

LQH

Series hybrid solar inverters

The Autarco LQH series hybrid inverters offer the best and most reliable performance in its class. These inverters combine a grid-tied 3-phase solar PV inverter with high voltage lithium-ion battery backup ensuring a versatile storage solution.

- + Max 6 inverters supported in parallel
- + Up to 50A max charge / discharge current
- + Supports peak shaving control in both "self-use" and "generator" mode
- + Supports Unbalanced and Half-Wave loads on the Grid and Backup ports
- + Automatic UPS switching
- + Match large current modules perfectly, with 20A string current
- + Integrated 4 MPP Trackers, suitable for multiple array orientations
- + 10 second 200% surge power backup overload capability
- + Upgrade existing grid-connected systems easily with intelligent AC coupling scheme

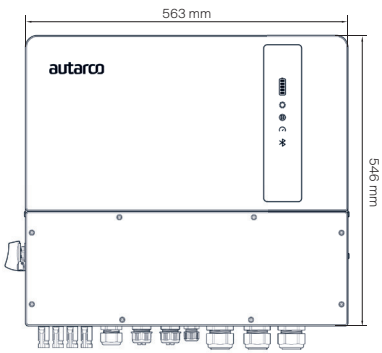


General characteristics

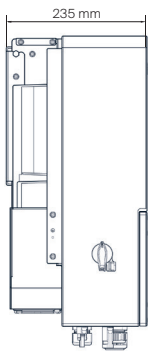
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|-----------------------------|--|
| Dimensions (W x H x D) | 563 x 546 x 235 mm |
| Net Weight | TBD |
| Mounting | Wall bracket |
| Max. site altitude | 2000m |
| IP protection class | IP66 |
| Topology | Transformerless |
| Cooling principle | Intelligent redundant fan-cooling |
| Warranty | 5 years, extendable to 15 years |
| Compatible battery types | Lithium-ion |
| Display | LED + Bluetooth + APP |
| Communication interfaces | 1 x RS485, (Battery) 1 x CAN (Battery) |
| Optional interfaces | 4G, WiFi and LAN |
| DC / AC connection | MC4 / OT Terminal |
| Battery connection | OT Terminal |
| Safety / EMC Standards | IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-3 |
| Operating temperature range | -25°C to +60°C |
| Relative humidity range | 0% to 95% |



Front



Side



PV Input characteristics

| | S2.LQH12000 | S2.LQH15000 | S2.LQH20000 |
|---|-------------|-------------|-------------|
| Recommended max. PV input power (kW) | 19.2 | 24 | 32 |
| Max. input voltage (V) | 1000 | 1000 | 1000 |
| Rated voltage (V) | 600 | 600 | 600 |
| Start-up voltage (V) | 160 | 160 | 160 |
| MPP voltage range (V) | 200 - 850 | 200 - 850 | 200 - 850 |
| Max. input current (A) | 20 | 20 | 20 |
| Max. short circuit current (A) | 30 | 30 | 30 |
| Max. input power per MPPT (kW) | 9 | 9 | 9 |
| MPPT number / Max. input strings number | 4/4 | 4/4 | 4/4 |

Battery

| | | | |
|-------------------------------------|-----------|-----------|-----------|
| Battery voltage range (V) | 120 - 800 | 120 - 800 | 120 - 800 |
| Max. charge / discharge power (kW) | 12 | 15 | 20 |
| Max. charge / discharge current (A) | 50 | 50 | 50 |
| Communication | CAN/RS485 | CAN/RS485 | CAN/RS485 |

Output characteristics (Grid side)

| | | | |
|----------------------------------|--|-------------------|-------------------|
| Rated output power (kW) | 12 | 15 | 20 |
| Max. apparent output power (kVA) | 12 | 15 | 20 |
| Rated grid voltage (V) | 3/N/PE, 380 / 400 | 3/N/PE, 380 / 400 | 3/N/PE, 380 / 400 |
| Rated grid frequency (Hz) | 50 / 60 | 50 / 60 | 50 / 60 |
| Rated grid output current (A) | 18.2 / 17.3 | 22.8 / 21.7 | 30.4 / 28.9 |
| Max. output current (A) | 18.2 / 17.3 | 22.8 / 21.7 | 30.4 / 28.9 |
| Power factor | >0.99 (0.8 leading - 0.8 lagging) | | |
| THDi | <3% | <3% | <3% |
| Grid connection standards | EN 50549-1, VDE4105 CEI 0-21, CEI 0-16, NC-RFG TypeB, NRS 097-2-1 ED 2.1 | | |

Input AC (Grid side)

| | | | |
|----------------------------|-------------------|-------------------|-------------------|
| Max. input power (kW) | 18 | 22.5 | 30 kW |
| Rated input current (A) | 27.3 | 34.2 | 45.6 |
| Rated input voltage (V) | 3/N/PE, 380 / 400 | 3/N/PE, 380 / 400 | 3/N/PE, 380 / 400 |
| Rated input frequency (Hz) | 50 / 60 | 50 / 60 | 50 / 60 |

Output AC (Back-up)

| | | | |
|----------------------------------|------------------------------|-------------------|-------------------|
| Rated output power (kW) | 12 | 15 | 20 |
| Max. apparent output power (kVA) | 2 times of rated power, 10 S | | |
| Back-up switch time | <10 ms | <10 ms | <10 ms |
| Rated output voltage (V) | 3/N/PE, 380 / 400 | 3/N/PE, 380 / 400 | 3/N/PE, 380 / 400 |
| Rated frequency (Hz) | 50 / 60 | 50 / 60 | 50 / 60 |
| Max. Rated output current (A) | 18.2 / 17.3 | 22.8 / 21.7 | 30.4 / 28.9 |
| THDv (@linear load) | <3% | <3% | <3% |

Input generator

| | | | |
|----------------------------|-------------|-------------|-------------|
| Max. input power (kW) | 12 | 15 | 20 |
| Max. input current (A) | 18.2 / 17.3 | 22.8 / 21.7 | 30.4 / 28.9 |
| Rated input frequency (Hz) | 50 / 60 | 50 / 60 | 50 / 60 |

Efficiency

| | |
|--|-------|
| Max. efficiency | 98.5% |
| EU efficiency | 97.5% |
| BAT charged by PV Max. efficiency | 98.5% |
| BAT charged/discharged to AC Max. efficiency | 97.5% |

Protection

| | |
|--------------------------------|------------|
| Anti-islanding protection | Integrated |
| PV over voltage protection | Integrated |
| Short circuit protection | Integrated |
| Output over current protection | Integrated |
| DC switch | Integrated |
| DC reverse-polarity protection | Integrated |
| Battery reverse protection | Integrated |
| AFCI | Integrated |

The specifications contained in this datasheet may deviate slightly from our actual products due to on-going product improvement and are subject to change at any time without prior notice.