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JRB SOLAR
INVESTMENT LIMITED
RC: 872046

JRB PRODUCTS CATALOG

CE RoHS BIS IP65 UL LVD SON SASO

CONTENT

JRB SOLAR INVESTMENT LTD is a renewable energy company, consultancy and general contracting company rendering services to the different tears of government, corporate bodies, educational/professional institutions and private individual in Nigeria. The company is registered and incorporated by the corporate affairs commission on the 25th of February, 2010.

Our expertise in Nigeria and general supply reflects itself in many ways and our competence is well established and generally reorganized by our clients. We are aided with modern engineering equipment and management personnel whose principal aim is to solve the more complex problems connected with power outage/supply and project execution.

Because of our awareness that solar solutions are increasingly addressing both rural and urban electrification needs across the globe and especially in sub-Sahara Africa, we address the greatest challenge when it comes to power requirements. we ensure customer satisfaction through best business practices, credible skills, support system and responsibility combined with strategic and effective partnership for prompt delivery of customized solutions.

OUR PRODUCTS
JRB SMART INVERTERS

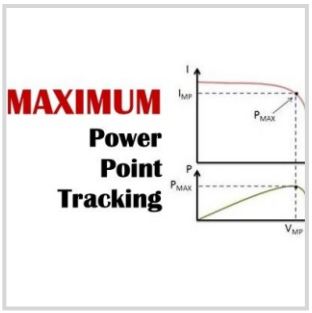
JRB SMART INVERTER PIP-2424 MSP (2.4KW)

PIP-2424MSP

4V Parallel-Ready Solar Inverter

24VDC ONLY

PARALLEL SUPPORT



MPPT

FREE MONITORING

MAIN FEATURES

- 24Vdc battery based solar inverter
- Parallel-ready up to 6 units max!
- Single phase (230VAC)

- High frequency pure sine wave design
- 80A MPPT models available
- Suitable for Off-Grid or with Grid
- Programmable parameters
- Max up to 60A utility charging
- Adjustable charging voltage
- Wide AC input range
- Lightweight, easy to install
- 2X surge capacity max 5s
- FREE monitoring software
- LCD Display + LED indicators
- USB, RS232 communication interface

	2424MSP
ELECTRICAL SPECIFICATIONS	
Max Continuous Power	2400W
Parallel Capability	Max up to 6 units
Input Voltage Range	90~280VAC (Appliance mode), 170~280VAC (UPS mode)
Input/Output Frequency	50Hz/60hz Auto sensing
Output Voltage	230VAC ± 5%
Output Waveform	Pure Sine Wave
Peak Efficiency	91%
Nominal DC Voltage	24V
Max DC Voltage (battery)	30V
Transfer Time	〈10ms (UPS mode), <20ms (Appliance mode)
Charging Mode	3-stage
AC Recharging Current	60A
SOLAR CHARGER	
Algorithm	MPPT
Max PV Input / Output	1000W
Max Charging Current	40A
Max PV Input Voc	100V
MPPT Range	30~80V
Standby Power	2W
ENVIRONMENTAL / MECHANICAL SPECIFICATIONS	
Operating/Storage Temp.	0℃ ~ 50℃ / -15℃~ 60℃
Operating Humidity	10~90%RH Non-Condensing
Dimension	355*272*100mm
Net Weight	8Kg

JRB SMART INVETER PIP3024MK (3KW)

PIP-MK *PF1.0* SERIES

Off-Grid Solar Inverter

MAIN FEATURES

- NEW! Zero Transfer Time
- NEW! Improved Monitoring Features (Removable USB / RS232, RS485, Bluetooth)
- NEW! Removable LCD Control Display (20m)
- Parallel Support up to 9 units!
- Max 3KW continuous output
- High frequency pure sine wave design
- Max PV input 145V
- Suitable for Off-Grid or with Grid backup
- Generator starter dry contact port
- Programmable parameters on LCD
- Max up to 60A utility charging
- Easy to install

REMOVABLE DISPLAY

MOBILE MONITORING VIA BLUETOOTH

ZERO TRANSFER TIME

PARALLEL SUPPORT

PIP-MK SERIES	3024MK
ELECTRICAL SPECIFICATION	
Continuous Output	3KVA/3KW
Parallel Capability	Yes, up to 9 units
Input Power Factor	1
Input Voltage Range	110-280VAC
Input/Output Frequency	50Hz / 60Hz
Output Voltage	230VAC±5%
Output Waveform	Pure Sine Wave
Output Short Circuit	Circuit Breaker
Peak E翮 ciency	>94% (line mode) / >90% (inverter mode)
Nominal DC Voltage	24V
Max DC Input	34V
Transfer Time	0 ms
Equalization Charge	32V
SOLAR + AC CHARGER SPECIFIATIONS	
Charging Algorithm	MPPT
Max Charging Current (PV power)	60A (1.5KW)
Max PV Input Voc	145VDC
MPPT Range	30-115VDC
Max AC Charging Current	60A
Max System Charging	120A
ENVIRONMENTAL / MECHANICAL SPECIFICATIONS	
Certification	CE
Communication Interface	Removable USB, RS232/RS485, Bluetooth, Dry Contact
Operating/Storage Temp.	0°C ~ 50°C / -15°C~ 60°C
Operating Humidity	10~90%RH Non-Condensing
Dimension	525*300*140mm
Net Weight	13Kg

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JRB SMART INVERTER U 3624GK (3.6KW)

220-240V OFF-GRID
SOLAR INVERTER

U-GK

3.6K

MINIMALISTIC

4.3" LCD +
RGB LIGHTS

BATTERY
OPTIONAL[1]

LITHIUM BMS
SUPPORT

BUILT-IN WIFI
TRANSMITTER

PARALLEL
CAPABLE[2]

INTERNAL
DATALOGGER

ANTI-DUST
SHIELD KIT

1. Only applies to single unit mode. Parallel setup will require battery.
2. On U-MS models only. Parallel kits required and sold separately.

JRB SOLAR INVESTMENT LIMITED
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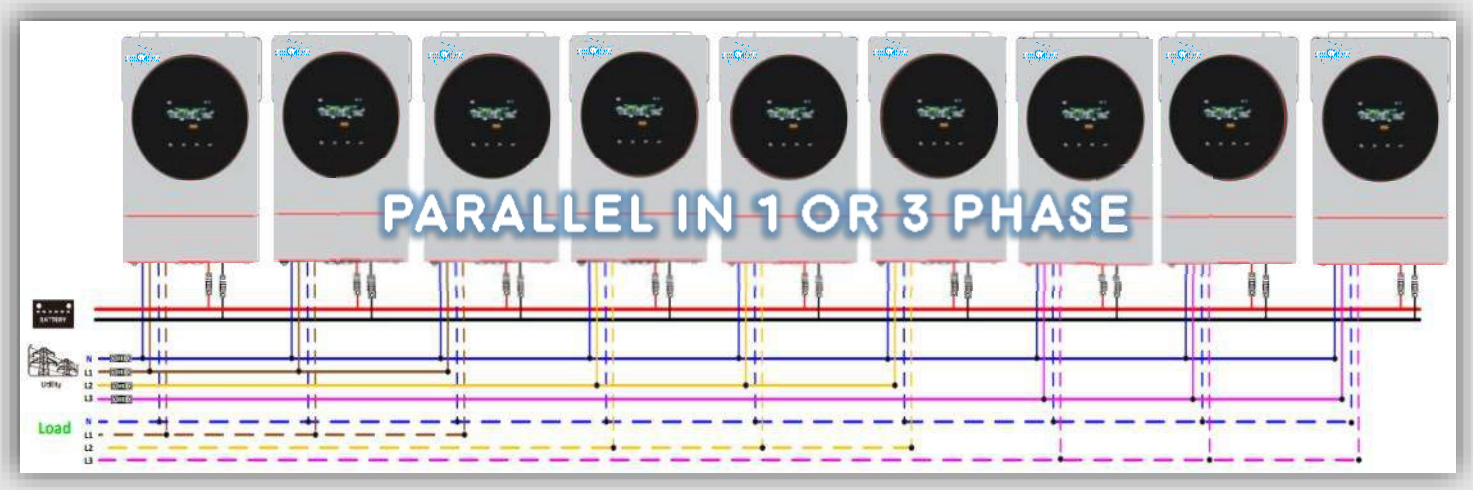
220-240V OFF-GRID
SOLAR INVERTER



U-GK /U-MS SERIES	U 3624GK
ELECTRICAL SPECIFICATION	
Continuous Output	3600W
Parallel Ready	No
Input/Output Frequency	50Hz / 60Hz
Output Voltage	230VAC±5%
Output Waveform	Pure Sine Wave
Transfer Time	10 (UPS) / 20ms (Appliance)
Peak Efficiency	93% (Inverter) / 95% (Line)
Nominal DC Voltage	24V
Max Charging Voltage	31.5V
Max DC Input	33V
Charging Mode	3-stage
Max AC Charging	100A
Max System Charging (Solar+AC)	120A
SOLAR CHARGER SPECIFICATION	
Charging Algorithm	MPPT
Max PV Array	4000W
Max Solar Charging	120A
Max PV Input Voc	500VDC
MPPT Range	150 - 450VDC
PV Input	1
ENVIRONMENTAL / MECHANICAL SPECIFICATIONS	
Certification	CE
Communication Interface	USB, RS232, RS485, WIFI, Dry Contact
Operating/Storage Temp.	-10°C ~ 50°C / -15°C~ 60°C
Operating Humidity	5~95%RH Non-Condensing
Dimension	423*314*120mm
Net Weight	10KG

*Product specifications are subject to change without further notice.

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JRB SMART INVETER PIP5048MGX (5KW)

220=240V Single Phase
OFF-GRID SOLUTION

Max PV Input
450V

PIP-5048MGX

HIGH PV INPUT

Max PV input up to 450V (Voc) allows more efficient PV wiring in series

DETACHABLE LCD DISPLAY

LCD module can be removed from device and installed for convenient access (max distance allowed 15m).

BATTERYLESS

Battery is no longer required and unit can power load directly from solar array **(single unit mode only)**

PARALLEL OPERATION

No more worry about not having enough power. Maximum expansion up to 9 units! **(battery required)**

GENSET STARTER DRY CONTACT

Built-in dry contact to send remote start signal to generator when necessary (inverter-type generators required)

BLUETOOTH MONITORING

Monitoring app available on Android and you can wirelessly monitor inverter data via built-in Bluetooth technology

BMS COMMUNICATION

BMS port supports several Lithium BMS systems (Pylontech, Weco, Soltaro, Bak)

WATCHPOWER

*FREE monitoring software available on PC, Mac, Linux 32bit / 64bit

WIFI BOX

Uploads inverter data to free Cloud service, accessible via browser on any device

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PIP-MGX Series	5048MGX
ELECTRICAL SPECIFICATIONS	
Max Continuous Power	5000W
Parallel Capability	Yes, max up to 9 units
Nominal Input / Output Voltage	230 VAC
Input / Output Frequency	50Hz/60hz Auto sensing
Output Voltage Regulation	230VAC ± 5%
Output Waveform	Pure Sine Wave
Peak Efficiency (line mode)	90%
Nominal Battery Voltage	48V
Maximum Battery Charging Voltage	64V
Transfer Time	10ms (UPS) / 20ms (Appliance)
Charging Mode	3-stage
Max AC Charging Current	80A
Batteryless Support	Yes (single unit mode only)
Power Saving Mode	Yes
SOLAR CHARGER	
Algorithm	MPPT
Max PV Input / Output	5000W
Max Charging Current	**80A**
Max PV Input Voc	450V
MPPT Range	120-430V
Max PV Input Current	18A
ENVIRONMENTAL / MECHANICAL SPECIFICATIONS	
Communication Port	RS232, USB, BMS
Operating/Storage Temp.	0°C ~ 50°C / -15°C~ 60°C
Operating Humidity	5% to 95% Relative Humidity (Non-condensing)
Dimension	468*295*140mm
Net Weight	12Kg

JRB SOLAR INVESTMENT LIMITED RC: 872046

JRB SMART INVERTER PIP-5048 MKX (5KW)

220-240V OFF-GRID
SOLAR INVERTER

PIP-5048MKX

MAX
6KW
PV

0ms
Transfer Time

500V
High PV Input Design

MAX 9
Parallel Ready to 9*

WIFI
Monitoring on smartphones**

*Parallel kits required, sold separately.
**free WatchPower APP can be downloaded on Google Play or Apple Store.

