



TECHNICAL SPECIFICATIONS

Grid Sharing Solar UPS MODEL SEC 301 /SEC 303

10KVA -40KVA / 10 KVA To 150 KVA

TECHNOLOGY		MPPT based Grid sharing solar technology
RATING		10KVA -40KVA / 10 KVA To 150 KVA
DC BUS		192 VDC To 360 V
SOLAR INPUT		
Maximum Panel current		Depend on Panel
Reverse Polarity Protection		Short Circuit Diode
Back feed Protection		Protected using reverse diode
MPPT Efficiency		96% (Peak)
Configuration		Grid Sharing
Sharing Method		Parallel Operation of Solar and Grid Power
Sharing percentage		0-100% ; depending on the availability of solar power against the power demand of the load.
BATTERY		
Battery Type		SMF/ TUBULAR
RATING		10KVA -40KVA / 10KVA To 150 KVA
Voltage		192 VDC To 360 V
Battery Low advance warning at		11 V / Battery
Battery Low cut off at		10.5 / Battery
Charger Type		Constant voltage constant current
Charging Current Standard		Grid charging current -10A Depend on Panel
Inverter Type		IGBT based MPWM with instantaneous Sinewave Control
Power Factor		0.8 lag
Nominal Voltage		230 V / 400V
Regulation	Balanced Load	(±) 1%
	Unbalanced Load	(±) 1%
Unbalanced Load Phase Shift		120 ⁰ ± 0.5 ⁰
Frequency		50 Hz ± 0.1Hz
Waveform		True Sinewave
Total Harmonic Distortion	Linear Load	< 2%
	Non Linear Load	< 6%
Transient Response		Remains within +/- 5% & recover to normal within 20 msec
Over Load Capacity	100%	Continuous
	125%	1 Minute
	150%	5 Seconds

Crest Factor	3:1	
Mode of Operation	Designed for Continuous operation	
ISOLATION	True Online with complete galvanic isolation.	
Inverter Protection	Advanced Electronic Protection for device safety backed up with MCB's/ MCCBs & fast acting fuses, high speed pulse by pulse electronic device protection over voltage / under voltage protection, Electronic over current trip	
BYPASS		
Manual Bypass	Provided	
EFFICIENCY	Load	10KVA -40KVA / 10KVA To 150 KVA
Efficiency	100 % load	> 86 % to 88 >%
The below mentioned specifications are applicable only on non-availability of solar power.		
UTILITY POWER INPUT		
INPUT		
Input Voltage	415V AC Three Ø & N	
Input Voltage Window	330-470V	
Input Frequency	50Hz ± 10%	
Power walk in	Soft start for 0-20 seconds power walk-in.	
RECTIFIER		
Voltage Regulation	(±) 1%	
Ripple Voltage	< 2% without Battery	
Converter Protection	Advanced Electronic Protection for device safety backed up with MCB's/ MCCBs & fast acting fuses	
ALARMS		
	Input / Low / Fail	
	Output Overload	
	Over Temperature	
	Battery low	
LED Indication (5 LED with Multi function)		
	* Input on	
	* Invert On	
	* Solar on	
	* Battery Low	
	* Over Load	
Multifunctional Solar LCD energy meter		
	• Solar Voltage	
	• Solar Current	
	• Solar Power	
	• Energy generated (Energy generated & delivered to load)	
	• Input Voltage	
	• Output voltage	
	• Battery Voltage	
	• Load Current.	

PROTECTIONS	
PROTECTING THE LOAD	
Output Under Voltage	Protects the load and its components from premature failure
Output Over Voltage	
Output Single Phase prevention	Protects the connected three phase loads & its components from premature failure
Output short circuit with pulse by pulse current limit up to 200µ secs.Protects 300% for 15 msecs,500% for 5 msecs & 1000% for 1.5 msecs of the rated current	Protects against false tripping & complete shutdown in case of surge power drawn by the load (non linear loads)
Neutral drift	Galvanic isolation provides complete isolation between output neutral and Input & the the output is fully protected against neutral drifts, voltage avalanches like lighting & input harmonics commonly found in the input side.
Neutral failure	
Lightning	
EMI & Harmonics in the input raw power	
'High voltage transient protection & Electrostatic discharge protection as per IEC 62040-2	
PROTECTING THE UPS	
Input MCCB/MCB	Protects the input from very large current caused by short circuit or due to a damaged internal component and avoids further damage to the equipment.
Input Under Voltage / Over Voltage	Prevents damage of components in the input sensing & the converter devices.
Rectifier Over Voltage	Prevents damage to the inverter & the charger components
Single phase prevention	Prevents damages to the components in the input & converter
Over Temperature Protection	Protects the Inverter & Converter magnetics and switching devices against premature failure
Battery Low protection	
Over Load protection	Protects the Inverter components against premature failure
Short circuit protection	
'High voltage transient protection & Electrostatic discharge protection as per IEC 62040-2	Prevents damage of components in the input sensing & the converter devices.
External Magnetic field Protection	Protects against external power frequency magnetic field
ENVIRONMENTAL	
Acoustic Noise level	<60db @ 1.5 meter
Ambient Temperature	0 to 40 Deg C
Storage Temperature	-10 to 70 Deg C
Humidity	Up to 95% RH Non condensing
Altitude	< 3000 Feet above sea level (without derating)
Extreme Climatic conditions	AC Environment is required if the temperature goes beyond the normal operating temperature (0-40 deg C)
Testing Standard	As per IEC 62040 - 3
PHYSICAL	
Enclosure Protection Grade	IP - 20
Cooling	Forced Air
Cable Entry	Front side bottom