

ET LV Series

5-20kW Three-phase 2/3/4 MPPTs
Hybrid inverter

The HORIZON ET LV Series inverter (5-20kW) is ideal for residential PV systems, offering seamless integration with low-voltage (48V) batteries. Designed for flexibility, it supports a wide range of battery capacities and brands



Flexible & Adaptable Applications

- Unbalanced output up to 150%
- Compatible with both lithium and lead-acid batteries



High Performance

- 20A per string & 200% PV oversizing
- Dual independent battery inputs with 416A



Superb Safety & Reliability

- AI-driven AFCI optional¹
- Type II SPD on both DC & AC sides
- IP66 ingress protection



Smart Control & Monitoring

- Seamless switching < 4ms
- Generator compatibility and charge for battery

Technical Data

HZ5K-ET-L-G10 HZ6K-ET-L-G10 HZ8K-ET-L-G10 HZ10K-ET-L-G10 HZ12K-ET-L-G10 HZ15K-ET-L-G10 HZ20K-ET-L-G10

Battery Side

Battery Type ¹	Li-Ion/Lead-acid						
Nominal Battery Voltage (V)	48						
Battery Voltage Range (V)	40-60						
Start-up Voltage (V)	30						
Number of Battery Inputs	1	1	1	1	2	2	
Max. Continuous Charging Current (A)	125	135	175	220	250	165 / 165	208 / 208
Max. Continuous Discharging Current (A)	125	135	175	220	250	165 / 165	208 / 208
Max. Charging Power (kW)	5	6	8	10	12	15	20
Max. Discharging Power (kW)	5.5	6.6	8.8	11	13.2	16.5	22.0

PV Side

Max. Input Power (kW)	10	12	16	20	24	30	40
Max. Input Voltage (V) ²	1000						
MPPT Operating Voltage Range (V) ²	150 ~ 850						
Start-up Voltage (V)	180						
Nominal Input Voltage (V)	620						
Max. MPPT Current (A)	20 / 20	20 / 20	20 / 20	20 / 20 / 20	20 / 20 / 20	20 / 20 / 20 / 20	20 / 20 / 20 / 20
Max. MPPT Short Circuit Current (A)	26 / 26	26 / 26	26 / 26	26 / 26 / 26	26 / 26 / 26	26 / 26 / 26 / 26	26 / 26 / 26 / 26
Number of MPPTs	2	2	2	3	3	4	4
Number of Strings per MPPT	1/1	1/1	1/1	1/1/1	1/1/1	1/1/1/1	1/1/1/1

AC Side (On-grid)

Nominal Power (kW)	5	6	8	10	12	15	20
Max. Power (kW)	5.5	6.6	8.8	11.0	13.2 ⁴	16.5 ⁴	22.0 ⁴
Nominal Apparent Power Output to Grid (kVA)	5	6	8	10	12	15	20
Max. Apparent Power to Utility Grid (kVA)	5.5	6.6	8.8	11.0	13.2	16.5	22.0
Nominal Apparent Power from Grid (kVA)	5	6	8	10	12	15	20
Max. Apparent Power from Grid (kVA)	48.3	48.3	48.3	48.3	48.3	48.3	48.3
Nominal Voltage (V)	400 / 380, 3L / N / PE						
Voltage Range (V)	170 ~ 290						
Nominal Frequency (Hz)	50 / 60						
Frequency Range (Hz)	45 ~ 65						
Max. Current to Grid (A)	7.9@230V 8.3@220V	9.6@230V 10@220V	12.8@230V 13.4@220V	15.9@230V 16.7@220V	19.1@230V ¹⁵ 20@220V	23.9@230V ¹⁵ 25@220V	31.9@230V ¹⁵ 33.3@220V
Max. Current From Grid (A)	70						
Nominal Current From Grid (A)	7.5@220V 7.2@230V	9.1@220V 8.7@230V	12.1@220V 11.6@230V	15.2@220V 14.5@230V	18.2@220V 17.4@230V	22.7@220V 21.7@230V	30.3@220V 29@230V
Nominal Current to Grid (A)	7.5@220V 7.2@230V	9.1@220V 8.7@230V	12.1@220V 11.6@230V	15.2@220V 14.5@230V	18.2@220V 17.4@230V	22.7@220V 21.7@230V	30.3@220V 29.0@230V
Power Factor	~ 1 (Adjustable from 0.8 leading to 0.8 lagging)						
THDI	<3%						

Back-up Side

Nominal Output Apparent Power (kVA)	5	6	8	10	12	15	20
Max. Output Apparent Power (kVA)	5.5 (10.0, 10s)	6.6 (12.0, 10s)	8.8 (16.0, 10s)	11.0 (20.0, 10s)	13.2 (24.0, 10s)	16.5 (30.0, 10s)	22.0 (40.0, 10s)
Max. Output Apparent Power with Grid (kVA)	48.3						
Max Output Current (Bypass)	70						
Nominal Output Voltage (V)	400 / 380, 3L / N / PE						
Nominal Output Frequency (Hz)	50 / 60						

Generator Side

Nominal Apparent Power (kVA)	20						
Max. Apparent Power (kVA)	20						
Nominal Voltage (V)	400 / 380						
Nominal Frequency (Hz)	50 / 60						
Frequency Range (Hz)	45 ~ 55 / 55 ~ 65						
Max. Current (A)	30.3						

Efficiency

Max. Efficiency	97.8%	97.8%	97.8%	97.8%	97.8%	97.9%	97.8%
European Efficiency	97.0%	97.0%	97.1%	97.3%	97.3%	97.3%	97.4%
Max. Battery to AC Efficiency	95.5%						
MPPT Efficiency	99.9%						

Protection

PV String Current Monitoring	Integrated						
PV Insulation Resistance Detection	Integrated						
Residual Current Monitoring	Integrated						
PV Reverse Polarity Protection	Integrated						
Battery Reverse Polarity Protection	Optional	Optional	Optional	Optional	Optional ¹⁶	Optional ¹⁶	Optional ¹⁶
Anti-islanding Protection	Integrated						
AC Overcurrent Protection	Integrated						
AC Short Circuit Protection	Integrated						
AC Overvoltage Protection	Integrated						
DC Switch	Integrated						
DC Surge Protection	Type II						
AC Surge Protection	Type II						
AFCI ¹⁷	Optional						
Rapid Shutdown	Optional						
Remote Shutdown	Integrated						

General Data

Operating Temperature Range (°C)	-35 ~ +60						
Relative Humidity	0 ~ 95%						
Max. Operating Altitude (m)	4000						
Cooling Method	Smart Fan Cooling						
User Interface	LCD						
Communication with BMS	CAN						
Communication	WiFi + LAN + Bluetooth, 4G, RS485, CAN						
Communication Protocols	Modbus RTU (RS485), Modbus TCP / IP (Ethernet), Sunspec Modbus RTU						
Weight (kg)	42.2	42.2	42.2	45.3	45.3	49.7	51.2
Dimension (W×H×D mm)	756 × 551 × 258						
Noise Emission (dB)	<45						
Power Self-consumption at Night (kW)	<15						
Ingress Protection Rating	IP66						
Anti-corrosion Class	C4						
Mounting Method	Wall Mounted						

1. The Li-Ion battery usually contain two mainstream type: LFP and Ternary Lithium battery.

2. When the input voltage is greater than 980V, the inverter will enter standby mode, and when the voltage returns to below 950V the inverter will return to normal operation.

3. Please refer to the user manual for the MPPT Voltage Range at Nominal Power.

4. For Brazil and Chile, the Max. Power is the same with the Nominal Power.