



N3H-X Series Split Phase Inverter

Hybrid On/Off-Grid Inverter

N3H-X12US N3H-X16US

120V/240V(split phase) , 208V(2/3 phase) , 230V(single phase)



Equipped with 4 MPPTs
Max. input current of
16A for each MPPT



AC coupling function
Max. 3 pcs parallel
for on-grid and off-grid



Easy installation with
flexible configuration
plug-and-play



Enables remote intelligent
monitoring through
SOLARMAN APP



Support OEM/ODM,
UL multiple listing
for customers



UL1741SA CUL1741/
UL1699B CSA 22.2



Technical Data	N3H-X12US	N3H-X16US
PV Input Data		
Max. DC Input Power	18kW	24kW
No. of MPPT Trackers	4	
MPPT Voltage Range (without battery)	120 - 500V	
MPPT Voltage Range (with battery)	120 - 430V	
MAX.DC Input Voltage	500V	
MAX. Input Current per MPPT	16A/16A/16A/16A	20A/20A/20A/20A
MAX. Short Current per MPPT	22A	25A/25A/25A/25A
Battery Input Data		
Nominal voltage	48V	
MAX. Charging/Discharging Current	250A/260A	260A/280A
Battery Voltage Range	40-58V	
Battery Type	Lithium / Lead Acid	
Charging Controller	3-Stage with Equalization	
AC Output Data (On-Grid)		
Nominal output power Output to Grid	12kW	16kW
MAX. Apparent Power Output to Grid	13.2kVA	16kVA
Nominal AC Voltage (L-N/L1-L2)	(110~120)/(220~240V) split phase ,240V single phase	
Nominal AC Frequency	60Hz (55 to 65Hz)	
Nominal AC Current	50A	66.7A
Max. AC Current	55A	73.3A
Max. Grid Passthrough Current	200A	
Output THDI	< 3%	
AC Output Data (Back-Up)		
Nominal. Apparent Power	12kW	13kW
Max. Apparent Power (No PV)	12kVA	13.2kVA
Max. Apparent Power (With PV)	13.2kVA	
Nominal Output Voltage	120/240V	
Nominal Output Frequency	60Hz	
Output Power Factor	0.8leading~0.8lagging	
Output THDU	< 2%	
Efficiency		
MPPT Efficiency	99.90%	
Europe Efficiency (PV)	96.20%	
Max. PV to Grid Efficiency (PV)	96.50%	
Max. Battery to Load Efficiency	94.60%	
Max. PV to Battery charging Efficiency	95.80%	
Max. GRID to Battery charging Efficiency	94.50%	
Protection		
Grounding detection	YES	
Arc Fault Protection	YES	
Island Protection	YES	
Insulation Resistor Detection	YES	
Residual Current Monitoring Unit	YES	
Output Over Current Protection	YES	
Back-up Output Short Protection	YES	
Output Over Voltage Protection	YES	
Output Under Voltage Protection	YES	
General Data		
Operating Temperature Range	-25 ~ +60℃	
Relative Humidity	0-95%	
Operating Altitude	0~4000m (Derating above 2000m altitude)	
Ingress Protection	IP65/NEMA 3R	
Weight (with breaker)	56kg	
Dimensions (Width*Height*Depth)	495mmx900mm x 260mm	
Cooling	FAN Cooling	
Noise emission	48dB	
Display	Touch panel	
Communication With BMS/Meter/EMS	RS485, CAN	
Supported communication interface	RS485, 4G (optional), Wi-Fi	
Self-consumption	< 25 W	
Safety	UL1741,UL1741SA&SB all options, UL1699B, CSA -C22.2 NO.107.1-01,RSD(NEC690.5,11,12)	
EMC	FCC Part 15 Class B	
Grid connection standards	IEEE 1547, IEEE 2030.5, HECO Rule 14H,	
	CA Rule 21 PhaseI,II,III,CEC,CSIP,SRD2.0,SGIP,OGPe,	
	NOM,California Prob65	