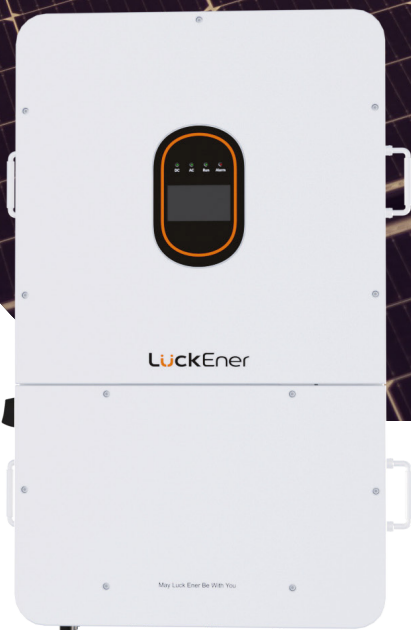


# Hybrid Inverter

20-65kW

# Ei.H020KH-065KH

Three-phase Hybrid Inverter (High voltage)



\* Product appearance may vary



Flexible Design



Safe & Stable



User-friendly

- Colorful touch screen and intelligent APP for friendly and easy operation
- Up to 5 MPPTs with 40A input per channel, compatible with the latest high-power PV modules
- 200% of recommended PV oversizing to achieve higher PV energy harvest
- 160A charge/discharge current, enabling faster charging and strong discharge capability
- Dual independent battery input ports (80A each), compatible with different battery connection schemes
- 2× rated AC power input, supporting full power for both battery charging and load consumption

- GEN port with multiple connections, supporting diesel generator, smart load and AC couple connections
- Switching time <10 ms, providing seamless transition between on-grid and off-grid modes
- Support for optional smart PID recovery and AFCI protection
- IP66 protection rating, ensuring dependable operation in harsh environmental conditions
- Max. 3 units in parallel operation in off-grid mode, enabling scalable and reliable energy systems

