

# High Voltage Hybrid Inverter



## N3 HV

5kW - 10kW / Three Phase, 2 MPPTs

18A

Max. PV input current

110%

AC overloading

100%

Unbalanced Loads

- ▶  $\leq 20\text{ms}$  transfer time
- ▶ Support AC retrofit application
- ▶ Type II SPD for both DC and AC
- ▶ Support parallel connection

| Model                                      | N3-HV-5.0                                                                                                                                               | N3-HV-6.0                                            | N3-HV-8.0    | N3-HV-10.0           |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------|----------------------|
| <b>PV Input</b>                            |                                                                                                                                                         |                                                      |              |                      |
| Max. Recommended PV Power [Wp]             | 7500                                                                                                                                                    | 9000                                                 | 12000        | 15000                |
| Max. PV Power for Single MPPT [Wp]         | 7500                                                                                                                                                    | 9000                                                 | 9000         | 9000                 |
| Max. PV Input Voltage [V]                  |                                                                                                                                                         | 1000                                                 |              |                      |
| MPPT Voltage Range [V]                     |                                                                                                                                                         | 160 ~ 950                                            |              |                      |
| Rated PV Input Voltage [V]                 |                                                                                                                                                         | 600                                                  |              |                      |
| Start-up Voltage [V]                       |                                                                                                                                                         | 160                                                  |              |                      |
| No. of MPP Trackers                        |                                                                                                                                                         | 2                                                    |              |                      |
| No. of Input Strings per Tracker           |                                                                                                                                                         | 1                                                    |              |                      |
| Max. PV Input Current [A]                  |                                                                                                                                                         | 18 / 18                                              |              |                      |
| Max. Short-circuit Current [A]             |                                                                                                                                                         | 23 / 23                                              |              |                      |
| <b>AC Output</b>                           |                                                                                                                                                         |                                                      |              |                      |
| Max. AC Output Apparent Power [VA]         | 5500                                                                                                                                                    | 6600                                                 | 8800         | 11000 <sup>[1]</sup> |
| Rated AC Output Power [W]                  | 5000                                                                                                                                                    | 6000                                                 | 8000         | 10000 <sup>[1]</sup> |
| Max. AC Output Current [A]                 | 7.6                                                                                                                                                     | 9.1                                                  | 12.2         | 15.2 <sup>[1]</sup>  |
| Rated AC Output Current [A]                | 7.2                                                                                                                                                     | 8.7                                                  | 11.5         | 14.4 <sup>[1]</sup>  |
| Rated AC Voltage [V]                       |                                                                                                                                                         | 3 / N / PE, 220 / 380, 230 / 400                     |              |                      |
| Grid Frequency [Hz]                        |                                                                                                                                                         | 50 / 60                                              |              |                      |
| Adjustable Power Factor [cosφ]             |                                                                                                                                                         | 0.8 leading ~ 0.8 lagging                            |              |                      |
| Output THDi (@Rated Output)                |                                                                                                                                                         | < 3%                                                 |              |                      |
| <b>AC Input</b>                            |                                                                                                                                                         |                                                      |              |                      |
| Max. AC Input Apparent Power [VA]          | 10000                                                                                                                                                   | 12000                                                | 16000        | 20000                |
| Max. AC Input Current [A]                  | 15.2                                                                                                                                                    | 18.2                                                 | 24.3         | 30.4                 |
| Rated AC Voltage [V]                       |                                                                                                                                                         | 3 / N / PE, 220 / 380, 230 / 400                     |              |                      |
| Grid Frequency [Hz]                        |                                                                                                                                                         | 50 / 60                                              |              |                      |
| <b>Battery</b>                             |                                                                                                                                                         |                                                      |              |                      |
| Battery Type                               |                                                                                                                                                         | Lithium                                              |              |                      |
| Battery Voltage Range [V]                  |                                                                                                                                                         | 160 ~ 700                                            |              |                      |
| Max. Charging / Discharging Current [A]    |                                                                                                                                                         | 30 / 30                                              |              |                      |
| Max.Charging / Discharging Power [W]       | 10000 / 5000                                                                                                                                            | 10000 / 6000                                         | 10000 / 8000 | 10000 / 10000        |
| Communication Interface                    |                                                                                                                                                         | CAN                                                  |              |                      |
| <b>Backup Output (With Battery)</b>        |                                                                                                                                                         |                                                      |              |                      |
| Rated Output Power [W]                     | 5000                                                                                                                                                    | 6000                                                 | 8000         | 10000                |
| Rated Output Voltage [V]                   |                                                                                                                                                         | 3 / N / PE, 220 / 380, 230 / 400                     |              |                      |
| Rated Frequency [Hz]                       |                                                                                                                                                         | 50 / 60                                              |              |                      |