JRB SOLAR INVESTMENT LIMITED
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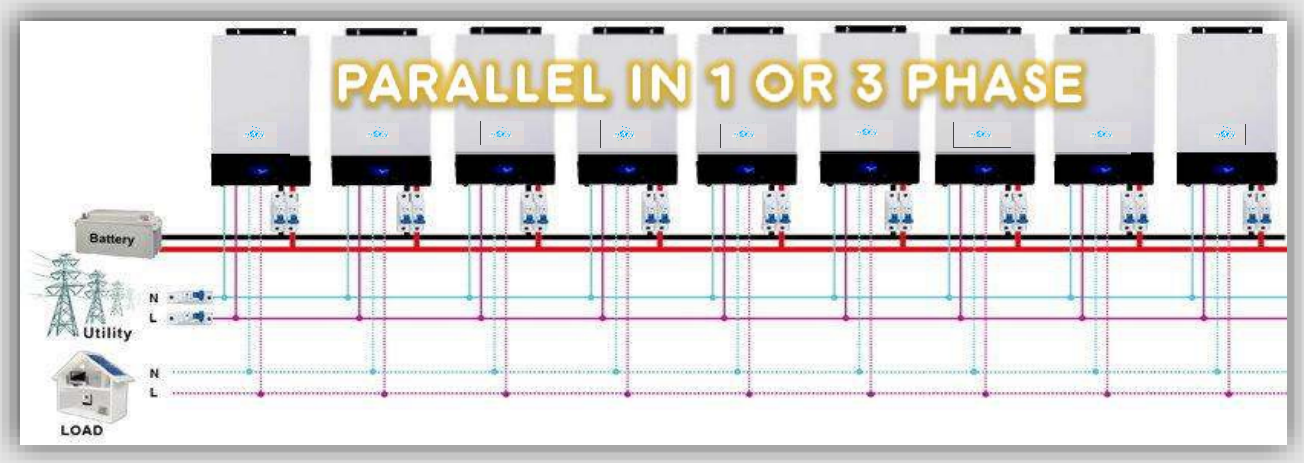
220-240V OFF-GRID
SOLAR INVERTER



PIP-MKX SERIES	5048MKX
ELECTRICAL DATA	
Continuous Output	5000W
Parallel Capability	Yes, up to 9 units
Input Power Factor	1
Input Voltage Range	110-280VAC
Input/Output Frequency	50Hz / 60Hz
Output Voltage	230VAC±5%
Output Waveform	Pure Sine Wave
Output Short Circuit	Circuit Breaker
Peak Efficiency	94% (line mode) / 92% (inverter mode)
Nominal DC Voltage	48V
Max DC Input	64V
Max Charging Voltage	62V
Transfer Time	**0ms**
SOLAR + AC CHARGER DATA	
Charging Algorithm	MPPT
Max PV Array Power	6000W
Max PV Input Voc	500VDC
MPPT Range	120-450VDC
Max Solar Charging	100A
Max AC Charging	100A
Max System Charging	100A
ENVIRONMENTAL / MECHANICAL DATA	
Certification	CE
Communication Interface	Removable USB, RS232/RS485, WIFI, Dry Contact
Operating/Storage Temp.	-10°C ~ 50°C / -15°C~ 60°C
Operating Humidity	5~95%RH Non-Condensing
Dimension	500*300*140mm
Net Weight	15KG

*Product specifications are subject to change without further notice.

JRB SMART INVETER MPI 10K (10KW)

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NEW Now supports PylonTech LITHIUM Batteries!

MPI 10K

MPI HYBRID SOLAR INVERTER SERIES

GRID-TIED + BATTERY BACKUP

MPI Hybrid Series

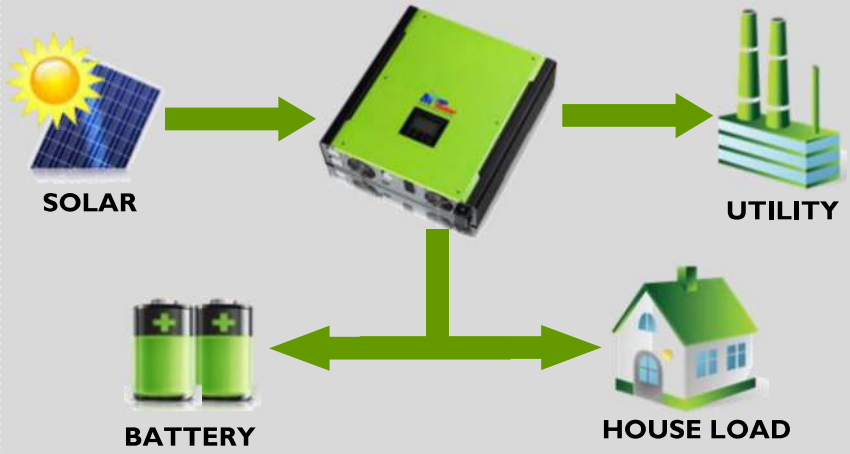
These hybrid solar inverters combine the features of both grid-tied and off grid operations, and allow users to operate in 3 main modes:

- Grid-Tied (Feedback)
- Off Grid
- Grid-Tied with Battery Backup

This hybrid systems offer an excellent all-in-one solution of off-grid inverter + grid-tie inverter + battery charger. Able to accept PV input voltage up to 900V with MPPT functionality, the Hybrid family can support up to max PV array sizes of up to 14.85KW. This enables users great flexibility in running load as well as feeding extra solar power back to grid. when grid fails, these system will switch to battery source like an off - grid inverter and keep load backed up. The bundled monitoring software, SolarPower, offers powerful features which allow user total control and access to a wide variety of operations to meet all types of demand. Hybrid models are fully compliant to and certified in VDE (Germany) and CE standards (As4777 certified)

**Optional accessories such as MODBUS card, MODBUS server, and Energy Meter are available upon request

GRID-TIE + BATTERY BACKUP

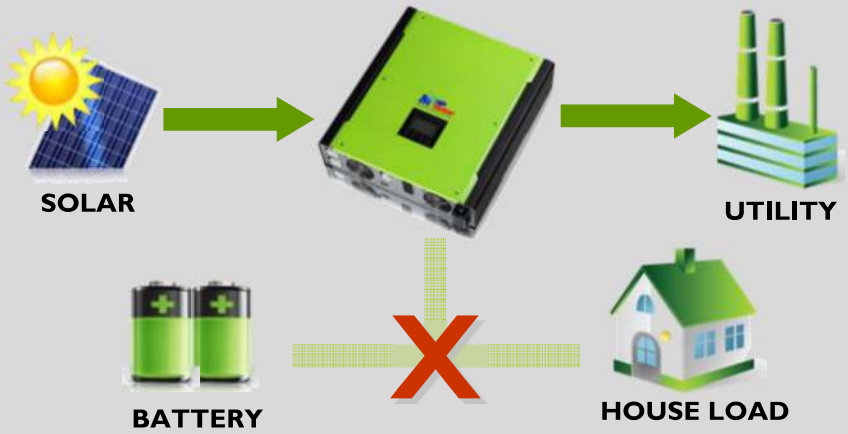


In this operation mode, users can program unit to

- Feedback PV power to utility
- Provide PV power to load
- Charge battery by PV

Different priority settings are available in this mode. Charging source may be selected from PV and grid as default, PV only, or none (when charging not intended). All programming conditions can be done in the CD-bundled software.

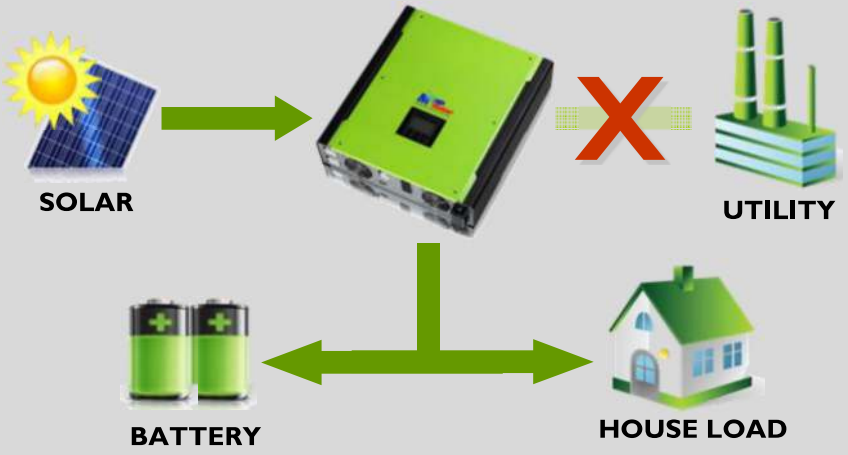
GRID-TIE ONLY



In this operation mode, the inverter will only behave like a pure grid-tie inverter where it only feeds back electricity to grid from PV source.

There is no priority setting available when this mode is selected.

OFF-GRID ONLY



In this operation mode, grid feedback to utility is disabled. Users can only program unit to:

- Provide PV power to load
- Charge battery by PV

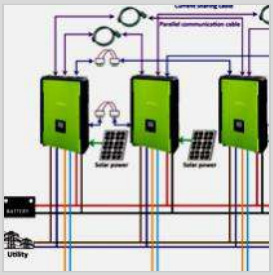
Different priority settings are also available, and grid relay may be connected to inverter to provide support when load > 3kw. Charging source may be selected from PV and grid, PV only, or none (charging not intended). All programming can be done in the CD-bundled software.

*Product specifications are subject to change without prior notice.

New Features

These new features are now available on selective Hybrid models:

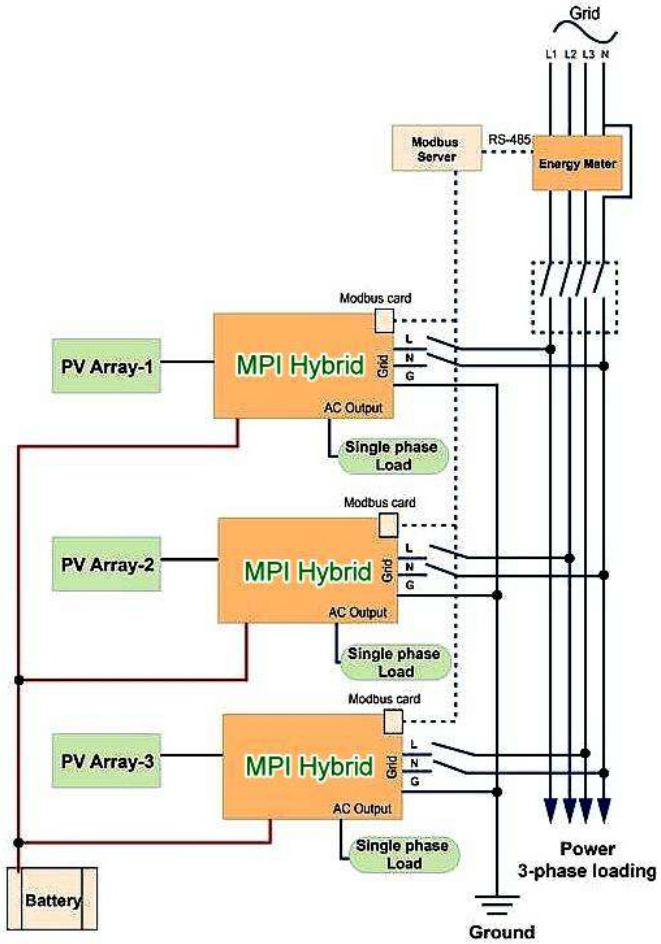
HIGH CHARGING
Max battery charging current now up to 200A! (10K)



STACKABLE
Supports parallel operation up to 6 units max! (10K only)

Energy Meter Application Diagram: Three Phase Setup

*MODBUS Card, Energy Meter, And Web-box Are Optional Accessories.



