UNO HYBRID N SERIES SINGLE PHASE INVERTER

TOMMATECH GmbH
GERMAN-based company



Single Phase Hybrid Inverter

Uno Hybrid N Series

12 / 14 / 16 / 18

Simple. Reliable. Efficient.

- High Efficiency
- AC Coupling
- Wide Voltage Range
- Up to 16 Parallel Units
- 350A Charge/Discharge
- IP65 Protection



12kW 14kW

Uno-Hybrid-LV-N-12-1P/ Uno-Hybrid-LV-N-14-1P / Uno-Hybrid-LV-N-16-1P Uno-Hybrid-LV-N-18-1P

The Uno Hybrid N Series is a flexible, high-performance, low-voltage hybrid inverter solution designed for both new installations and upgrades to existing solar energy systems. With an IP65 protection rating, it delivers reliable performance under a variety of environmental conditions. The inverter supports AC coupling for retrofitting (integration into existing systems) and enables up to 16 units to operate in parallel in both grid-connected (on-grid) and off-grid scenarios. With a maximum charge/discharge current of 350A and support for multiple battery configurations, it offers powerful and efficient energy management. Additionally, by enabling energy storage from diesel generators, it provides an ideal solution for hybrid energy systems that require high reliability.

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PV String Input Data	UNO-HYB-LV-N12K-1P	UNO-HYB-LV-N14K-1P	UNO-HYB-LV-N16K-1P	UNO-HYB-LV-N18K-1P
Max. PV Access Power (W)	24000	28000	32000	36000
Max. PV Input Power (W)	19200	22400	25600	28800
Max. PV Input Voltage (V)	500			
Start-up Voltage (V)	125			
MPPT Voltage Range (V)	150-425			
Rated PV Input Voltage (V)	370			
Max. Operating PV Input Current (A)	36+36+36			
Max. Input Short-Circuit Current (A)	54+54+54			
No. of MPP Trackers/ No. of Strings MPP Tracker	3/2+2+2			
AC Input/Output Data				
Rated AC Input/Output Active Power (W)	12000	14000	16000	18000
Max. AC Input/Output Apparent Power (VA)	13200	15400	17600	19800
Rated AC Input/Output Current (A)	54.6/52.2	63.7/60.9	72.8/69.6	81.9/78.3
Max. AC Input/Output Current (A)	60/57.4	70/67	80/76.6	90/86.1
Max. Continuous AC Passthrough (grid to load) (A)	100			200
Peak Power (off-grid) (W)	2 times of rated power, 10s			
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
Rated input/output voltage	220/230V 0.85Un-1.1Un L+N+PE			
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65			
Total Current Harmonic Distortion THDi	<3% (of nominal power)			
DC Injection Current	<0.5% In			
Battery Input Data				
Battery Type	Lead-acid or Lithium-ion			
Battery Voltage Range (V)	40-60			
Max. Charging Current (A)	220	250	290	350
Max Discharging Current (A)	220	250	290	350
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
Number of Battery Input	1			
Efficiency				
Max. Efficiency	97.6%			
Euro Efficiency	96.5%			
MPPT Efficiency	>99%			
Equipment Protection				
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (AFCI) (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection			
Surge Protection Level	Tip II(DC), TİP II(AC)			
Interface				
Communication Interface	RS485/RS232/CAN			
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN (optional)			
General Data				
Operating Temperature Range (℃)	-40 to +60˚C, >45˚C Derating			
Permissible Ambient Humidity	0-100%			
Permissible Altitude	3000m			
Noise (dB)	<55			
Ingress Protection(IP) Rating	IP 65			
Inverter Topology	Non-Isolated			
Over Voltage Category	OVC II(DC), OVC III(AC			
Cabinet Size (WxHxD mm)	464x763x282 (Excluding Connectors and Brackets)			464x863x282
Weight (kg)	54.1			59.8
Type of Cooling	Intelligent Air Cooling			
Warranty	5 Years			
Grid Regulation	IEC61727, IEC 62116 IEC 61683, IEC 60068-2-1/2/14/30, EN50549			
Safety / EMC Standard	EN IEC 61000-6-1/2/3/4, EN IEC 61000-3-2/11, EN 61000-3-3/12, EN 55011, EN 62109-1/2, Voltage Directive EU 2014/35			

* TommaTech GmbH reserves the right to change the specifications of the products without prior notice.

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