



## HYBRID INVERTER

### Three Phase:

HP3-5K/6K/8K/10K/12KD2 (EN)

HP3-5K/6K/8K/10K/12K/15KL2 (UL)

As the core of the energy storage solution, LIVOLTEK three phase hybrid inverter offers flexible and social-able solutions for both residential and commercial applications. With the ability of scalable battery storage, the high-voltage inverter facilitate powerful energy backup and also present high self-consumption with optimized built-in EMS to reduce energy cost.

### High Performance

- 200% PV oversizing and up to 110% AC output
- 200% overload for backup loads
- Seamless on grid/off grid switching time <10ms

### Flexible Application

- Max. 10 units in parallel for on-grid and off-grid operation
- 100% unbalanced output
- Compatible with generator

### Safe and Reliable

- Type II AC/DC surge protection
- AFCI function optional
- IP65 Ingress protection

### Safe and Reliable

- Peak shaving mode
- Support half-wave loads
- Remote control and upgrade

HYBRID INVERTER

THREE-PHASE: HP3-5K/6K/8K/9.9K/10K/12K D2 (EN)

INVERTER

| Model                         | HP3-5KD2                                                                                                                                                                                                                                                                                                                                                                                                                       | HP3-6KD2 | HP3-8KD2 | HP3-9.9KD2 | HP3-10KD2 | HP3-12KD2 |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|------------|-----------|-----------|
| PV Input                      |                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Max. PV Input Power           | 10000Wp                                                                                                                                                                                                                                                                                                                                                                                                                        | 12000Wp  | 16000Wp  | 20000Wp    | 20000Wp   | 24000Wp   |
| Max. PV Input Voltage         | 1000V                                                                                                                                                                                                                                                                                                                                                                                                                          |          |          |            |           |           |
| Nominal Input Voltage         | 600V                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |            |           |           |
| MPPT Voltage Range            | 150 V – 950 V                                                                                                                                                                                                                                                                                                                                                                                                                  |          |          |            |           |           |
| Start-up Voltage              | 180V                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |            |           |           |
| No. of MPPTs/Strings per MPPT | 2 / (1+1)                                                                                                                                                                                                                                                                                                                                                                                                                      |          |          | 2 / (2+1)  |           |           |
| Max. PV Current               | 16A / 16A                                                                                                                                                                                                                                                                                                                                                                                                                      |          |          | 32A / 16A  |           |           |
| Max. Short Circuit Current    | 20 / 20A                                                                                                                                                                                                                                                                                                                                                                                                                       |          |          | 40A / 20A  |           |           |
| AC @ Grid                     |                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Max. AC Input Power           | 21000W                                                                                                                                                                                                                                                                                                                                                                                                                         | 21000W   | 21000W   | 21000W     | 21000W    | 21000W    |
| Max. AC Input Current         | 31.0A                                                                                                                                                                                                                                                                                                                                                                                                                          | 31.0A    | 31.0A    | 31.0A      | 31.0A     | 31.0A     |
| Nominal AC Output Power       | 5000W                                                                                                                                                                                                                                                                                                                                                                                                                          | 6000W    | 8000W    | 10000W     | 10000W    | 12000W    |
| Nominal AC Voltage            | 3W + N + PE, 380V, 400V, 415V                                                                                                                                                                                                                                                                                                                                                                                                  |          |          |            |           |           |
| AC Frequency                  | 45 – 55Hz / 55 – 65Hz                                                                                                                                                                                                                                                                                                                                                                                                          |          |          |            |           |           |
| Max. AC Current               | 7.6A                                                                                                                                                                                                                                                                                                                                                                                                                           | 9.1A     | 12.1A    | 15.1A      | 15.2A     | 18.2A     |
| THDi @Rated Power[%]          | < 3%                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |            |           |           |
| Power Factor                  | ~1 (Adjustable from 0.8 Leading to 0.8 Lagging)                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| EPS Output @ Off Grid         |                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Nominal EPS Power             | 5000W                                                                                                                                                                                                                                                                                                                                                                                                                          | 6000W    | 8000W    | 9900W      | 10000W    | 12000W    |