*Product specifications are subject to change without prior notice.

JRB SOLAR INVESTMENT LIMITED RC: 872046

Specifications

MPI HYBRID SERIES	10K
MAIN SPECS	
Continuous Output	10,000W
Parallel-Ready	Yes, up to 6 units
PV INPUT RATING (GRID-TIED)	
Max PV Input Power	14,850W
Max PV Input Voltage	900Vdc
Start-up / Initial Feeding Voltage	320 / 350 Vdc
PV MPPT Range	350 - 850 Vdc
Max PV Input Current	18A x 2
MPPT Tracker	2
Max DC/AC Conversion Efficiency	>96%
AC INPUT SPECS	
Start-up / Auto Restart Voltage	120 - 140Vac / 180Vac (per phase)
Input Voltage Range	170 - 280Vac (per phase)
Nominal Frequency	50 / 60 Hz
Max AC Input Current	25A
AC OUTPUT SPECS	
Nominal AC Output Voltage	**400Vac, 3-Phase**
Output Voltage Range	184 - 265Vac (P-N) / 318 - 460Vac (P-P)
Output Frequency (GRID-TIE)	47.5 - 51.5Hz / 59.3 - 60.5 Hz
Output Frequency (OFF-GRID)	50 / 60Hz, auto-sensing
Output Waveform	Pure Sine Wave
Max Output Power (via grid relay)	16,000W
Max Output Power (battery)	10,000W
Max Efficiency	>91%
BATTERY CHARGER	
Nominal DC Voltage	48Vdc
Max Charging Current	200A
ENVIRONMENTAL / COMMUNICATION	
Communication Port	RS232 / USB, Intelligent Slot (card)
Certifications	EN62109-1, EN62109-2, EN62040-1 / CE, VDE4105, VDE0126-1-1, AS4777/3100 (10K only)
Operating Temp.	-10 - 50°C
Operating Humidity	0 - 90% RH (No condensing)
Dimension	622*500*167mm
Net Weight	45Kg

*Product specifications are subject to change without prior notice.

JRB SMART INVERTER MPI 12KW WP (12KW)

380-400V 3P HYBRID SOLAR INVERTER

MPI 12K WP

MPI WP HYBRID

IP65 GRID-TIE + BATTERY BACKUP 3-PHASE SOLAR INVERTER

MPI WP Hybrid Series

Newly developed from the original MPI Hybrid inverters with enhanced weather protection on IP65 rated enclosure, the new WP hybrid model allows application for both indoor and outdoor environment* and also offers added protection against PCB corrosion and increases product life. In addition to the 3 main modes of operations (Grid-Tied, Off-Grid, and Grid-Tied with backup), other new features include:

- Built-in WIFI transmitter (for monitoring on smartphones)
- BMS support to Pylontech / Weco / Soltario battery systems
- Parallel ready up to 6 units
- Large, touchable LCD function keys

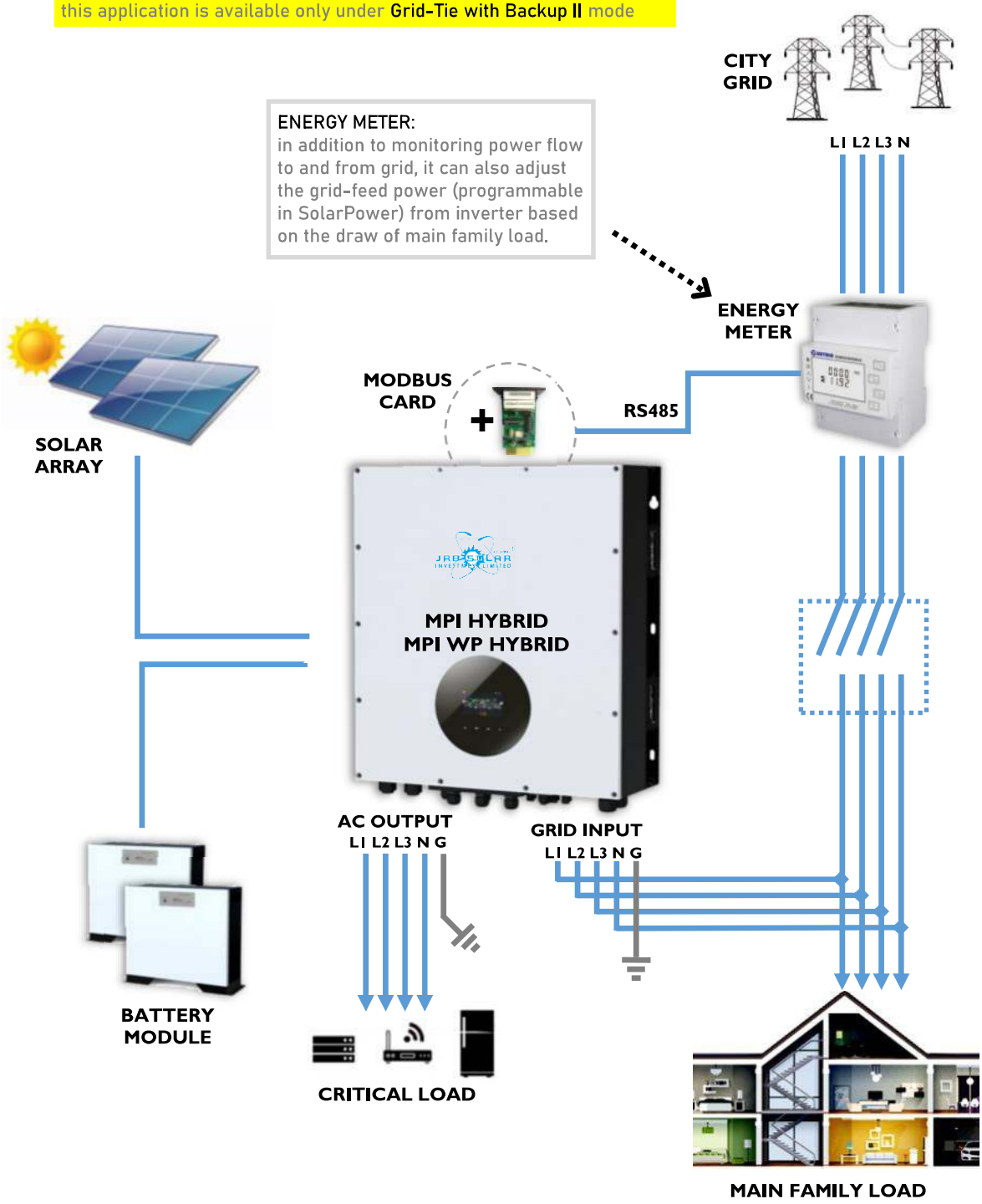
Communication ports on the MPI WP hybrids include: RS232 and USB port (direct connection to PC), dry contact (to use with compatible generators), intelligent slot (for SNMP and MODBUS cards**), and BMS port (for connecting to compatible Lithium BMS systems).

*certain restrictions apply: do not install units on sites where there is direct exposure to sunlight, rain, snow, >95% humidity, near antenna or at altitude >2km above sea level

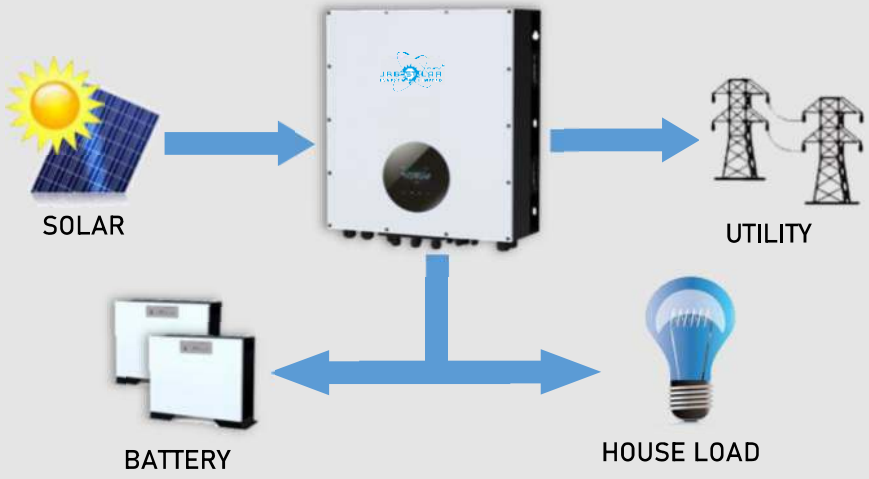
**optional accessories sold separately. MODBUS card is for use with Energy Meter (also an optional accessory.)

MODBUS / Energy Meter Application

this application is available only under Grid-Tie with Backup II mode



GRID-TIE + BATTERY BACKUP

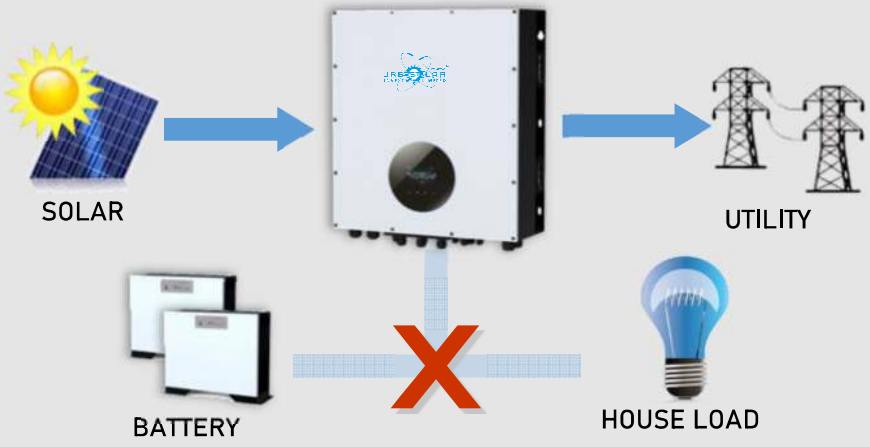


In this operation mode, users can program unit to

- Feedback PV power to utility
- Provide PV power to load
- Charge battery by PV

Different priority settings are available in this mode. Charging source may be selected from PV and grid as default, PV only, or none (when charging not intended). All programming parameters can be set in SolarPower, the bundled monitoring software.

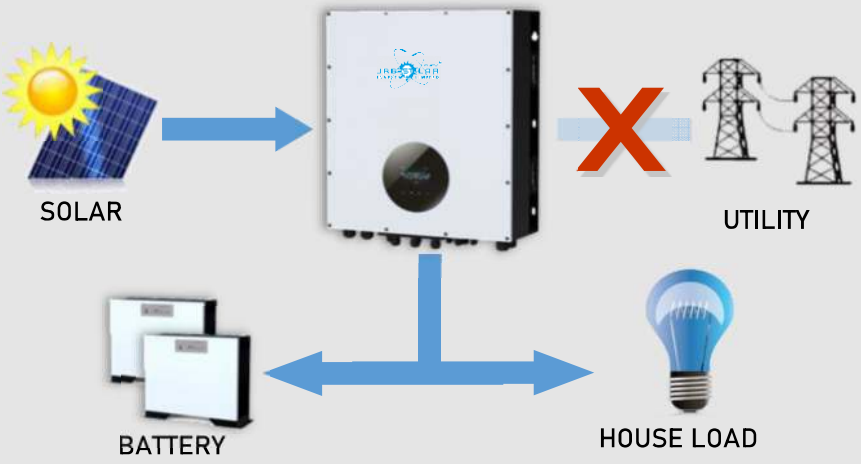
GRID-TIE ONLY



In this operation mode, the inverter will only behave like a pure grid-tie inverter where it feeds back electricity to grid from PV array.

