









HYBRID SOLAR INVERTER

1-5 KVA | 48V

## BOXER HBD

THE OFFGRID INVERTER KILLER

-  Seamless changeover time
-  Battery-less operation on demand
-  Export power to grid at lean loads
-  20% Overloading on PV Side
-  Li+ compatible with brand selection
-  Runs heavy loads including 1.5T AC

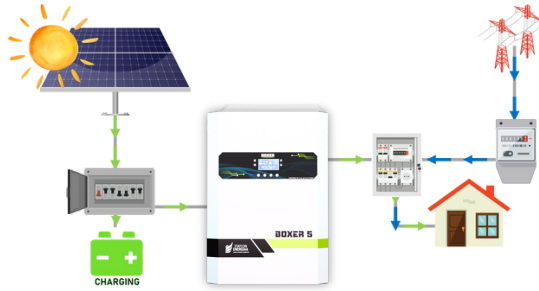
## HYBRID SOLAR INVERTER 1PH (GRID EXPORT WITH STORAGE)

The smart consumer says, “Why pay for off grid, when hybrid is now at the same cost?”

The Boxer is a unique addition to the Indian solar industry, plagued with cheap and frequently failing foreign wall mounted products. Boxer has a galvanic isolation to protect from the grid variations and gives the consumer all benefits of a hybrid inverter, while being a sleek, efficient machine. With Lithium compatibility, it is set to bring about a revolution in Indian homes, craving for high power and better backups.

\*Other customised ratings available on request

# BOXER HBD THE OFFGRID INVERTER KILLER



Block Diagram of Installation

DID YOU KNOW... 5 OUT OF 10 CUSTOMERS ACTUALLY ASK FOR HYBRID SYSTEMS RATHER THAN GRID TIED SYSTEMS?

Now avail subsidy on Hybrid Solar inverter systems, with Lithium ion batteries or Lead acid, or any other battery under the PM SURYAGHAR MUFT BIJLI YOJANA

RATINGS	1KVA/48V	2KVA/48V	3KVA/48V	4KVA/48V	5KVA/48V
MODEL NO.	BOX-048-01K-1P	BOX-048-2K-1P	BOX-048-03K-1P	BOX-048-04K-1P	BOX-048-05K-1P
<b>A.MPPT CHARGER</b>					
Type (Buck)	MPPT				
PV Normal Capacity (KWp)	1.2	2.4	3.6	4.8	6
Max PV Strings in parallel	1	2	3	4	5
No of MPPT Channel/No. of Input	1/1				
Max. Open Circuit Voltage (Voc)	190				
MPPT Tracking Range (Vmp)	75-160				
Max Output Current (A)	23	46	71	94	118
Peak Charging Efficiency	≥92%		≥94%		
<b>B. SOLAR INVERTER</b>					
Nominal Capacity	1KVA	2KVA	3KVA	4KVA	5KVA
Output Current(A)	3.5	7	10	14	17
Battery Voltage(V)	48				
Output Voltage/Freq/Phase	230V(± 2%) / 50Hz/1P+N				
Load Power Factor	0.8- unity				
Peak Efficiency	>88 %				
Over Loads: 120 sec/ 5 sec/ 2.5 sec	101-110%/111-150% /151-200%/>200% Immediate trip				
Auto Bypass Feature	Provided				
Anti Islanding/ Power Export to Grid	Provided ( As per IEC 62116 & IEC 61727)				
<b>C. GRID CHARGER</b>					
Grid Voltage Range	230V (+10% & -20%)				
Grid freq Range	50Hz (+5% & -5%)				
Max Grid Import Power	1.5KVA	3KVA	4.5KVA	6KVA	7.5KVA
<b>D. PROTECTIONS &amp; DISPLAY PARAMTERS</b>					
	PROTECTIONS			DISPLAY PARAMETERS	
PV Side Battery Side Grid Side Load Side System Protection	<ul style="list-style-type: none"> <li>Reverse Polarity, PV Power Limit, Surge Protection (MOV),O/P voltage</li> <li>Reverse Polarity, O/U Voltage, Current Limit</li> <li>O/U Voltage, O/U Frequency, Surge Protection (MOV)</li> <li>Overloads, Short circuit, Surge Protection (MOV)</li> <li>Over Temperature</li> </ul>			<ul style="list-style-type: none"> <li>Voltage, Charger O/P Amps, Power, Cumulative Energy</li> <li>Voltage, Current, Battery State</li> <li>Phase Voltage, Frequency, Power, Power Factor</li> <li>Voltage &amp; Current, Frequency, Power, Export kWh</li> <li>Mode of Operation, Active Faults</li> </ul>	
<b>E. MISCELLANEOUS</b>					
Switchgear Protection	MCB/MCCB provided on PV, Battery, Load & Grid path				
LED Indications	Power On, Inverter ON, Solar Present/Charging, Load On Grid/Charging, Battery Low, System Trip				
Data Port (RS485/ RS 232)	Optional (Available on Request)				
Remote Monitoring	Optional through GPRS based Modem/WIFI				
Ingress Protection	IP-20 (Indoor Type)				
Cooling Method	Force Cooling (Temp Controlled)				
Operating Temperature	0-50 degrees (without Derating)				
Humidity	Max. 95% Non-Condensing				
Altitude	1000m above sea level				