| EPS Peak Power (10s)          | 5500W                                                                                                                                                                                                                                                                                                                                                                                                                          | 6600W    | 8800W    | 10900W     | 11000W    | 13200W    |
| Nominal Output Voltage        | 3W + N + PE, 220 / 380V, 230 / 400V, 240 / 415V                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Nominal Frequency             | 50Hz / 60Hz                                                                                                                                                                                                                                                                                                                                                                                                                    |          |          |            |           |           |
| Nominal Output Current        | 7.3A                                                                                                                                                                                                                                                                                                                                                                                                                           | 8.7A     | 11.6A    | 14.4A      | 14.5A     | 17.4A     |
| THDv @Linear Power[%]         | < 3%                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |            |           |           |
| Battery Input                 |                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Battery Type                  | Lithium                                                                                                                                                                                                                                                                                                                                                                                                                        |          |          |            |           |           |
| Battery Voltage               | 100V – 700 V                                                                                                                                                                                                                                                                                                                                                                                                                   |          |          |            |           |           |
| Max. Charge/Discharge Current | 50A / 50A                                                                                                                                                                                                                                                                                                                                                                                                                      |          |          |            |           |           |
| Communication with BMS        | CAN                                                                                                                                                                                                                                                                                                                                                                                                                            |          |          |            |           |           |
| Efficiency                    |                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Max. Efficiency               | 98.20%                                                                                                                                                                                                                                                                                                                                                                                                                         | 98.20%   | 98.20%   | 98.20%     | 98.20%    | 98.20%    |
| Euro Efficiency               | 97.20%                                                                                                                                                                                                                                                                                                                                                                                                                         | 97.50%   | 97.90%   | 97.90%     | 97.90%    | 97.90%    |
| General Data                  |                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |            |           |           |
| Dimension (W*H*D)             | 540*470*210 mm                                                                                                                                                                                                                                                                                                                                                                                                                 |          |          |            |           |           |
| Weight                        | 26kg                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |            |           |           |
| Cooling                       | Natural Convection                                                                                                                                                                                                                                                                                                                                                                                                             |          |          |            |           |           |
| Protection Rating             | IP65                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |            |           |           |
| Mounting Method               | Wall-mounted                                                                                                                                                                                                                                                                                                                                                                                                                   |          |          |            |           |           |
| Operating Temperature Range   | -25 °C to +60 °C                                                                                                                                                                                                                                                                                                                                                                                                               |          |          |            |           |           |
| Display                       | LED & APP                                                                                                                                                                                                                                                                                                                                                                                                                      |          |          |            |           |           |
| Communication                 | Wi-Fi / DO / DI / RS485                                                                                                                                                                                                                                                                                                                                                                                                        |          |          |            |           |           |
| Protection Function           | Islanding Protection, PV DC Reverse Polarity Protection, DC Short Circuit Protection Device, AC Short Circuit Protection Device, PV DC Overcurrent Protection, AC Overcurrent Protection, Leakage Current Protection, Over/Under Frequency Protection, Over/Under Voltage Protection, Insulation Resistance Protection, Over-Temperature Protection, AC Current Imbalance Protection, Arc Detection Protection, Buzzer Warning |          |          |            |           |           |
| Standard                      | EN 62109-1/2, EN 62920:2017+A11+A1, EN IEC 61000-6-1/2/3/4, IEC61727, IEC62116, EN50549-1, CEI 0-21, PTPIREE 2021.04.28 (Eu) 2016_631 (RfG)), UNE 217001/217002, NTS Type A, VDE-AR-N-4105:2018, DIN VDE V 0124-100:2020-06, IEC 61683                                                                                                                                                                                         |          |          |            |           |           |

