

# DATASHEET

## 5K-2P-N

### Residential Hybrid Inverter

Inverter Model:

Sol-Ark-5K-48-ST

SKU:

5K-2P

| Input Data (PV)                             |  |
|---|--|
| Max. Allowed PV Power (STC)                 | 6,500W   |
| Rated MPPT Operating Voltage Range          | 175 - 425V   |
| MPPT Voltage Range                          | 150 - 500V   |
| Startup Voltage                             | 125V   |
| Max. Input Voltage <sup>1</sup>             | 500V   |
| Max. Operating Input Current per MPPT       | 10A (self-limiting)  |
| No. of MPP Trackers                         | 2  |
| No. of PV Strings per MPPT                  | 2  |
| Max. AC Coupled Input                       | 9,600W   |
| Output Data (AC)                            |  |
| Nominal AC Voltage                          | 120/240V, 120/208V, 220V   |
| Grid Frequency                              | 50 / 60Hz  |
| Real Power, max continuous                  | 5,000W   |
| Max. Output Current                         | 20.8A  |
| Peak Apparent Power (10s, off-grid)         | 16,000VA @ 240V  |
| Peak Apparent Power (100ms, off-grid)       | 25,000VA @ 240V  |
| Max Output Fault Current (100ms)            | 104A   |
| Max. Grid Passthrough Current               | 63A  |
| Power Factor Output Range                   | +/- 0.9 adjustable   |
| Backup Transfer Time                        | 4ms  |
| CEC Efficiency                              | 96.5%  |
| Max Efficiency                              | 97.5%  |
| Design (DC to AC)                           | Transformerless DC   |
| Stackable                                   | No   |
| Battery Input Data (DC)                     |  |
| Battery Technologies                        | Lithium / Lead Acid  |
| Nominal DC Voltage                          | 48V  |
| Operating Voltage Range                     | 43 - 63V   |
| Capacity                                    | 50 – 9900Ah  |
| Max. Battery Charge / Discharge Current     | 120A   |
| Charging Controller                         | 3-Stage with Equalization  |
| Grid to Battery Charging Efficiency         | 96.0%  |
| External Battery Temperature Sensor (BTS)   | Included   |
| Automatic Generator Start (AGS)             | 2 Wire Start - Integrated  |
| BMS Communication                           | CANBus & RS485 MODBUS  |
| General Data                                |  |
| Dimensions (H x W x D)                      | 750 x 450 x 254 mm (29.5 x 17.7 x 10 in)   |
| Weight                                      | 35.4 kg / 78 lb.   |
| Enclosure                                   | IP65 / NEMA 3R   |
| Ambient Temperature                         | -25~55°C, > 45°C Derating  |
| Noise                                       | < 30 dB @ 25°C (77°F)  |
| Idle consumption - No Load                  | 60W  |
| Communication and Monitoring                | Wi-Fi & LAN Hardware Included  |
| Standard Warranty                           | 10 Years   |
| Protection and Certifications               |  |
| Certifications and Listings                 | UL1741-2010/2018, IEEE1547a 2003/2014, FCC 15 Class B, UL1741SB, CA Rule 21, HECO Rule 14H |
| PV DC Disconnect Switch – NEC 240.15        | Integrated   |
| Ground Fault Detection – NEC 690.5          | Integrated   |
| PV Rapid Shutdown Control – NEC 690.12      | Integrated   |
| PV Arc Fault Detection – NEC 690.11         | Integrated   |
| PV Input Lightning Protection               | Integrated   |
| PV String Input Reverse Polarity Protection | Integrated   |
| AC Output Breaker - 63A                     | Integrated   |
| 250A Battery Breaker / Disconnect           | Integrated   |
| Surge Protection                            | DC Type II / AC Type II  |

1. See Installation Guide for more details on sizing array strings. The highest input voltage is based on the open-circuit voltage of the array at the minimum design temperature.