There is no priority setting available when this mode is selected. No battery is used here.

OFF-GRID ONLY



In this operation mode, grid feedback to utility is disabled. Users can only program unit to:

- Provide PV power to load
- Charge battery by PV

Different priority settings are also available, and GRID RELAY may be enabled to inverter to provide extra power beyond maximum rating. Charging sources may be selected from PV and grid, PV only, or none (charging not intended).

MPI HYBRID WP SERIES	MPI 12K WP
Rated Power	
Continuous Output	12,000W
Parallel-Ready	Yes, up to 6 units
PV Input Rating (GRID-TIE)	
Max PV Input Power	16,000W
Max PV Input Voltage	1,000V
Start-up / Initial Feeding Voltage	320 / 350 Vdc
PV MPPT Range	350 - 950 Vdc
Max PV Input Current	26A each
MPPT Tracker	2
Max DC/AC Conversion Efficiency	96%
AC Input	
Start-up / Auto Restart Voltage	120 - 140Vac / 180Vac
Input Voltage Range	170 - 290Vac
Nominal Frequency	50 / 60 Hz
Max AC Input Current	40A
AC Output	
Nominal AC Output Voltage	3-Phase 400Vac (P-P)
Output Voltage Range	184 - 265Vac per phase
Output Frequency (GRID-TIE)	47.5 - 51.5Hz / 59.3 - 60.5 Hz
Output Frequency (OFF-GRID)	50 / 60Hz, auto-sensing
Output Waveform	Pure Sine Wave
Max Output Power (grid relay enabled)*	24KW
Max Output Power (battery mode)	12,000W
Max Efficiency	91%
Battery Charger	
DC Voltage Range	40 - 62Vdc
Nominal DC Voltage	48Vdc
Max Charging Current	250A
ENVIRONMENTAL / MECHANICAL SPECIFICATIONS	
Ingress Protection Rating	IP65
Communication Port	RS232 / USB / BMS / WIFI / Dry Contact / Intelligent Slot
Certifications	EN62109-1, EN62109-2, EN62040-1 / CE VDE4105, VDE0126-1-1
Operating Temp.	-25 to 60°C (power derating starts >45°C)
Operating Humidity	0 - 100% RH (No condensing)
Operating Altitude	max 1000m (power derating 1% per 100m beyond 1000m)
Dimension	750 x 660 x 255mm
Net Weight	73kg

*applicable to Off-Grid modes I and II only

Product specifications are subject to change without further notice.

JRB SMART INVERTER MPI 15KW WP (15KW)

380-400V 3P HYBRID SOLAR INVERTER

MPI 15K WP

MPI WP HYBRID

IP65 GRID-TIE + BATTERY BACKUP 3-PHASE SOLAR INVERTER

MPI WP Hybrid Series

Newly developed from the original MPI Hybrid inverters with enhanced weather protection on IP65 rated enclosure, the new WP hybrid model allows application for both indoor and outdoor environment* and also offers added protection against PCB corrosion and increases product life. In addition to the 3 main modes of operations (Grid-Tied, Off-Grid, and Grid-Tied with backup), other new features include:

- Built-in WIFI transmitter (for monitoring on smartphones)
- BMS support to Pylontech / Weco / Soltario battery systems
- Parallel ready up to 6 units
- Large, touchable LCD function keys

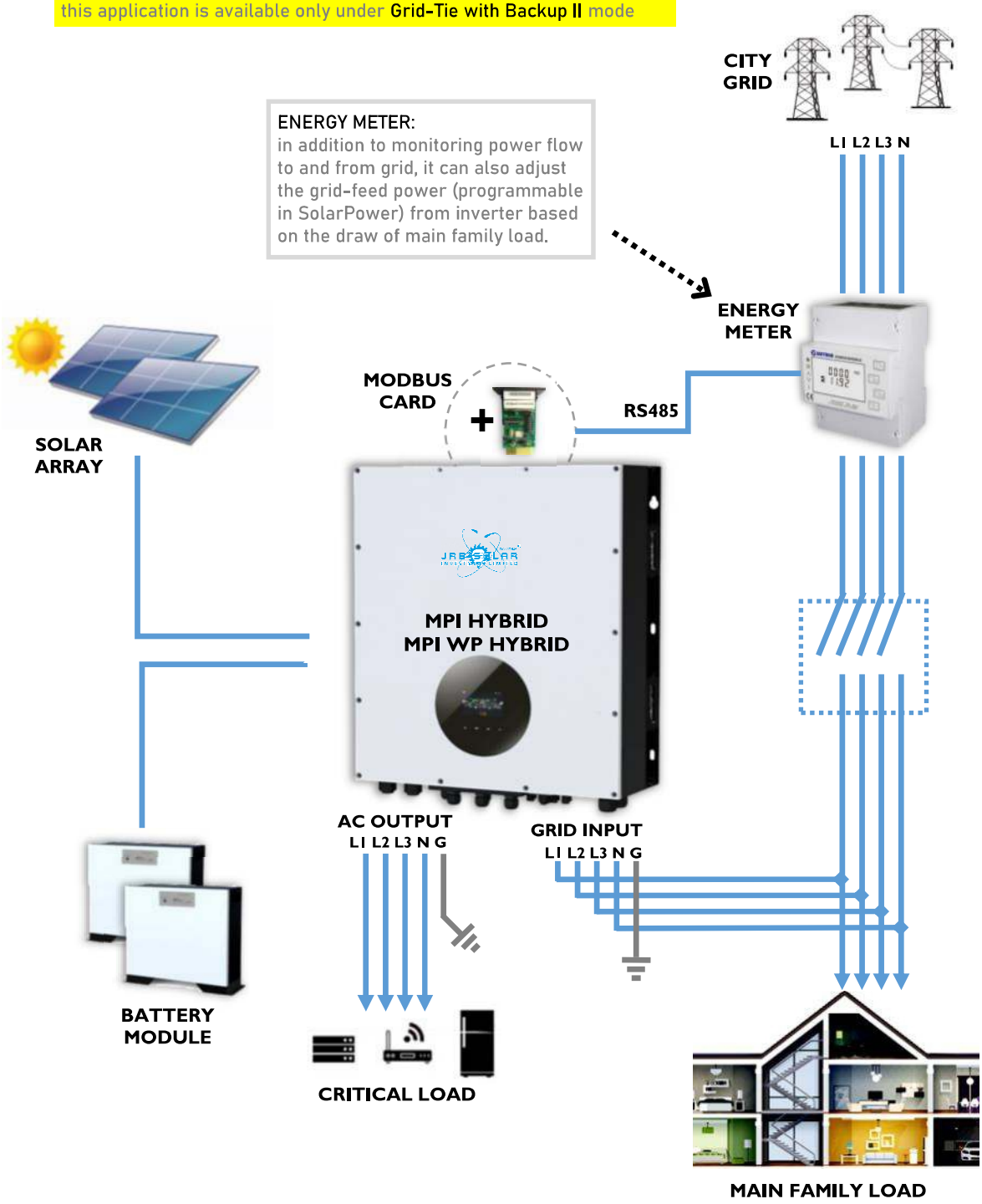
Communication ports on the MPI WP hybrids include: RS232 and USB port (direct connection to PC), dry contact (to use with compatible generators), intelligent slot (for SNMP and MODBUS cards**), and BMS port (for connecting to compatible Lithium BMS systems).

*certain restrictions apply: do not install units on sites where there is direct exposure to sunlight, rain, snow, >95% humidity, near antenna or at altitude >2km above sea level

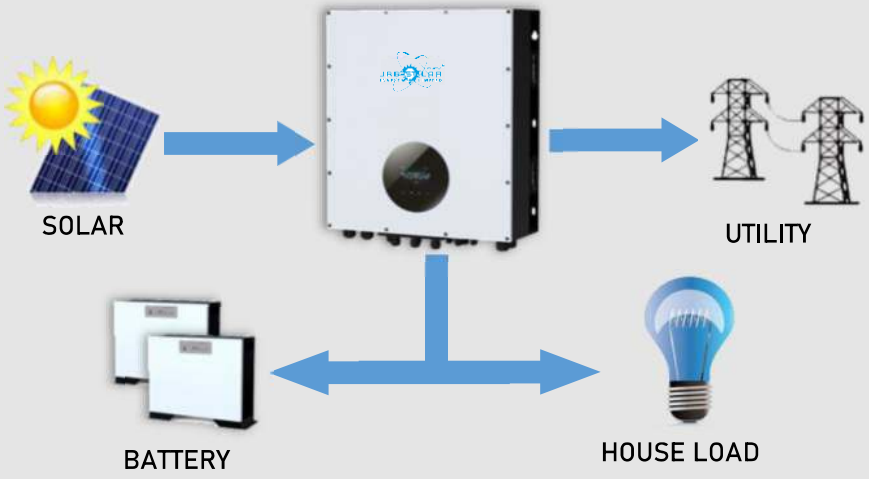
**optional accessories sold separately. MODBUS card is for use with Energy Meter (also an optional accessory.)

MODBUS / Energy Meter Application

this application is available only under Grid-Tie with Backup II mode



GRID-TIE + BATTERY BACKUP

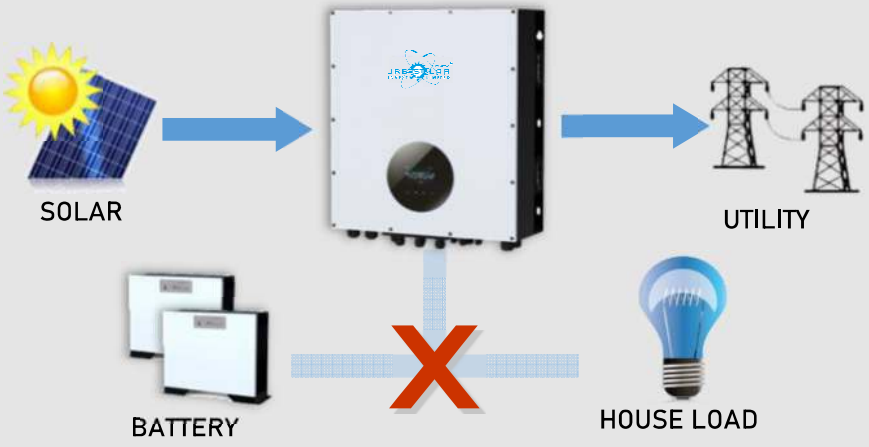


In this operation mode, users can program unit to

- Feedback PV power to utility
- Provide PV power to load
- Charge battery by PV

Different priority settings are available in this mode. Charging source may be selected from PV and grid as default, PV only, or none (when charging not intended). All programming parameters can be set in SolarPower, the bundled monitoring software.

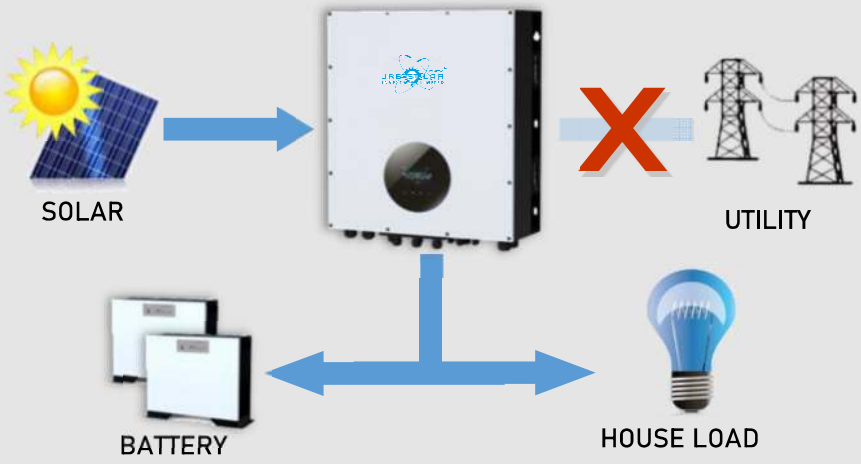
GRID-TIE ONLY



In this operation mode, the inverter will only behave like a pure grid-tie inverter where it feeds back electricity to grid from PV array.