HYBRID INVERTER

HP3-5K/6K/8K/10K/12K/15K L2

INVERTER

| Model                         | HP3-5KL2                                                                                                                                                                                                                                                                                                                                                                                                                         | HP3-6KL2 | HP3-8KL2        | HP3-10KL2 | HP3-12KL2       | HP3-15KL2 |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|-----------|-----------------|-----------|
| PV Input                      |                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| Max. PV Input Power           | 10000Wp                                                                                                                                                                                                                                                                                                                                                                                                                          | 12000Wp  | 16000Wp         | 20000Wp   | 24000Wp         | 30000Wp   |
| Max. PV Input Voltage         | 1000V                                                                                                                                                                                                                                                                                                                                                                                                                            |          |                 |           |                 |           |
| Nominal Input Voltage         | 380V                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                 |           |                 |           |
| MPPT Voltage Range            | 150 V ~ 950 V                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                 |           |                 |           |
| Start-up Voltage              | 180 V                                                                                                                                                                                                                                                                                                                                                                                                                            |          |                 |           |                 |           |
| No. of MPPTs/Strings per MPPT | 2 / (2+1)                                                                                                                                                                                                                                                                                                                                                                                                                        |          | 3 / (2+2+1)     |           | 3 / (2+2+2)     |           |
| Max. PV Current               | 32A / 16A                                                                                                                                                                                                                                                                                                                                                                                                                        |          | 32A / 32A / 16A |           | 32A / 32A / 32A |           |
| Max. Short Circuit Current    | 40A / 20A                                                                                                                                                                                                                                                                                                                                                                                                                        |          | 40A / 40A / 20A |           | 40A / 40A / 40A |           |
| AC @ Grid                     |                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| Nominal AC Output Power       | 5000W                                                                                                                                                                                                                                                                                                                                                                                                                            | 6000W    | 8000W           | 10000W    | 12000W          | 15000W    |
| Max. AC Input Power           | 12000W                                                                                                                                                                                                                                                                                                                                                                                                                           | 12000W   | 17000W          | 23000W    | 23000W          | 23000W    |
| Max. AC Input Current         | 31.0A                                                                                                                                                                                                                                                                                                                                                                                                                            | 31.0A    | 43.5A           | 58.0A     | 58.0A           | 58.0A     |
| Nominal AC Output Power       | 5000W                                                                                                                                                                                                                                                                                                                                                                                                                            | 6000W    | 8000W           | 10000W    | 12000W          | 15000W    |
| Nominal AC Voltage            | 3W+N+PE, 208/220/230V                                                                                                                                                                                                                                                                                                                                                                                                            |          |                 |           |                 |           |
| AC Frequency                  | 50 Hz / 60 Hz                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                 |           |                 |           |
| Max. AC Current               | 13.2A                                                                                                                                                                                                                                                                                                                                                                                                                            | 15.8A    | 21.0A           | 26.3A     | 31.5A           | 39.4A     |
| THDi @Rated Power[%]          | < 3%                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                 |           |                 |           |
| Power Factor                  | ~1 (Adjustable from 0.8 Leading to 0.8 Lagging)                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| EPS Output @ Off Grid         |                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| Nominal EPS Power             | 5000W                                                                                                                                                                                                                                                                                                                                                                                                                            | 6000W    | 8000W           | 10000W    | 12000W          | 15000W    |
| EPS Peak Power (10s)          | 10.7kW                                                                                                                                                                                                                                                                                                                                                                                                                           |          | 20.0kW          |           | 22.7kW          |           |
| Nominal Output Voltage        | 3W+N+PE, 208/220/230V                                                                                                                                                                                                                                                                                                                                                                                                            |          |                 |           |                 |           |
| Nominal Frequency             | 50Hz / 60Hz                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                 |           |                 |           |
| Nominal Output Current        | 12.6A                                                                                                                                                                                                                                                                                                                                                                                                                            | 15.1A    | 20.1A           | 25.2A     | 30.2A           | 37.7A     |
| THDv @Linear Power[%]         | < 3%                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                 |           |                 |           |
| Battery Input                 |                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| Battery Type                  | Lithium                                                                                                                                                                                                                                                                                                                                                                                                                          |          |                 |           |                 |           |
| Battery Voltage               | 100V ~ 700 V                                                                                                                                                                                                                                                                                                                                                                                                                     |          |                 |           |                 |           |
| Max. Charge/Discharge Current | 50A / 50A                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                 |           |                 |           |
| Communication with BMS        | CAN                                                                                                                                                                                                                                                                                                                                                                                                                              |          |                 |           |                 |           |
| Efficiency                    |                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| Max. Efficiency               | 98.10%                                                                                                                                                                                                                                                                                                                                                                                                                           | 98.10%   | 98.10%          | 98.20%    | 98.20%          | 98.20%    |
| Euro Efficiency               | 97.70%                                                                                                                                                                                                                                                                                                                                                                                                                           | 97.70%   | 97.70%          | 97.80%    | 97.80%          | 97.80%    |
| General Data                  |                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |                 |           |                 |           |
| Dimension (W*H*D)             | 540*470*210 mm                                                                                                                                                                                                                                                                                                                                                                                                                   |          | 595*485*235 mm  |           |                 |           |
| Weight                        | 26kg                                                                                                                                                                                                                                                                                                                                                                                                                             |          | 38kg            |           |                 |           |
| Cooling                       | Natural Convection                                                                                                                                                                                                                                                                                                                                                                                                               |          | Intelligent Fan |           |                 |           |
| Protection Rating             | IP65                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                 |           |                 |           |
| Mounting Method               | Wall-mounted                                                                                                                                                                                                                                                                                                                                                                                                                     |          |                 |           |                 |           |
| Operating Temperature Range   | -25 °C to +60 °C                                                                                                                                                                                                                                                                                                                                                                                                                 |          |                 |           |                 |           |
| Display                       | LED & APP                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                 |           |                 |           |
| Communication                 | Wi-Fi / DO / DI / RS485                                                                                                                                                                                                                                                                                                                                                                                                          |          |                 |           |                 |           |
| Protection Function           | Islanding Protection, PV DC Reverse Polarity Protection, DC Short Circuit Protection Device, AC Short Circuit Protection, Device, PV DC Overcurrent Protection, AC Overcurrent Protection, Leakage Current Protection, Over/Under Frequency, Protection, Over/Under Voltage Protection, Insulation Resistance Protection, Over-Temperature Protection, AC Current Imbalance Protection, Arc Detection Protection, Buzzer Warning |          |                 |           |                 |           |
| Standard                      | EN 62109-1/2, EN 62920:2017+A11+A1, EN IEC 61000-6-1/2/3/4, IEC61727, IEC62116                                                                                                                                                                                                                                                                                                                                                   |          |                 |           |                 |           |