

Single-Phase Off-Grid Inverter

12.0 kW



High Efficiency

- Dual MPPTs with 27A MPPT current for high-current PV modules
- Built-in 160A solar charger for fast PV charging
- Up to 99.5% PV charging efficiency for more energy stored from the same PV system

Flexible Compatibility

- Wide 60V–450V MPPT voltage range for greater PV compatibility
- Supports both lithium and lead-acid batteries for greater flexibility

Reliable Power

- Up to 2 times peak output as on-grid transferring to off-grid
- Seamless switchover keeps lights and appliances running

High Safety

- Multiple electrical protections for enhanced operational safety
- Reliable operation at high altitudes and in demanding environments

*Product dimensions and specifications are subject to change without prior notice.

	XN12048-MAX
PV 输入	
Max. usable PV input power	15kW
Max. input voltage	500V
Start-up voltage	60V
MPPT voltage range	60V~450V
Max. input current per MPPT	27A
Max. short circuit current per MPPT	33A
MPPT number / Strings per MPPT	2/1
Battery Input	
Battery type	Lithium battery, Lead-acid battery
Battery voltage range	48V
Max. charge / discharge current	160A / 220A
Number of battery port / BMS port	1/1
Communication Interface	RS232 / RS485 / CAN
Input / Output AC (Grid)	
Max. input current	70A
Rated grid voltage	220 / 230 / 240V
Operating voltage range	90V~280V
Grid connection type	L + N + PE
Rated grid frequency	50 / 60 Hz
Output AC (Back-up)	
Rated output power	12kW
Max. apparent output power	24kVA
Rated output voltage, frequency	220 / 230 / 240V , 50/60Hz
On/off grid switch time	10ms
THDv	≤ 3%
Peak output power, Duration	1min @102%~125% ; 10s @125%~200%
Input AC (Generator)	
Rated input current	52A
Rated input voltage, frequency	220 / 230 / 240V , 50/60Hz
Efficiency	
Max. efficiency	98.0%
Max. battery charging efficiency by PV	99.5%
Max. battery discharge efficiency	94.0%@48VDC
Protection	
AC short-circuit protection	Yes
Integrated DC switch	Yes
Residual current protection	Yes
Insulation resistance monitoring	Yes
String current monitoring	Yes
Surge protection	Yes
General Data	
Dimensions (W × H × D)	425 x 495 x 120mm
Weight	Approx.15kg
Topology	L + N + PE
Self-consumption	< 50w
Operating temperature/ humidity	-10℃ ~60 ℃ / 5%-95% (Non-condensing)
Ingress protection rating	IP21
Display	LCD
Communication interface	RS232 / RS485 / CAN
Cooling method	Forced-air cooling
Max. operating altitude	4000m (Derating above 1000 m)
Safety/ EMC standards	IEC/EN 62109-1 & -2; IEC 61683; IEC 61000

Disclaimer: The above data are theoretical values measured in INVT's internal laboratory under specific test conditions. Actual performance may vary depending on product variation, software version, operating conditions, and environmental factors. Please refer to actual conditions.