There is no priority setting available when this mode is selected. No battery is used here.

OFF-GRID ONLY



In this operation mode, grid feedback to utility is disabled. Users can only program unit to:

- Provide PV power to load
- Charge battery by PV

Different priority settings are also available, and GRID RELAY may be enabled to inverter to provide extra power beyond maximum rating. Charging sources may be selected from PV and grid, PV only, or none (charging not intended).

MPI HYBRID WP SERIES	MPI 15K WP
Rated Power	
Continuous Output	15,000W
Parallel-Ready	Yes, up to 6 units
PV Input Rating (GRID-TIE)	
Max PV Input Power	16,000W
Max PV Input Voltage	1,000V
Start-up / Initial Feeding Voltage	320 / 350 Vdc
PV MPPT Range	350 - 950 Vdc
Max PV Input Current	26A each
MPPT Tracker	2
Max DC/AC Conversion Efficiency	96%
AC Input	
Start-up / Auto Restart Voltage	120 - 140Vac / 180Vac
Input Voltage Range	170 - 290Vac
Nominal Frequency	50 / 60 Hz
Max AC Input Current	40A
AC Output	
Nominal AC Output Voltage	3-Phase 400Vac (P-P)
Output Voltage Range	184 - 265Vac per phase
Output Frequency (GRID-TIE)	47.5 - 51.5Hz / 59.3 - 60.5 Hz
Output Frequency (OFF-GRID)	50 / 60Hz, auto-sensing
Output Waveform	Pure Sine Wave
Max Output Power (grid relay enabled)*	24KW
Max Output Power (battery mode)	15,000W
Max Efficiency	91%
Battery Charger	
DC Voltage Range	40 - 62Vdc
Nominal DC Voltage	48Vdc
Max Charging Current	300A
ENVIRONMENTAL / MECHANICAL SPECIFICATIONS	
Ingress Protection Rating	IP65
Communication Port	RS232 / USB / BMS / WIFI / Dry Contact / Intelligent Slot
Certifications	EN62109-1, EN62109-2, EN62040-1 / CE VDE4105, VDE0126-1-1
Operating Temp.	-25 to 60°C (power derating starts >45°C)
Operating Humidity	0 - 100% RH (No condensing)
Operating Altitude	max 1000m (power derating 1% per 100m beyond 1000m)
Dimension	750 x 660 x 255mm
Net Weight	73kg

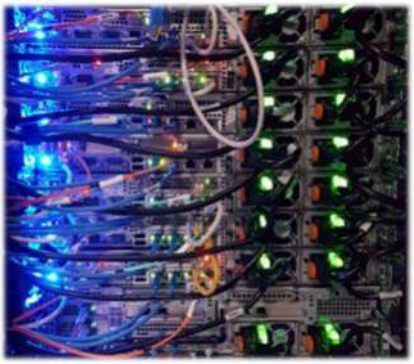
*applicable to Off-Grid modes I and II only

Product specifications are subject to change without further notice.

JRB SMART INVETER HV V3 30K (30KW)

HYBRID 3-PHASE
SOLAR INVERTER

HV V3 30KW



WARNING: must remain in UPRIGHT position at all times.

- ☑ 3-Phase 400Vac Output
- ☑ Industrial Grade Power
- ☑ High 384Vdc System
- ☑ 950V Max PV Input
- ☑ Max 45KW PV Support

*Specification may change without prior notice.

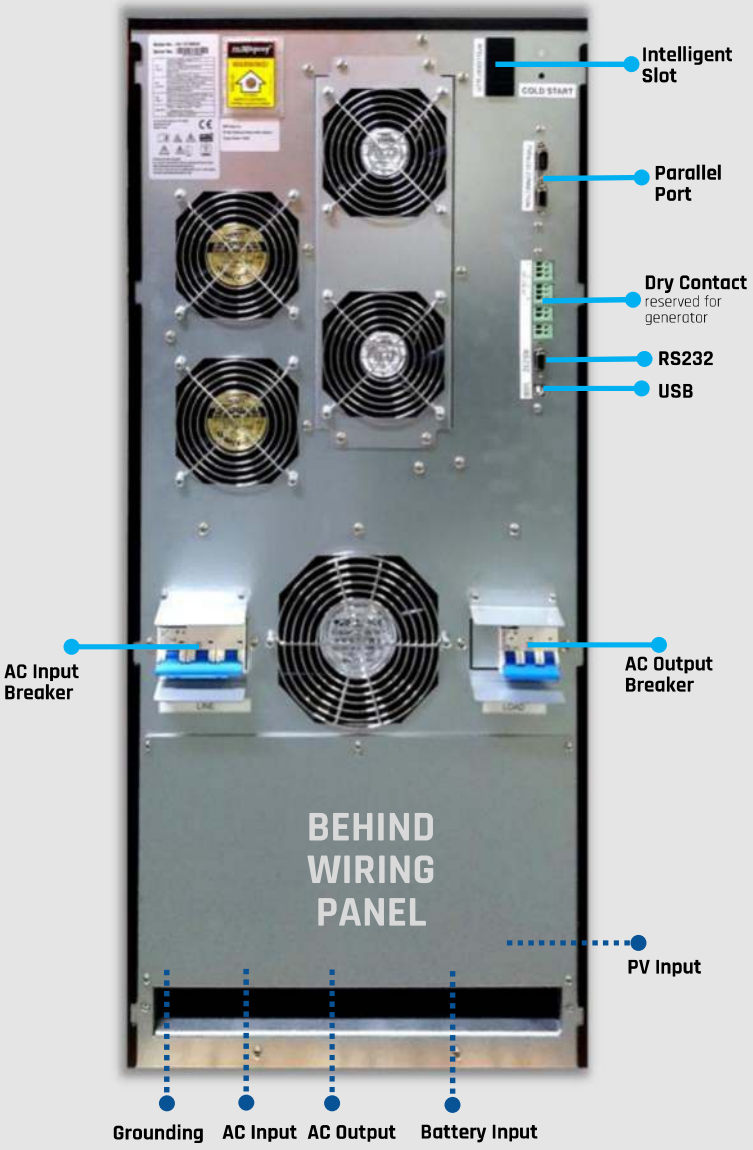
RC: 872046
JRB SOLAR INVESTMENT LIMITED

HYBRID 3-PHASE
SOLAR INVERTER

GRID-TIE WITH BACKUP

GRID-TIE ONLY

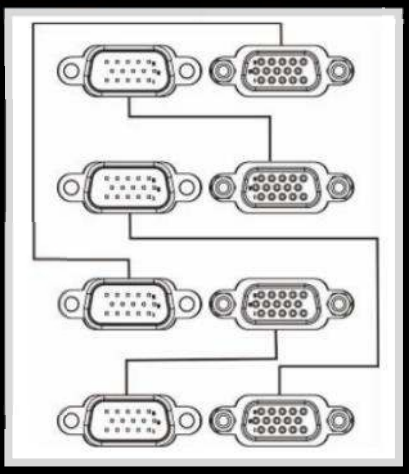
OFF-GRID ONLY

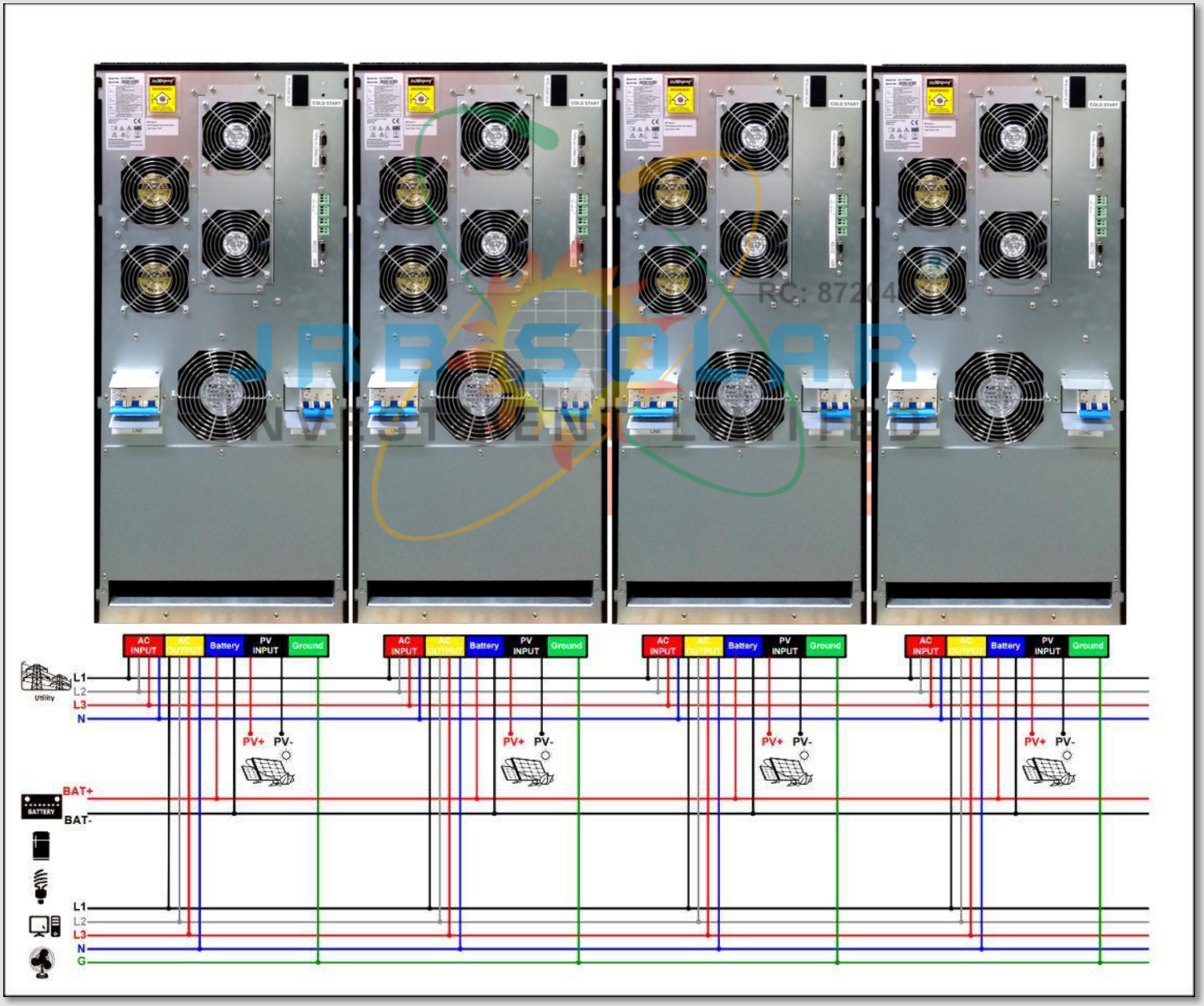


HYBRID 3-PHASE
SOLAR INVERTER

PARALLEL UP TO 4 UNITS MAX (120KW)

COM PORT CONNECTION:





