

Navgrun

SMART ENERGY. **STRONGER FUTURE.**

Advanced Inverters for
Maximum Performance



**HIGH
EFFICIENCY**



**SMART
MONITORING**



**RELIABLE
PROTECTION**



**SUSTAINABLE
ENERGY**



Nithin Sai Renewables Pvt Ltd

 www.navgrun.com

 info@navgrun.com



SYSTEM TECHNICAL DATA

MODEL NAME	SHU – 33 BLP1	SHU – 53BLP1	SHU – 63 BLP1	SHU – 83 BLP1
Rating	3Kw/3.6Kw	4Kw/5Kw	6Kw	8Kw
PV String Input Data				
Max. PV Input Power(W)	5760	8000	9600	12800
Max. PV Input Voltage(V)	500V			
Start-up Voltage(V)	125 V			
MPPT Voltage Range(V)	150-425			
Rated PV Input Voltage(V)	370			
Max. Operating PV Input Current(A)	13+13			26+26
Max. Input Short-Circuit Current	17+17			34+34
Number of MPP Trackers/ Number of Strings MPP Tracker	2/1+1			2/2+2
Battery Input Data				
Battery Type	Lead-acid or Lithium-ion			
Battery Voltage Range(V)	40-60			
Max. Charging Current(A)	90	120	135	190
Max. Discharging Current(A)	90	120	135	190
Charging Strategy for Li-ion Battery	Self-adaptation to BMS			
Number of Battery Input	1			
AC Input/Output Data				
Rated AC Input/Output Active Power(W)	3600	5000	6000	8000
Rated AC Input/Output Current (A)	16.4/15.7	22.7/21.7	27.3/26.1	36.4/34.8
Max. AC Input/Output Current	18/17.2	25/23.9	30/28.7	40/38.3
Max. Continuous AC Passthrough(grid to load)(A)	35		40	50
Peak Power (off-grid) (W)	2 times of rated power,10s			
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
Rated Input/output Voltage	230/230			
Rated Input/output Grid Frequency/Range(Hz)	50/45-55			
Grid Connection Form	L+N+PE			
THDi	<3%(of nominal power)			
DC Injection Current	<0.5% In			
Efficiency				
Max. Efficiency	97.6%			
Equipment Protection				
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring,Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level.			
surge Protection Level	Type II (DC&AC)			
Interface				
Communication Interface	RS485 /RS232/CAN			
Monitor Mode	GPRS/Bluetooth/WIFI/4G/LAN(optional)			
General Data				
Operating Temperature Range	-40 to +60C,>45C Derating			
Permisable Ambient Humidity	0-100%			
Permisable Altitude	2000m			
Noise (dB)	<30			
Ingress Protection(IP) Rating	IP65			
Inverter Topology	Non-Isolated			
Over Voltage Category	OVC II(DC), OVC III(AC)			
Cabinet Size (WxHxD mm)	330x580x232 (Excluding Connectors and Brackets)			
Weight (kg)	24.9			
Type of Cooling	Intelligent Air Cooling			
Warrenty	5 Years			
IEC Certificates	IEC 61727, IEC 62116, IEC 61683, IEC 60068-2/1/2/14/30, IEC/EN 61000-6-1/2/3/4, IEC/EN 61000-3-3/11/12 IEC/EN 62109-1, IEC/EN 62109-2, EN 55011:2016/A2:2021			

SYSTEM TECHNICAL DATA						
MODEL NAME	SHU – 63 BLP3	SHU – 83BLP3	SHU – 103 BLP3	SHU – 123 BLP3	SHU – 153 BLP3	SHU – 20 BLP3
Ratings	6Kw	8Kw	10Kw	12Kw	15Kw	20Kw
PV String Input Data						
Max. PV Input Power(W)	9000	12000	15000	18000	24000	32000
Max. PV Input Voltage(V)	800V					
Start-up Voltage(V)	160V					
MPPT Voltage Range(V)	200–650				160–650	
Rated PV Input Voltage(V)	550				550	
Max. Operating PV Input Current(A)	20+20				36+36	
Max. Input Short-Circuit Current	30+30				54+54	
Number of MPP Trackers/ Number of Strings MPP Tracker	2/1+1				2/2+2	
Battery Input Data						
Battery Type	Lead-acid or Lithium-ion					
Battery Voltage Range(V)	40–60					
Max. Charging Current(A)	135	190	210	240	280	350
Max. Discharging Current(A)	135	190	210	240	280	350
Charging Strategy for Li-ion Battery	Self-adaptation to BMS					
Number of Battery Input	1					
AC Input/Output Data						
Rated AC Input/Output Active Power(W)	6000	8000	10000	12000	15000	20000
Rated AC Input/Output Current (A)	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4	22.8/21.8	30.4/29
Max. AC Input/Output Current	10/9.6	13.4/12.8	16.7/16	20/19.2	25/24	33.4/31.9
Max. Continuous AC Passthrough(grid to load)(A)	45				70	
Peak Power (off-grid) (W)	2 times of rated power,10s					
Power Factor Adjustment Range	0.8 leading to 0.8 lagging					
Rated Input/output Voltage	230/400V & 230/400V					
Rated Input/output Grid Frequency/Range(Hz)	50/45–55					
Grid Connection Form	3L+N+PE					
THDi	<3%(of nominal power)					
DC Injection Current	<0.5% In					
Efficiency						
Max. Efficiency	97.6%					
Equipment Protection						
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring,Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level.					
surge Protection Level	Type II (DC&AC)					
Interface						
Communication Interface	RS485 /RS232/CAN					
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)					
General Data						
Operating Temperature Range	–40 to +60C,>45C Derating					
Permissible Ambient Humidity	0–100%					
Permissible Altitude	3000m					
Noise (dB)	≤55				<60	
Ingress Protection(IP) Rating	IP65					
Inverter Topology	Non-Isolated					
Over Voltage Category	OVC II(DC), OVC III(AC)					
Cabinet Size (WxHxD mm)	380x660x250 (Excluding Connectors and Brackets)				456x750x268.5(Excluding Connectors and Brackets)	
Weight (kg)	35.2				51.9	
Type of Cooling	Intelligent Air Cooling					
Warrenty	5 Years					
IEC Certificates	IEC 61727, IEC 62116, IEC 61683, IEC 60068–2/1/2/14/30, IEC/EN 61000–6–1/2/3/4, IEC/EN 61000–3–2/3/11/12 IEC/EN 62109–1, IEC/EN 62109–2, EN 55011:2016/A2:2021					

