

# OmniStax Series Intelligent Hybrid Inverter



The OmniStax series of 29.9kW/30kW/40kW/50kW hybrid inverters integrates charging and discharging, grid-tied photovoltaic systems, grid-tied/off-grid switching, off-grid backup power, generator charging, and EMS/APP functionalities. It is dedicated to delivering safe, intelligent, simplified, and efficient energy solutions for microgrids and small-to-medium commercial scenarios.



## Highly Integrated

- 200% PV Over-Sizing, Capable of fast charging at up to 160A, Seamless grid to off-grid transition <10ms, Gen Charge and EMS/APP.
- AI-Powered Arc Fault Detection
- Supports Multiple Operation modes, Including Self-Consumption, Peak Shaving, Battery Backup, Designed for applications such as Microgrids and Zero-Carbon Campuses etc.



## High Reliability

- SiC Platform  
The Max system Efficiency is 98.6%.
- Ingress Protection :IP66 Designed for harsh outdoor operation
- Warranty: 5-Year standard 10-Year optional



## Highly Compatible

- Supports up to 21A Solar Panels.
- Compatible with 100-314Ah Battery Cell. Flexible configuration with phased investment.



## Remote Monitoring and Maintenance

- Supports 100Mbps Network, Remote Seamless Upgrade, and Online Operation and Maintenance



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# PARAMETER

## PARAMETERS

Technical Data	ES-29.9K-TP	ES-30K-TP	ES-40K-TP	ES-50K-TP
<b>PV Input</b>				
Max Usable PV Input Power	59.8kW	60kW	80kW	100kW
Max Input Voltage	1000V			
Rated Voltage	625V			
Start-up Voltage	150V			
MPPT Voltage Range	150V-850V			
Max Input Current	42A/42A/42A		42A/42A/42A/42A	
Max Short Circuit Current	55A/55A/55A		55A/55A/55A/55A	
Number of MPPT Channel	3		4	
Number of Strings per MPPT Channel	2		2	
<b>Battery Input/Output</b>				
Battery Type	Li-ion			
Number of Battery Input	2			
Max Charge Power	29.9kW	30kW	40kW	50kW
Max Discharge Power	29.9kW	30kW	40kW	50kW
Battery Voltage range	150V-810V			
Max Charge Current	80A/80A(Supports paralleling)			
Max Discharge Current	80A/80A(Supports paralleling)			
<b>Grid side</b>				
Rated Output Power	29.9kW	30kW	40kW	50kW
Rated Output Apparent Power	29.9kVA	30kVA	40kVA	50kVA
Rated Output Current	43.3A	43.5A	58.0A	72.5A
Rated Input Apparent Power	59.8kVA	60kVA	80kVA	100kVA
Rated Input Current	86.7A	87.0A	115.9A	144.9A
Rated Voltage	3L+N+PE, 230V/400V			
Rated Frequency	50Hz			
Output Power Factor	0.8 leading - 0.8 lagging			
THDi	< 3%			
<b>Generator</b>				
Max Input Apparent Power	29.9kVA	30kVA	40kVA	50kVA
Rated Current	43.3A	43.5A	58.0A	72.5A
Rated Voltage	3L+N+PE, 230V/400V			
Rated Frequency	50Hz			
<b>Output AC(Back-up)</b>				
Rated Apparent Power	29.9kVA	30kVA	40kVA	50kVA
Rated Output Current	43.3A	43.5A	58.0A	72.5A
Rated Voltage	3L+N+PE, 230V/400V			
Rated Frequency	50Hz			
Max imbalance Power per Phase	10.0kVA	10.0kVA	13.3kVA	16.7kVA
Back-up Switch Time	10ms			
THDv(@Linear Load)	< 2%			
Overload	1.5 times of rated power, 10s			
<b>Efficiency</b>				
Max Efficiency	98.60%			
BAT Charged by PV Max Efficiency	98.50%			
Max Battery to AC Efficiency	97.70%			
MPPT Efficiency	99.90%			
<b>Protection</b>				
Anti-islanding protection	Yes			
Insulation Resistor detection	Yes			
Output over current protection	Yes			
Output short protection	Yes			
Output over voltage protection	Yes			
DC reverse polarity protection	Yes			
DC Surge Protection/AC Surge Protection	Type II /Type III			
Integrated AFCI	Yes			
<b>General data</b>				
Dimensions(W/H/D)	830mm×635mm×300mm			
Weight	< 85kg			
Operation temperature range	-30°C ~ +60°C (Derate above 45°C)			
Topology	Non-Isolated			
Relative humidity	0-95%			
Ingress protection	IP66			
Noise emission	< 65 dB(A)			
Cooling concept	Intelligent redundant fan-cooling			
Max operation altitude	3000m			
Display	LED/LCD+APP			
Communication	CAN, RS485, Ethernet			
Warranty	5 years			
<b>Certification</b>				
Grid connection standard	EN 50549-1/EN 50549-10,NRS 097-2-1,AS4777.2			
Safety/EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4			