

# Axpert VM 4 TWIN Off-Grid Inverter

OFF-GRID INVERTER



- Dual output for smart load management
- Maximum PV input current 27A
- Wide PV input voltage range 60VDC~450VDC
- Customizable status LED ring with RGB lights
- Touchable button with large 4.3" colored LCD
- Built-in Wifi for mobile monitoring (Android/iOS App available)
- Supports USB On-the-Go function
- Data log event stored in the inverter
- Reserved communication port (RS485, CAN-BUS or RS232) for BMS
- Battery independent design
- Battery equalization extends lifecycle
- Enhanced charging power
- Built-in anti-dust kit

## Axpert VM 4 TWIN Off-Grid Inverter Selection Guide

MODEL	Axpert VM 4 TWIN 4K	Axpert VM 4 TWIN 6K
<b>RATED POWER</b>	4000VA/4000W	6000VA/6000W
<b>INPUT</b>		
Voltage	230 VAC	
Selectable Voltage Range	170-280 VAC (For Personal Computers) 90-280 VAC (For Home Appliances)	
Frequency Range	50 Hz/60 Hz (Auto sensing)	
<b>OUTPUT</b>		
AC Voltage Regulation (Batt. Mode)	230VAC ± 10%	
Surge Power	8000VA	12000VA
Efficiency (Peak)	90% ~ 93%	
Transfer Time	10 ms (For Personal Computers) 20 ms (For Home Appliances)	
Waveform	Pure sine wave	
<b>BATTERY</b>		
Battery Voltage	24 VDC	48 VDC
Floating Charge Voltage	27 VDC	54 VDC
Overcharge Protection	33 VDC	63 VDC
<b>SOLAR CHARGER &amp; AC CHARGER</b>		
Solar Charger type	MPPT	
Maximum PV Array Power	5000W	6000W
MPP Range @ Operating Voltage	60 ~ 450 VDC	60 ~ 450 VDC
Maximum PV Array Open Circuit Voltage	500 VDC	500 VDC
Maximum PV Input Current	27A	
Maximum Solar Charge Current	120A	120A
Maximum AC Charge Current	100A	100A
Maximum Charge Current	120A	120A
<b>PHYSICAL</b>		
Dimension, D x W x H (mm)	119 x 313.6 x 457.5	
Net Weight (kgs)	10	12
Communication Interface	USB/RS232/RS485/WiFi/Dry-contact	
<b>OPERATING ENVIRONMENT</b>		
Humidity	5% to 95% Relative Humidity (Non-condensing)	
Operating Temperature	-10°C to 50°C	
Storage Temperature	-15°C to 60°C	

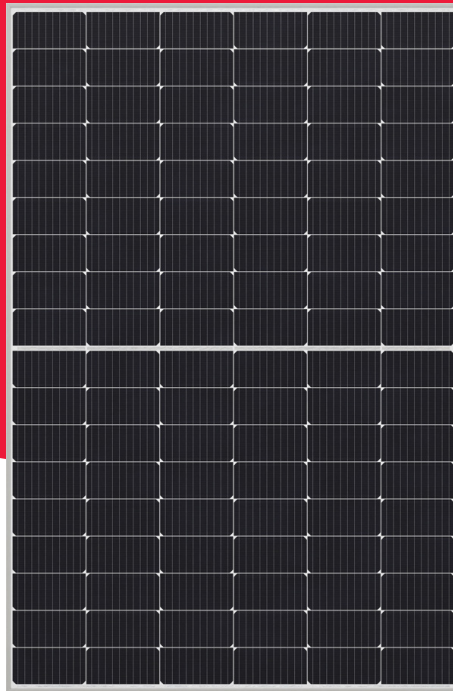
Product specifications are subject to change without further notice.

NU-JC Series

# NU-JC415


415 W

The High Performer





## Powerful product features


**+%** Guaranteed positive power tolerance (0/+5 %)

 High module efficiency 21.25 %  
PERC monocrystalline silicon photovoltaic modules

**MBB** MBB busbar technology  
Improved reliability  
Higher efficiency  
Reduced series resistance

 Half-cut cell  
Improved shading performance  
Lower internal losses

 Tested and certified  
VDE, IEC/EN61215, IEC/EN61730  
Safety class II, CE  
Fire rating class C

 Robust product design  
PID resistance test passed  
Salt mist test passed (IEC61701)  
Ammonia test passed (IEC62716)  
Dust and sand test passed (IEC60068)

## Your solar partner for life

**60**  
YEARS 60 years of solar expertise

 Local support team in Europe

**25**  
YEARS Linear power output guarantee

**50**  
MIL 50 million PV modules installed

**10\***  
YEARS Product guarantee

**1**  
TIER Tier 1 - BloombergNEF



Energy Solutions

**SHARP**  
Be Original.

\* Applicable for modules installed in countries as shown in the guarantee conditions.