HYBRID 3-PHASE SOLAR INVERTER

HV V3 3-Phase Series	HV V3 30KW
Rated Power	
Continuous Output	30,000W
Parallel-Ready	Yes, up to 4 units
PV Input Rating (GRID-TIE)	
Max PV Input Power	45,000W
Max PV Input Voltage	950V
Start-up / Initial Feeding Voltage	500 / 550 VDC
PV MPPT Range	460 - 900 VDC
Max PV Input Current	72A
MPPT Tracker	1
AC Input	
Start-up / Auto Restart Voltage	150 - 170 / 180VAC, per phase
Input Voltage Range	170 - 280VAC per phase
Max AC Input Power	30,000W
Nominal Frequency	50 / 60 Hz
Max AC Input Current	43.5A per phase
AC Output	
Nominal AC Output Voltage	230VAC (P-N) / 400VAC (P-P)
Output Voltage Range	195.5 - 253Vac per phase
Output Frequency (GRID-TIE)	49 - 51Hz / 59.3 - 60.5 Hz
Output Frequency (OFF-GRID)	50 / 60Hz, auto-sensing
Output Waveform	Pure Sine Wave
Max Output Power (battery mode)	30,000W
Max DC/AC Conversion Efficiency	91%
Battery Charger	
DC Working Range	320 - 512VDC
DC Charging Range	384-480VDC
Nominal DC Voltage	384VDC
Max Charging Current	80A
Environmental / Mechanical Specification	
Ingress Protection Rating	IP20
Communication Port	RS232, USB
Certifications	CE
Operating Temp.	-10 to 55°C (power derating starts >50°C)
Operating Humidity	0 - 900% RH (No condensing)
Operating Altitude	max 2000m (power derating 1% per 100m beyond 1000m)
Dimension	1021 x 715 x 430mm
Net Weight	221KG

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

JRB SOLAR INVESTMENT LIMITED RC: 872046

OUR PRODUCT

JRB CHARGE CONTROLLER

(PWM & MPPT)

JRB MPPT CHARGE CONTROLLER PCM60X

MPPT CONTROLLERS

PCM60X

ELECTRICAL SPECIFICATIONS			
Max PV Input Voltage		**145VDC (Open Circuit)**	
System Voltage	12V	24V	48V
MPPT Range	15 ~ 115VDC	30 ~ 115VDC	60 ~ 115VDC
Max PV Input Power	800W	1600W	3200W
Max Input Current		50A	
Recommended Battery Type		Flooded, GEL, or AGM Lead Acid	
Max Charging Current		**60A**	
Charging Schemes		3-step, Bulk, Absorption, Float	
Flooded Absorb/Float	14.6V, 13.5V	29.2V, 27V	58.4V, 54V
AGM, Gel Absorb/Float	14.1V, 13.5V	28.2V, 27V	56.4V, 54V
Max Equalization Charge	15.5V	31V	62V
Battery Temp. Compensation		-5.0mV/℃/cell (25℃ reference)	
BTC range		25—50℃	
Protections		Overinput current, high temperature disconnect/reconnect, high PV & high/low battery voltage disconnect/reconnect	
LED Indicator		3, Power ON/Charging, Fault/Warning, Wiring Fault	
GENERAL SPECIFICATIONS			
Certification / EMC		CE	
Ambient / Storage Temp.		0℃ —50℃ / -30℃ —70℃	
Enclosure Type		Indoor , IP31	
Working Humidity		0-90%RH Max Non-Condensing	
Dimension		315*165*128mm	
Weight		4.5kg	

KEY FEATURES

- Maximum Power Point Tracking (MPPT)
- Max 60amp output
- Compatible with 12, 24 or 48V systems.
- 3-stage charging scheme
- Max equalization charge up to 62V
- Supports programmable charging voltages
- Built-in COM port for bundled monitoring software (MPPTracker®)
- **Support wide range of lead-acid batteries including flooded, AGM, and gel batteries.**
- **Max PV array support up to 3.2kw (for 48V only).**
- **Maximum efficiency up to 98%**
- **System protections include: over input current or power, high temperature protection, battery HVD/HVR/LVD/LVR**
- **Built-in BVS (battery voltage sensing)**

Optional accessories:
- **BTS wire**
- **SNMP web box**

can be ordered separately

Model	**VS4048N**
Voltage:	**12/24/48V**
Current	**40A**

Model	**VS5048N**
Voltage:	**12/24/48V**
Current	**50A**

Model	**VS3048N**
Voltage:	**12/24/48V**
Current	**30A**

Model	**LS1024EPD**
Voltage:	**12/24V**
Current	**10A**

Model	**LS2024EPD**
Voltage:	**12/24V**
Current	**20A**

SOLAR STREET LIGHT PROFESSIONAL MANUFACTURER

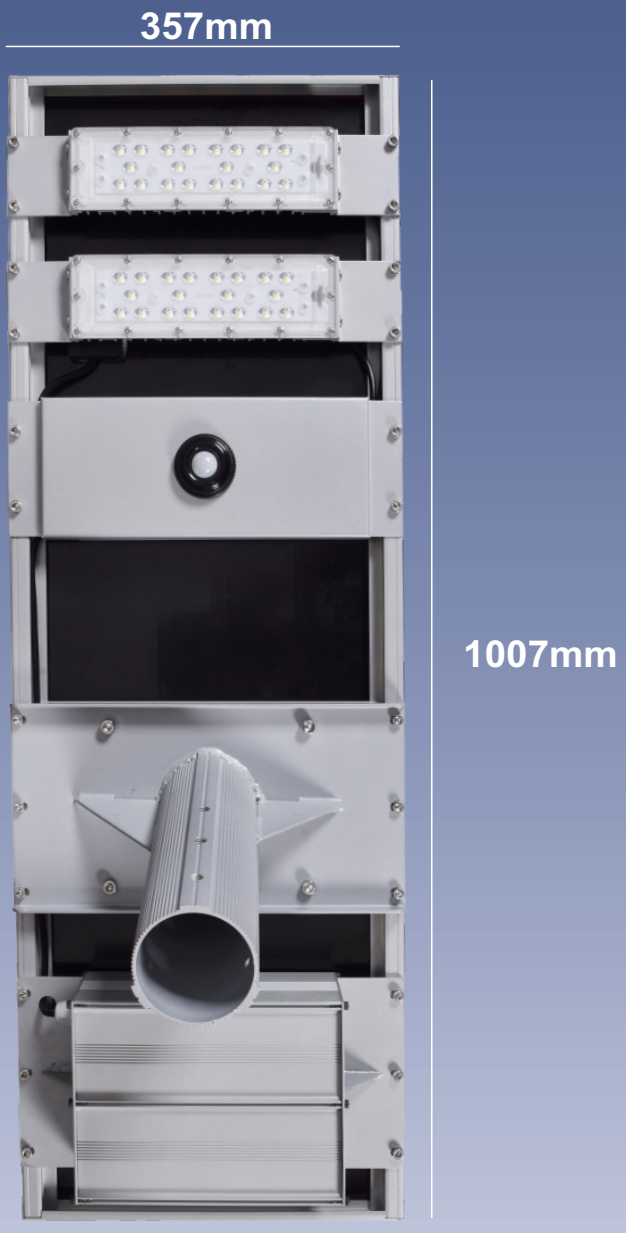
JRB INTEGRATED SOLAR LIGHT (40W) (JRB-ES40)

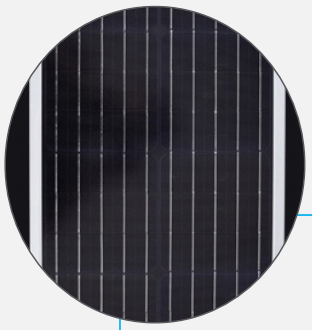
EXCELLENT QUALITY LIGHTING NIGERIA

SOLAR ENERGY

LIGHT SOURCE: 40W / SOLAR PANEL: 60W

LUMEN: 220LM/WATT





Solar Panel

High-efficiency monocrystalline silicon solar panel.

Parameter

Light source	40W 5050LED
Working hours	10-12 hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30℃～+70℃
Color temperature	6500K
Product size	1007*357*304mm
Package size	1080*430*255mm
Net weight	21.6kg
Gross weight	24.82kg

LED Source

LED Energy-saving lampbeads
are more practical.

Sensor

It automatically senses the light
in the dark,which saves more power.

Battery

Using lithium iron phosphate A battery,epoxy resin insulation,high temperature and heat resistance, suitable for high temperature areas,stable safety performance.

Housing

Integrated die-casting,waterproof and anti-corrosion.

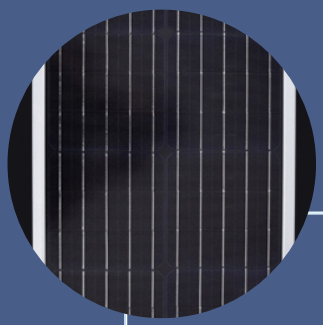
JRB INTEGRATED SOLAR LIGHT (60W) (JRB-ES60)

EXCELLENT QUALITY LIGHTING NIGERIA

SOLAR ENERGY

LIGHT SOURCE: 60W / SOLAR PANEL: 80W

LUMEN: 220LM/WATT



Solar Panel

High-efficiency monocrystalline silicon solar panel.

Parameter

Light source	60W 5050LED
Working hours	10-12 hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30℃～+70℃
Color temperature	6500K
Product size	1477*357*304mm
Package size	1550*430*255mm
Net weight	29.2kg
Gross weight	33.41kg

LED Source

LED Energy-saving lampbeads
are more practical.

Sensor

It automatically senses the light
in the dark,which saves more power.

Battery

Using lithium ironphosphate A battery,epoxy resin insulation,high temperature and heat resistance, suitable for high temperature areas,stable safety performance.

Housing

Integrated die-casting,waterproof and anti-corrosion.

JRB INTEGRATED SOLAR LIGHT (80W) (JRB-ES80)

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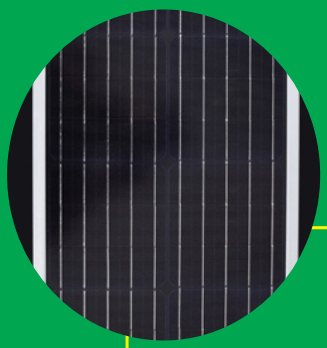
EXCELLENT QUALITY LIGHTING NIGERIA

SOLAR ENERGY

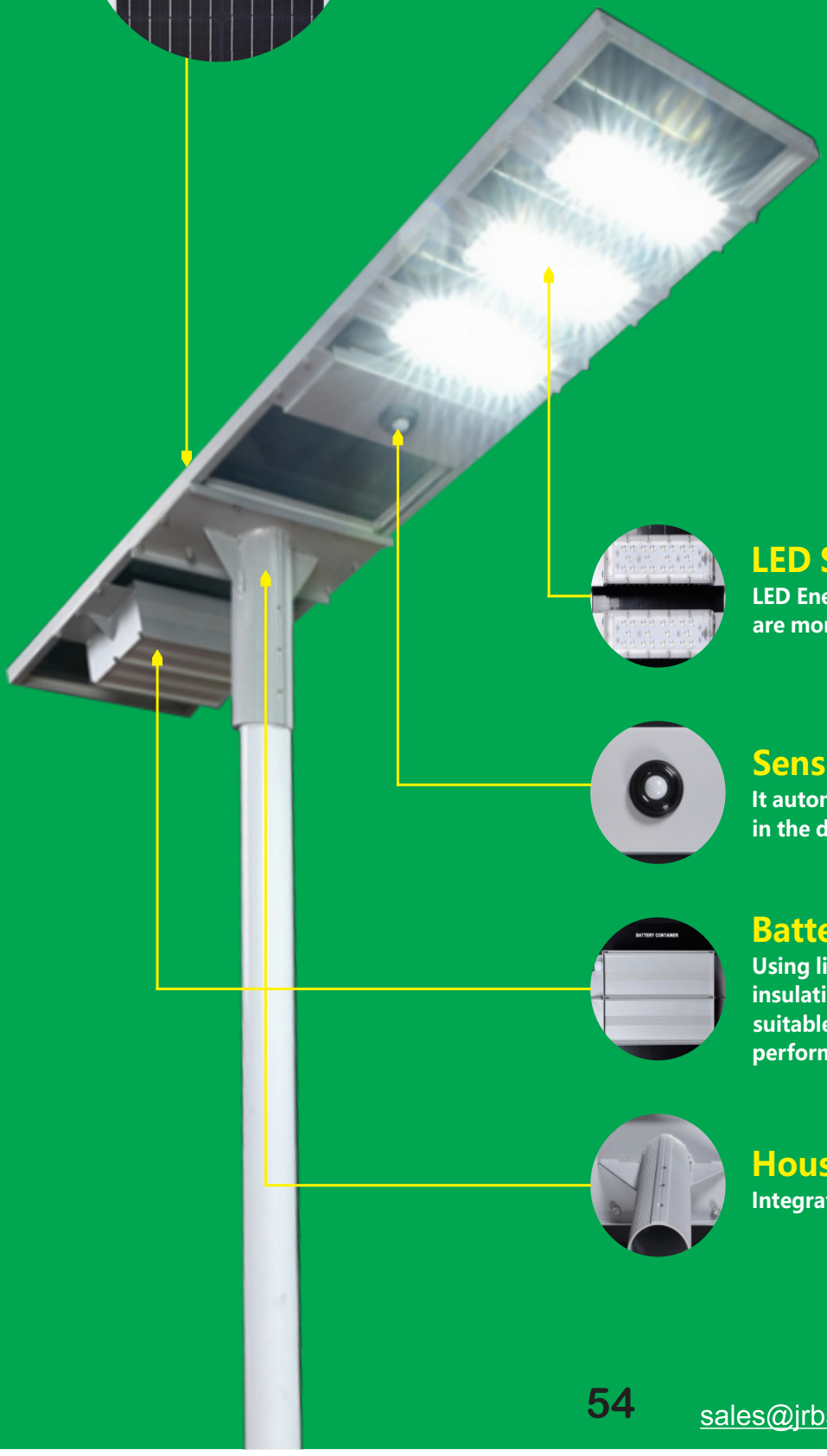
LIGHT SOURCE: 80W / SOLAR PANEL: 90W

LUMEN: 220LM/WATT



Solar Panel

High-efficiency monocrystalline silicon solar panel.



