

# OPTIMUM SERIES 4-6KW OFF GRID SOLAR INVERTER



A solar inverter is a crucial component in a solar power system that converts direct current (DC) electricity generated by solar panels into alternating current (AC) electricity, which is suitable for use in homes and businesses. The primary function of a solar inverter is to transform the variable and intermittent DC power produced by solar panels into stable and synchronized AC power that can be fed into the electrical grid or used locally



## GENERAL FEATURES

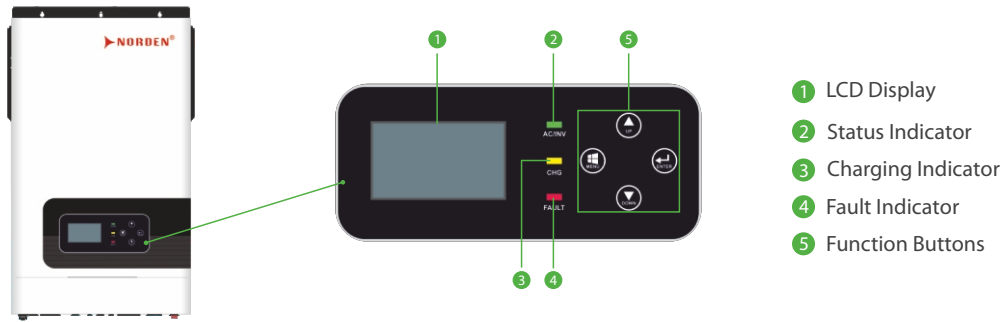
- Pure sine wave output
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 3 units (for 48V mode)
- Overload, short circuit, and Deep discharge protection

## SPECIFICATIONS

| MODEL                      |                                       | NPS-0424IO                                                      | NPS-0648IO  |
|----------------------------|---------------------------------------|-----------------------------------------------------------------|-------------|
| Inverter Output            | Nominal battery system voltage        | 24VDC                                                           | 48VDC       |
|                            | Rated power (kW)                      | 4kW                                                             | 6kW         |
|                            | Surge power                           | 8000W                                                           | 12000W      |
|                            | Waveform                              | Pure sine wave                                                  |             |
|                            | Nominal output voltage RMS            | 230VAC ±5%                                                      |             |
|                            | Output frequency                      | 50Hz / 60Hz ± 0.3Hz                                             |             |
|                            | Inverter efficiency Peak              | 92%                                                             |             |
|                            | Typical transfer time                 | 10ms(max)                                                       |             |
| AC Input                   | Power factor                          | 1                                                               |             |
|                            | Voltage                               | 230VAC                                                          |             |
|                            | Selectable voltage range              | 170~280VAC(UPS)/90~280 VAC (APL)                                |             |
| Battery                    | Frequency range                       | 50Hz / 60Hz (Auto sensing)                                      |             |
|                            | Normal voltage                        | 24VDC                                                           | 48VDC       |
|                            | Floating charge voltage               | 27.4VDC                                                         | 54.8VDC     |
| Solar Charger & AC Charger | Overcharge protection                 | 30VDC                                                           | 60VDC       |
|                            | Maximum PV Array Open Circuit Voltage | 500VDC (450V for parallel)                                      |             |
|                            | Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |             |
|                            | Maximum PV Array Power                | 5000W                                                           | 6000W       |
|                            | PV Array MPPT Voltage Range           | 150~450VDC (150~430VDC)                                         |             |
|                            | Maximum Solar Charge Current          | 100A                                                            | 120A        |
| Mechanical Specifications  | Maximum AC Charge Current             | 80A                                                             | 100A        |
|                            | Maximum Charge Current                | 100A                                                            | 120A        |
|                            | Mounting                              | Wall mount                                                      |             |
| Environment                | Dimensions (W x H x D)                | 322x486x134                                                     | 309x505x147 |
|                            | Humidity                              | 5% to 95% Relative humidity (Non-condensing)                    |             |
|                            | Operation temperature range           | 0°C to 50°C                                                     |             |
|                            | Storage temperature                   | -15°C to 60°C                                                   |             |
|                            | Audible noise                         | 60dB MAX                                                        |             |

\*Product specifications are subject to change without further notice.

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## ORDERING INFORMATION

| Part Number | Description                 |
|-------------|-----------------------------|
| NPS-0424IO  | 4kW Off Grid Solar Inverter |
| NPS-0648IO  | 6kW Off Grid Solar Inverter |