## Electrical data (STC)

NU-JC415			
Maximum power	$P_{max}$	415	$W_p$
Open-circuit voltage	$V_{oc}$	38.08	V
Short-circuit current	$I_{sc}$	13.87	A
Voltage at point of maximum power	$V_{mpp}$	31.49	V
Current at point of maximum power	$I_{mpp}$	13.18	A
Module efficiency	$\eta_m$	21.25	%

STC = Standard Test Conditions: irradiance 1,000 W/m<sup>2</sup>, AM 1.5, cell temperature 25 °C.  
 Rated electrical characteristics are within ±10 % of the indicated values of  $I_{sc}$ ,  $V_{oc}$  and 0 to +5 % of  $P_{max}$ .  
 Reduction of efficiency from an irradiance change of 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup> ( $T_{module} = 25$  °C) is less than 3 %.

## Electrical data (NMOT)

NU-JC415			
Maximum power	$P_{max}$	311.11	$W_p$
Open-circuit voltage	$V_{oc}$	36.09	V
Short-circuit current	$I_{sc}$	11.25	A
Voltage at point of maximum power	$V_{mpp}$	29.35	V
Current at point of maximum power	$I_{mpp}$	10.6	A

NMOT = Nominal Module Operating Temperature: 42.5 °C, irradiance 800 W/m<sup>2</sup>, air temperature of 20 °C, wind speed of 1 m/s.

## Mechanical data

Length	1,722 mm
Width	1,134 mm
Depth	30 mm
Weight	20.7 kg

## Temperature coefficient

$P_{max}$	-0.341 %/°C
$V_{oc}$	-0.262 %/°C
$I_{sc}$	0.054 %/°C

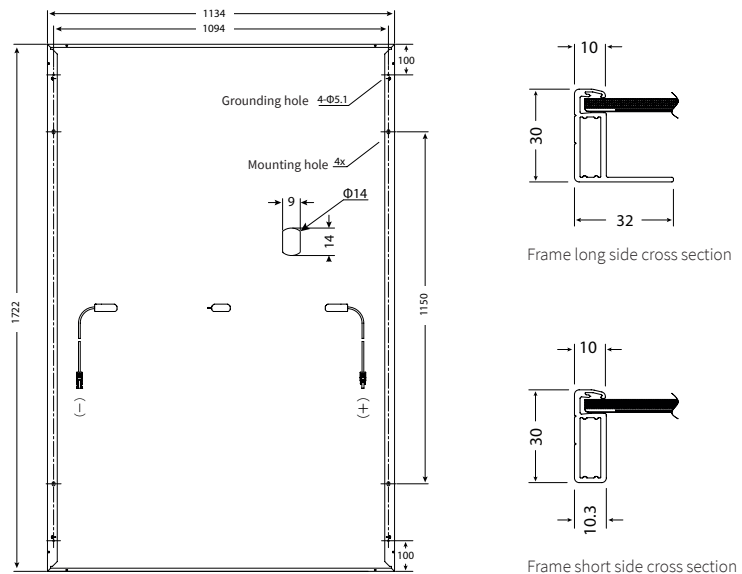
## Limit values

Maximum system voltage	1,000 V DC
Over-current protection	25 A
Temperature range	-40 to 85 °C
Max. mechanical load (snow/wind)	2,400 Pa
Tested snow load (IEC61215 test pass*)	5,400 Pa

## Packaging data

Modules per pallet	36 pcs
Pallet size (L × W × H)	1.75 m × 1.13 m × 1.25 m
Pallet weight	Approx. 780 kg

## Dimensions (mm)



\*Please refer to SHARP's installation manual for details.

## General data

Cells	Half-cut cell mono, 182 mm x 91 mm, MBB, 2 strings of 54 cells in series
Front glass	Anti-reflective high transmissive low iron tempered glass, 3.2 mm
Frame	Anodized aluminium alloy, silver
Backsheet	White
Cable	∅ 4.0 mm <sup>2</sup> , length 1,250 mm
Connection box	IP68 rating, 3 bypass diodes
Connector	MC4 (Multi Contact, Stäubli), IP68

Note: Technical data is subject to change without prior notice. Before using SHARP products, please request the latest data sheets from SHARP. SHARP accepts no responsibility for damage to devices which have been equipped with SHARP products on the basis of unverified information. The specifications may deviate slightly and are not guaranteed. Installation and operating instructions are to be found in the corresponding handbooks, or can be downloaded from [www.sharp.eu](http://www.sharp.eu). This module should not be directly connected to a load.