SYSTEM TECHNICAL DATA

MODEL NAME	SHU - 303 BHP3	SHU - 403BHP3	SHU - 503 BHP3
Ratings	30Kw	40Kw	50Kw
PV String Input Data			
Max. PV Input Power(W)	48000	64000	80000
Max. PV Input Voltage(V)	1000V		
Start-up Voltage(V)	180V		
MPPT Voltage Range(V)	150-850		
Rated PV Input Voltage(V)	600		
Max. Operating PV Input Current(A)	36+36+36	36+36+36+36	
Max. Input Short-Circuit Current	55+55+55	55+55+55+55	
Number of MPP Trackers/ Number of Strings MPP Tracker	3/2+2+2	4/2+2+2+2	
Battery Input Data			
Battery Type	Lithium-ion		
Battery Voltage Range(V)	160-800		
Max. Charging Current(A)	50+50		
Max. Discharging Current(A)	50+50		
Charging Strategy for Li-ion Battery	Self-adaptation to BMS		
Number of Battery Input	2		
AC Input/Output Data			
Rated AC Input/Output Active Power(W)	30000	40000	50000
Rated AC Input/Output Current (A)	45.5/43.5	60.7/58	75.8/72.5
Max. AC Input/Output Current	50/47.9	66.7/63.8	83.4/79.8
Max. Continuous AC Passthrough(grid to load)(A)	200		
Peak Power (off-grid) (W)	1.5 times of rated power,10s		
Power Factor Adjustment Range	0.8 leading to 0.8 lagging		
Rated Input/output Voltage	230/400V & 230/400V		
Rated Input/output Grid Frequency/Range(Hz)	50/45-55		
Grid Connection Form	3L+N+PE		
THDi	<3%(of nominal power)		
DC Injection Current	<0.5% In		
Efficiency			
Max. Efficiency	97.6%		
Equipment Protection			
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring,Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level.		
surge Protection Level	Type II (DC&AC)		
Interface			
Communication Interface	RS485 /RS232/CAN		
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)		
General Data			
Operating Temperature Range	-40 to +60C,>45C Derating		
Permisable Ambient Humidity	0-100%		
Permisable Altitude	2000m		
Noise (dB)	≤65		
Ingress Protection(IP) Rating	IP65		
Inverter Topology	Non-Isolated		
Over Voltage Category	OVC II(DC), OVC III(AC)		
Cabinet Size (WxHxD mm)	527x894x294 (Excluding Connectors and Brackets)		
Weight (kg)	80		
Type of Cooling	Intelligent Air Cooling		
Warrenty	5 Years		
IEC Certificates	IEC 61727, IEC 62116, IEC 61683, IEC 60068-2/1/2/14/30, IEC/EN 61000-6-1/2/3/4, IEC/EN 61000-3-2/3/11/12 IEC/EN 62109-1, IEC/EN 62109-2, EN 55011:2016/A2:2021		

Nithin Sai Renewables Pvt Ltd

 www.navgrun.com
 info@navgrun.com
 +91 96060 80780

Contact Us

Corporate Office

Balsa N1, 2nd Floor, Embassy Manyata
Business Park, Outer Ring Road, Nagavara,
Rachenahalli Village, KR Puram Hobli,
Bangalore, India - 560045

Factory

Plot No. 75-A, 2nd Phase, KIADB Industrial Area,
Chintamani Taluk, Mastenahalli Industrial Area,
Chikkaballapur,
Karnataka - 563128