 100°C System will shut down	
Reverse Battery	DC fuse will blown	
Phase to Phase protection in mains mode	Yes provided by electronic	
Solar Charge Controller		
Solar Charge Controller type	PWM type	
Max Panel wattage can be connected	600W	
Max PV current	25A	
Reverse PV protection	Yes provided, it will also display on LCD panel	
Reverse current flow to PV	Yes provided, it will also display on LCD panel	
Sharing of current when PV and Grid Both are available	If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid.	
Option for Grid and Battery priority	Yes, provided, user can set priority for Battery or Grid. Hence user can set system in electricity bill saving.	
Display and Alarms		
LCD Initial Display	Welcome, SMARTEN Website Address, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battery Type Selected LA / SMF / Tubular, Battery Capacity Selected 100-135Ah / 150-200Ah,	
LCD Status Display	Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS OFF, Battery Voltage, Load %, Output Voltage, Output Frequency, Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut	
Buzzer	Audible beep for Overload, Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown / MCB Trip	
Safety		
HV Test Input to Earth	Leakage current <5mA when 1.5kV applied for 1 min	
HV Test Output to Earth	Leakage current <5mA when 1.5kV applied for 1 min	
IR Test Input to Earth	>5MΩ between @ 500VDC	
IR Test Output to Earth	>5MΩ between @ 500VDC	
Earth Leakage current in Mains mode	< 2.5mA	
Earth Leakage current in Backup mode	< 2.5mA	