| Rated Output Current [A]                   | 7.6                                                                                                                                                     | 9.1                                                  | 12.2         | 15.2                 |
| Output THDv (@Linear Load)                 |                                                                                                                                                         | < 3%                                                 |              |                      |
| Automatic Switch Time [ms]                 |                                                                                                                                                         | ≤ 20                                                 |              |                      |
| Peak Apparent Power, Duration [VA, s]      | 7500, 60                                                                                                                                                | 9000, 60                                             | 12000, 60    | 15000, 60            |
| <b>Efficiency</b>                          |                                                                                                                                                         |                                                      |              |                      |
| Max. Efficiency                            | 98.0%                                                                                                                                                   | 98.0%                                                | 98.0%        | 98.0%                |
| Euro Efficiency                            | 97.7%                                                                                                                                                   | 97.7%                                                | 97.7%        | 97.7%                |
| Max. Battery Charge / Discharge Efficiency | 97.6%                                                                                                                                                   | 97.6%                                                | 97.6%        | 97.6%                |
| <b>Protection</b>                          |                                                                                                                                                         |                                                      |              |                      |
| DC Insulation Monitoring                   |                                                                                                                                                         | Integrated                                           |              |                      |
| Input Reverse Polarity Protection          |                                                                                                                                                         | Integrated                                           |              |                      |
| Anti-island Protection                     |                                                                                                                                                         | Integrated                                           |              |                      |
| Residual Current Monitoring                |                                                                                                                                                         | Integrated                                           |              |                      |
| Over-heat Protection                       |                                                                                                                                                         | Integrated                                           |              |                      |
| AC Overcurrent Protection                  |                                                                                                                                                         | Integrated                                           |              |                      |
| AC Short-circuit Protection                |                                                                                                                                                         | Integrated                                           |              |                      |
| AC Overvoltage Protection                  |                                                                                                                                                         | Integrated                                           |              |                      |
| DC Surge Protection                        |                                                                                                                                                         | Integrated (Type II)                                 |              |                      |
| AC Surge Protection                        |                                                                                                                                                         | Integrated (Type II)                                 |              |                      |
| DC Switch                                  |                                                                                                                                                         | Integrated                                           |              |                      |
| <b>General Data</b>                        |                                                                                                                                                         |                                                      |              |                      |
| Dimensions (W * H * D) [mm]                |                                                                                                                                                         | 520 * 412 * 186                                      |              |                      |
| Weight [kg]                                |                                                                                                                                                         | 27                                                   |              |                      |
| Display                                    |                                                                                                                                                         | LED + OLED                                           |              |                      |
| Communication                              |                                                                                                                                                         | CAN, RS485, USB Update, Optional: WiFi, 4G, Ethernet |              |                      |
| Operating Temperature Range [°C]           |                                                                                                                                                         | -25 ~ +60                                            |              |                      |
| Relative Humidity                          |                                                                                                                                                         | 0 ~ 100%                                             |              |                      |
| Operating Altitude [m]                     |                                                                                                                                                         | ≤ 2000                                               |              |                      |
| Standby Self-consumption [W]               |                                                                                                                                                         | < 15                                                 |              |                      |
| Topology                                   |                                                                                                                                                         | Transformerless                                      |              |                      |
| Cooling                                    |                                                                                                                                                         | Natural                                              |              |                      |
| Ingress Protection                         |                                                                                                                                                         | IP65                                                 |              |                      |
| Noise [dB]                                 |                                                                                                                                                         | < 35                                                 |              |                      |
| <b>Certifications &amp; Standards</b>      |                                                                                                                                                         |                                                      |              |                      |
| Grid Regulation                            | AS 4777, EN 50549-1, EN 50549-PL, EN 50549-GR, EN 50549-CZ, TOR Erzeuger, CEI 0-21, C10 / C11, VDE0126, UNE 217002 / RD647, IEC61727 / IEC62116, NC RfG |                                                      |              |                      |
| Safety Regulation                          | IEC 62109-1, IEC 62109-2, EN 62109-1, EN 62109-2                                                                                                        |                                                      |              |                      |
| EMC                                        | EN / IEC 61000-6-1, EN / IEC 61000-6-3, EN 61000-4-16, EN 61000-4-18, EN61000-4-29                                                                      |                                                      |              |                      |

[1] The Max. AC output apparent power & Max. AC output current of N3-HV-10.0-A is 11000VA & 15.2A.