| Models                                    | Ei.H020KH<br>-A1.34-P3NV-L                                                         | Ei.H025KH<br>-A1.34-P3NV-L | Ei.H29.9KH<br>-A1.34-P3NV-L | Ei.H030KH<br>-A1.46-P3NV-L | Ei.H035KH<br>-A1.46-P3NV-L | Ei.H040KH<br>-A1.48-P3NV-L | Ei.H49.9KH<br>-A1.48-P3NV-L | Ei.H050KH<br>-A1.510-P3NV-L | Ei.H055KH<br>-A1.510-P3NV-L | Ei.H060KH<br>-A1.510-P3NV-L | Ei.H065KH<br>-A1.510-P3NV-L |
|-------------------------------------------|------------------------------------------------------------------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| PV input data                             |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Recommend max. PV capacity (Wp)           | 40,000                                                                             | 50,000                     | 60,000                      | 60,000                     | 70,000                     | 80,000                     | 100,000                     | 100,000                     | 110,000                     | 120,000                     | 130,000                     |
| Max. PV input power (W)                   | 32,000                                                                             | 40,000                     | 47,840                      | 48,000                     | 56,000                     | 64,000                     | 79,840                      | 80,000                      | 88,000                      | 96,000                      | 104,000                     |
| Max. PV input voltage (V)                 | 1000                                                                               |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated voltage (V)                         | 630                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Start voltage (V)                         | 160                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| MPPT voltage range (V)                    | 150~1000                                                                           |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Max. PV input current (A)                 | 40/20/20                                                                           |                            |                             | 40/40/20/20                |                            |                            | 40/40/40/40                 |                             |                             | 40/40/40/40/40              |                             |
| Max. short-circuit current per MPPT (A)   | 50/30/30                                                                           |                            |                             | 50/50/30/30                |                            |                            | 50/50/50/50                 |                             |                             | 50/50/50/50/50              |                             |
| MPPT number                               | 3                                                                                  |                            |                             | 4                          |                            |                            | 4                           | 4                           | 5                           | 5                           | 5                           |
| No. of PV strings per MPPT                | 2+1+1                                                                              |                            |                             | 2+2+1+1                    |                            |                            | 2+2+2+2                     |                             |                             | 2+2+2+2+2                   |                             |
| Battery input data                        |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Battery type                              | Li-ion                                                                             |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Battery voltage range (V)                 | 135-850                                                                            |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Max. charging current (A)                 | 80*2                                                                               |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Max. discharging current (A)              | 80*2                                                                               |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| AC output/input data(grid side)           |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated output power (W)                    | 20,000                                                                             | 25,000                     | 29,900                      | 30,000                     | 35,000                     | 40,000                     | 49,900                      | 50,000                      | 55,000                      | 60,000                      | 65,000                      |
| Max output power (VA)                     | 22,000                                                                             | 27,500                     | 32,890                      | 33,000                     | 38,500                     | 44,000                     | 54,890                      | 55,000                      | 60,500                      | 66,000                      | 71,500                      |
| Rated output current (A)                  | 30.3/28.9                                                                          | 37.9/36.3                  | 45.4/43.4                   | 45.6/43.5                  | 53.1/50.8                  | 60.7/58                    | 75.7/72.4                   | 75.8/72.5                   | 83.4/79.8                   | 90.9/86.9                   | 98.5/94.2                   |
| Max output current (A)                    | 33.3                                                                               | 41.7                       | 49.8                        | 50.0                       | 58.3                       | 66.7                       | 83.2                        | 83.3                        | 91.7                        | 100.0                       | 108.3                       |
| Max. input power (W)                      | 40,000                                                                             | 50,000                     | 59,800                      | 60,000                     | 70,000                     | 80,000                     | 130,000                     | 130,000                     | 130,000                     | 130,000                     | 130,000                     |
| Max. input current (A)                    | 60.6                                                                               | 75.8                       | 90.6                        | 90.9                       | 106.1                      | 121.2                      | 197.0                       | 197.0                       | 197.0                       | 197.0                       | 197.0                       |
| Operation phase                           | 3L+N+PE                                                                            |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated output voltage (V)                  | 220/380V; 230/400V                                                                 |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated frequency (Hz)                      | 50/60                                                                              |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| THDi                                      | <3%                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Power factor                              | 1(0.8leading~0.8lagging)                                                           |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| AC output (backup)                        |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated output power (W)                    | 30,000                                                                             | 37,500                     | 45,000                      | 45,000                     | 52,500                     | 60,000                     | 65,000                      | 65,000                      | 65,000                      | 65,000                      | 65,000                      |
| Peak power (VA,s)                         | 1.5times, 10s                                                                      |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated output current (A)                  | 45.5                                                                               | 56.8                       | 68.2                        | 68.2                       | 79.5                       | 90.9                       | 98.5                        | 98.5                        | 98.5                        | 98.5                        | 98.5                        |
| Rated output voltage (V)                  | 220/380V; 230/400V                                                                 |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated frequency (Hz)                      | 50/60                                                                              |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Switch time (ms)                          | <10                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Generator data                            |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated input power (W)                     | 20,000                                                                             | 25,000                     | 29,900                      | 30,000                     | 35,000                     | 40,000                     | 49,900                      | 50,000                      | 55,000                      | 60,000                      | 65,000                      |
| Max. apparent input power (VA)            | 45,000                                                                             | 56,250                     | 67,500                      | 67,500                     | 78,750                     | 90,000                     | 97,500                      | 97,500                      | 97,500                      | 97,500                      | 97,500                      |
| Max. input current (A)                    | 68.2                                                                               | 85.2                       | 102.3                       | 102.3                      | 119.3                      | 136.4                      | 147.7                       | 147.7                       | 147.7                       | 147.7                       | 147.7                       |
| Rated input voltage (V)                   | 220/380V; 230/400V                                                                 |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Rated frequency (Hz)                      | 50/60                                                                              |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Efficiency                                |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Safety EMC/Standard                       | 97.6%                                                                              |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| EU efficiency                             | 97%                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Protection                                |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| DC switch                                 | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| DC reverse-polarity connection protection | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Thermal protection                        | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| AC overvoltage/current protection         | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| AC short circuit protection               | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Ground fault circuit interrupter          | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Power network monitoring                  | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Island protection                         | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Ground fault monitoring                   | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Insulation resistance monitoring          | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Residual current detection                | Yes                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| PID recovery                              | Optional                                                                           |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Arc fault circuit interrupter             | Optional                                                                           |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Surge protection                          | AC Typell/DC Typell                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| General                                   |                                                                                    |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Dimensions (W*H*D mm)                     | 560*990*320                                                                        |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Weight (kg)                               | 85                                                                                 |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Noise (dB)                                | <65                                                                                |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Operating temperature (°C)                | -25~60 (>45°C derating)                                                            |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Type of cooling                           | Smart air cooling                                                                  |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Topology                                  | Transformless                                                                      |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Communication                             | RS485/CAN                                                                          |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Permissible altitude (m)                  | 3000 (>2000m derating)                                                             |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Permissible ambient humidity              | 0~100%                                                                             |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Ingress protection (IP) grade             | IP66                                                                               |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Warranty                                  | 5 years; (More info refers to the warranty policy)                                 |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Display                                   | LCD+LED                                                                            |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Grid regulation                           | IEC61727,IEC62116(Additional certifications in progress. See website for updates.) |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |
| Safety EMC/Standard                       | IEC EN 61000-6-3; IEC62920; IEC62109-1/2                                           |                            |                             |                            |                            |                            |                             |                             |                             |                             |                             |