Parameter

Light source	80W 5050LED
Working hours	10-12 hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30℃～+70℃
Color temperature	6500K
Product size	1477*357*304mm
Package size	1550*430*255mm
Net weight	29.2kg
Gross weight	33.41kg

LED Source

LED Energy-saving lampbeads
are more practical.

Sensor

It automatically senses the light
in the dark,which saves more power.

Battery

Using lithium ironphosphate A battery,epoxy resin insulation,high temperature and heat resistance, suitable for high temperature areas,stable safety performance.

Housing

Integrated die-casting,waterproof and anti-corrosion.

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JRB INTEGRATED SOLAR LIGHT (20W) (DL-6020)

RC: 872046®
JRB SOLAR
INVESTMENT LIMITED
...A renewable energy company

Parameter	
LIGHT SOURCE	20W LED, 3800LUMENS 190 LUMEN/W
BATTERY TYPE	LiFePO4 lithium battery
PANEL	18V 60W, HIGH EFFICIENCY MONO PANEL

JRB INTEGRATED SOLAR LIGHT (60W) (AL-X60)

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AL-X60
60W

Parameter

Model	AL-X60
Solar panel	18V 70W(high efficiency monocrys
Lumen(lm)	120-130lm/w
Light source	60W 3030LED
Working hours	10-12 hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	7-8m
Product size	1150*325*135mm
Package size	1190*350*220mm
Net weight	12.8KG
Gross weight	14.8KG

Project pictures

JRB INTEGRATED SOLAR LIGHT (80W) (AL-X80)

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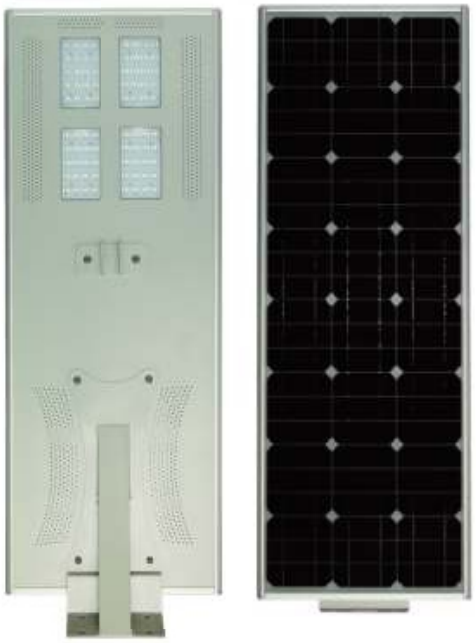
AL–X80
80W

Parameter

Model	AL-X80
Solar panel	18V 100W(high efficiency monocrystall
Lumen(lm)	120-130lm/w
Light source	80W 3030LED
Working hours	10-12 hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	8-10m
Product size	1150*450*135mm
Package size	1190*350*220mm
Net weight	17.8KG
Gross weight	19.8KG



Project pictures

JRB INTEGRATED SOLAR LIGHT (40W) (AL-RL02)

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AL-RL02
40W

Parameter

Model	AL-RL02
Solar panel	9V/40W(high efficiency monocrystalline silicor
Lumen(lm)	150-160lm/w
Light source	40W 3030LED
Working hours	10-12 hours per day
Battery type	lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	4-5m
Product size	625*248*89mm
Package size	630*260*110mm
Net weight	3.1KG
Gross weight	3.75KG

Project pictures

JRB INTEGRATED SOLAR LIGHT (60W) (AL-RL03)

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AL-RL03
60W

Parameter

Model	AL-RL03
Solar panel	9V/40W(high efficiency monocry
Lumen(lm)	150-160lm/w
Light source	60W 3030LED
Working hours	10-12 hours per day
Battery type	lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	5-6m
Product size	630*255*90mm
Package size	650*272*110mm
Net weight	3.5KG
Gross weight	4.1KG

Project pictures

JRB INTEGRATED SOLAR LIGHT (30W) (AL-GD30)

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AL-GD30
30W

Parameter

Model	AL-GD30
Solar panel	30W(high efficiency monocrystalline silicon)
Lumen(lm)	170-180lm/w
Light source	30W 5050LED
Working hours	10-12hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	3-5m
Product size	538×283×160mm
Package size	600*160*340mm
Net weight	6.2KG
Gross weight	6.7KG

Project pictures

JRB INTEGRATED SOLAR LIGHT (60W) (AL-GD60)

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AL–GD60
60W

Parameter

Model	AL-GD60
Solar panel	60W(high efficiency monocrystalline silic
Lumen(lm)	170-180lm/w
Light source	60W 5050LED
Working hours	10-12hours per day
Battery type	LiFePO4 lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	6-8m
Product size	670*357*62mm
Package size	730*412*167mm
Net weight	9.5KG
Gross weight	10.45KG

Project pictures

JRB INTEGRATED SOLAR LIGHT (with WIFI/CCTV camera) (AL-S30)

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AL-S30

Wifi/CCTV Camera
monitoring function

2 megapixel CMOS image sensor

Resolution: 1920*1080@ 30fps

Day and night monitoring

The irradiation distance can reach 120m

IP66 dust-proof and waterproof design

Model	AL-S30
Solar panel	18V/60W (high efficiency monocrystalline silicon)
Lumen(lm)	120-130lm/w
Light source	30W 3030LED
Working hours	10-12 hours per day
Battery type	lithium battery
Working temperature	-30°C~+70°C
Protection level	IP65
Color temperature	2700-7000k(Optional)
Mounting height	10-12m
Product size	1136*325*44mm
Package size	1190*360*220mm
Net weight	13.5kg
Gross weight	14.5KG

JRB INTEGRATED SOLAR LIGHT(with Bluetooth App Function)
(AL-CH30)

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RC: 872046
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Bluetooth App function

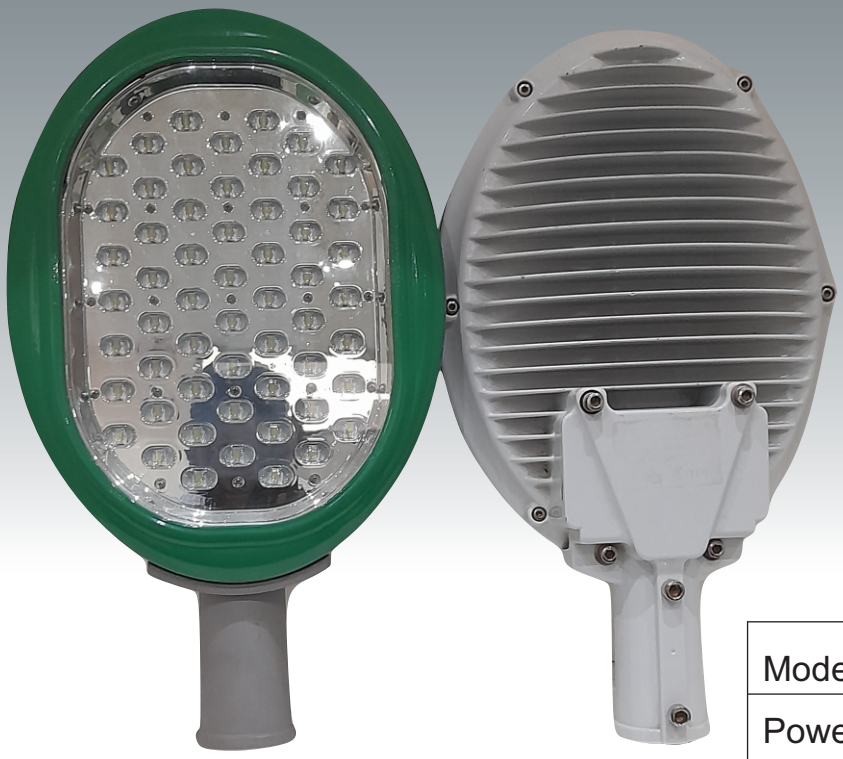
- Forced ON/OFF control
- Get fault code
- Set relevant parameters on time
- Calculate saved cost of electricity
- Restore factory setting

Model	AL-CH30	Protection level	IP65
Solar panel	18V/50W (high efficiency monocrystalline silicon)	Color temperature	2700-7000k(Optional)
Lumen(lm)	150-160lm/w	Mounting height	5-6m
Light source	30W 3030LED	Product size	1060*205*60mm
Working hours	10-12 hours per day	Package size	1100*260*220mm
Battery type	LiFePO4 lithium battery	Net weight	8.5KG
Working temperature	-30°C~+70°C	Gross weight	10.25KG

Model	JRB - 15WA	JRB - 20WA
Power Consumption	15W LED	20W LED
Input Voltage	12V DC	12V DC
Enclosure	1P65	1P65

Model	JRB - 30WB
Power Consumption	30W LED
Input Voltage	12V DC
Enclosure	IP65

Model	**JRB - 30WC**
Power Consumption	**30W LED**
Input Voltage	**12V DC**
Enclosure	**IP65**



Model	JRB - 56WD
Power Consumption	56W LED
Input Voltage	12V DC
Enclosure	IP65

Model	JRB - 30WE	JRB - 36WE
Power Consumption	30W LED	36W LED
Input Voltage	12V DC	12V DC
Enclosure	1P65	1P65

Model	JRB - 40WF	JRB - 42WF
Power Consumption	40W LED	42W LED
Input Voltage	12V DC	12V DC
Enclosure	1P65	1P65

OUR PRODUCTS
JRB SOLAR BATTERY

TECHNICAL **PARAMETERS**

VALVE REGULATE GEL BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	7.2V-7.45V
Float Charge at 25°C	6.8V-6.9V
Max Charging Current (A)	120A
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS '**LONG LIFE**'

CAPACITY

- 6V- 400Ah
- DESIGN LIFE: **18 YEARS**
- **LONG LIFE PRODUCT** FOR SENSITIVE & HIGH RELIABILITY APPLICATION

TECHNICAL **PARAMETERS**

DEEP CYCLE VRLA BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	14.5V-14.9V
Float Charge at 25°C	13.6V-13.8V
Max Charging Current (A)	0.1C/0.25C
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS 'LONG LIFE'

CAPACITY

- 12 V - 100 Ah
- DESIGN LIFE: 18 YEARS
- LONG LIFE PRODUCT FOR SENSITIVE & HIGH RELIABILITY APPLICATION

TECHNICAL **PARAMETERS**

VALVE REGULATED GEL BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	14.5V-14.9V
Float Charge at 25°C	13.6V-13.8V
Max Charging Current (A)	0.1C/0.25C
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS '**LONG LIFE**'

CAPACITY

- 12V - 200 Ah
- DESIGN LIFE: 18 YEARS
- **LONG LIFE PRODUCT** FOR SENSITIVE & HIGH RELIABILITY APPLICATION

TECHNICAL **PARAMETERS**

OPZV2 VALVE REGULATED TUBULAR GEL BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	2.37-2.40V
Float Charge at 25°C	2.27-2.30V
Max Charging Current (A)	200A
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS '**LONG LIFE**'

CAPACITY

- 2V - 1000 Ah
- DESIGN LIFE: **18 YEARS**
- **LONG LIFE PRODUCT** FOR SENSITIVE & HIGH RELIABILITY APPLICATION

TECHNICAL **PARAMETERS**

OPZV2 VALVE REGULATED TUBULAR GEL BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	2.37-2.40V
Float Charge at 25°C	2.27-2.30V
Max Charging Current (A)	300A
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS '**LONG LIFE**'

CAPACITY

- 2V - 1500 Ah
- DESIGN LIFE: **18 YEARS**
- **LONG LIFE PRODUCT** FOR SENSITIVE & HIGH RELIABILITY APPLICATION

TECHNICAL
PARAMETERS

DEEP CYCLE VRLA BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	14.4v-14.7v
Float Charge at 25°C	13.6v-13.8v
Max Charging Current (A)	45A
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS '**LONG LIFE**'

CAPACITY

- 12V - 180 Ah
- DESIGN LIFE: **18 YEARS**
- **LONG LIFE PRODUCT** FOR SENSITIVE & HIGH RELIABILITY APPLICATION

TECHNICAL
PARAMETERS

DEEP CYCLE VRLA BATTERY

PERFORMANCE

PARAMETERS	
Design Float Life at 25°C	20 years
Cycle Life at 25°C	14.4V-14.7V
Float Charge at 25°C	13.6V-13.8V
Max Charging Current (A)	50A
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C

SPECIFICATION

- IEC/EN 60896-21 & 22
- IEC 61427
- BS 6290 PART IV
- IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS '**LONG LIFE**'

CAPACITY

- 12V - 220 Ah
- DESIGN LIFE: **18 YEARS**
- **LONG LIFE PRODUCT** FOR SENSITIVE & HIGH RELIABILITY APPLICATION

OUR PRODUCTS
JRB HOME SYSTEM

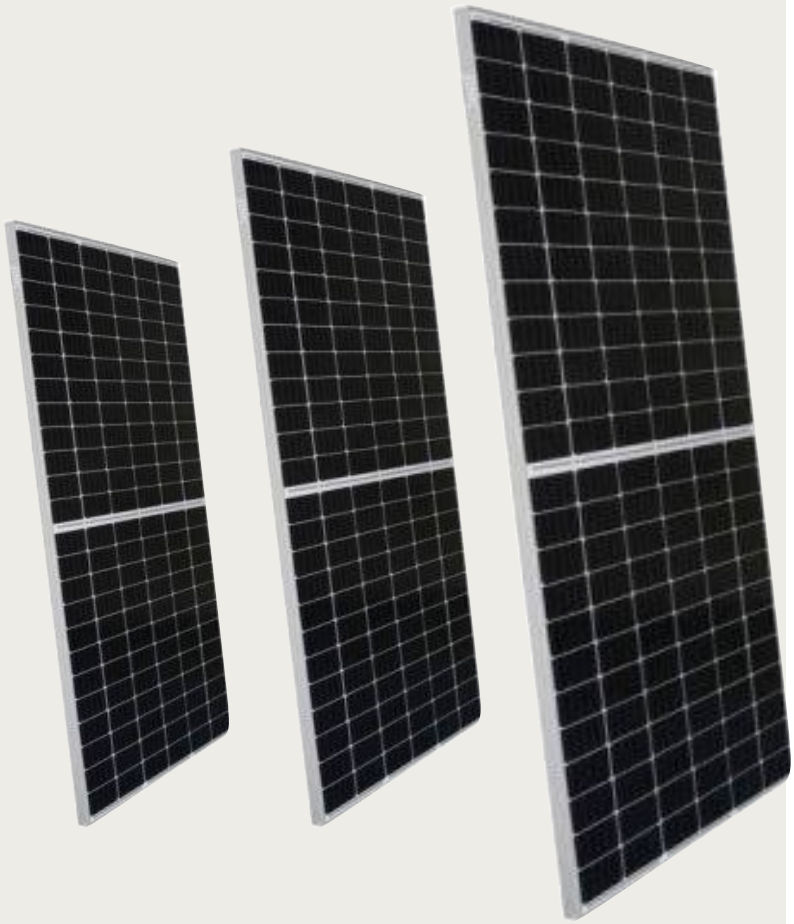
SG 1230W	
Solar Panel	18V30W
Battery	12V17AH
DC Lamp	3Wx3 & 5Wx3

SG 1220W	
Solar Panel	18V20W
Battery	12V12AH
DC Lamp	3Wx2 & 5Wx2

SY - 500W-A	
Battery	12V12AH
Power	500W

OUR PRODUCTS
JRB SOLAR PANELS

JRB MONO-CRYSTALLINE SOLAR PANLES



	DM-380M6	DS-A36-250	DS-A36-200	DS-A36-230
Pm (W)	380	250	200	230
Imp(A)	11.11	6.94	5.56	6.39
Vmp(V)	34.24	36.0	36.0	36.0
Isc(A)	11.52	7.57	6.06	6.97
Voc(V)	42.06	44.6	44.6	44.6
Max system voltage	1,000	715	715	715
Dimension(mm)	1770*1050*35	1380*990*45	1420*990*45	1420*990*45

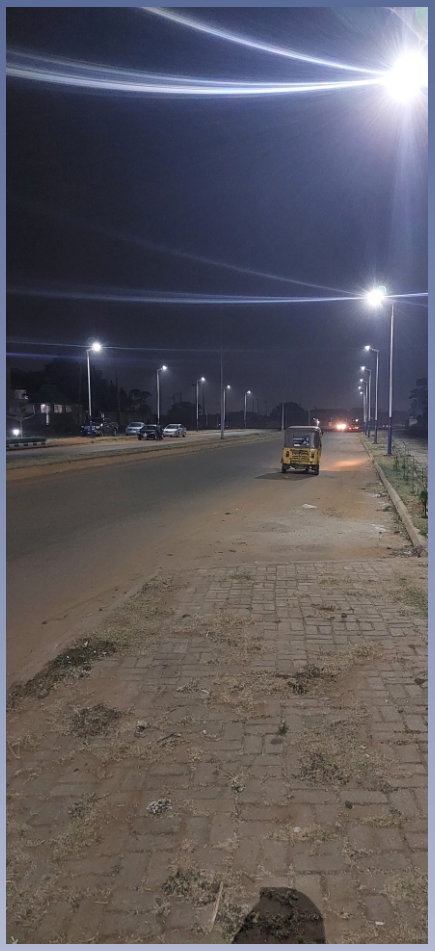
JRB POLY-CRYSTALLINE SOLAR PANLES

	DS-A18-40	DS-A18-60	DS-A18-80	DS-A18-100	DS-A18-120	DS-A36-130		
Pm (W)	40	60	80	100	120	130		
Imp(A)	2.22	3.33	4.44	5.56	6.67	7.22		
Vmp(V)	18.0	18.0	18.0	18.0	18.0	18.0		
Isc(A)	2.42	3.64	4.85	6.06	7.27	7.88		
Voc(V)	22.3	22.3	22.3	22.3	22.3	22.3		
Max system voltage	715	715	715	715	715	715		
Dimension(mm)	610*510*25	690*665*35	1140*510*35	990*665*35	129*665*35	129*665*35		

OUR PROJECTS

Installation Of 120kw Solar Off-grid System At Our Headquarters In Wuye Abuja

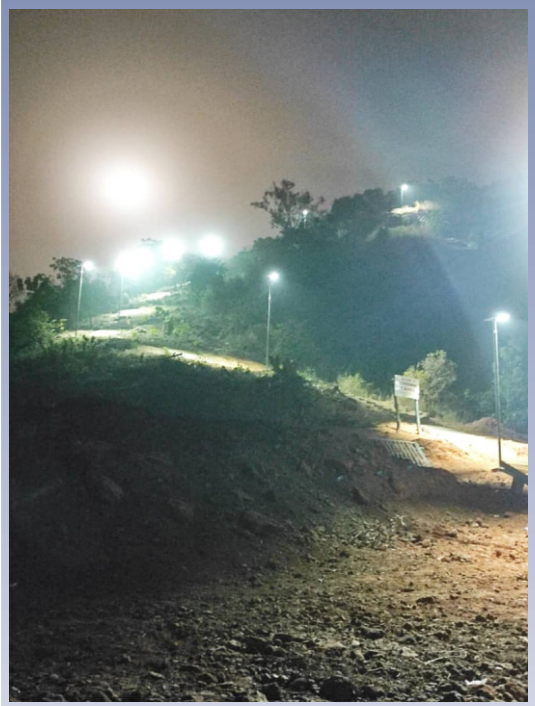
Installation Of 40kw Solar Off-grid System At Federal Ministry Of Interior Headquarters, Abuja

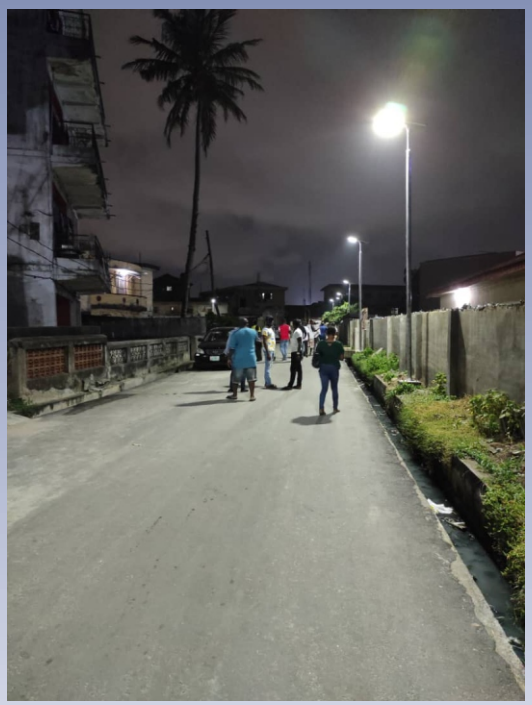


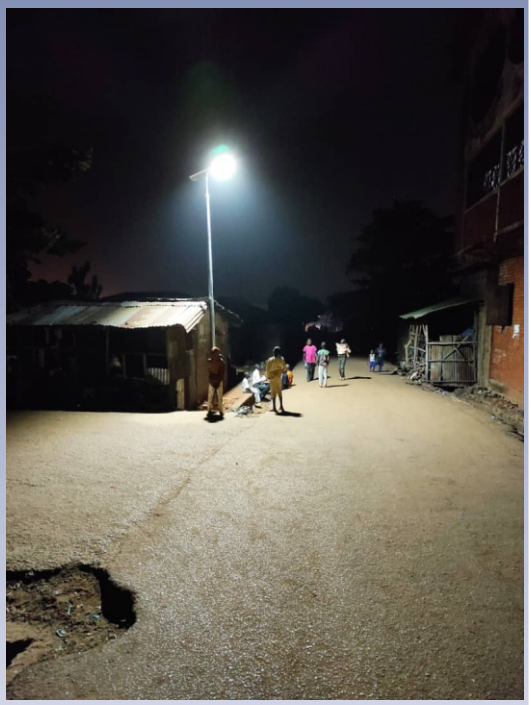
Lumination Of Muhammad Bello Way, Wuye, Abuja With Solar Integrated Street Lights

152KWP Solar Installed Capacity at JRB Headquarters

Installation Of 15KW Solar Off-grid System At NAF Valley Estate, Abuja







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