FRANKLINWH

# aPower S

## Complete solar and battery system

The aPower S is a battery storage device with integrated inverters to support a direct connection to solar (PV) panels. The front wiring design makes installation easier and more efficient.

The aPower S also supports parallel AC-coupled connection with FranklinWH aPower 2 batteries to expand power and capacity for homes at the same time. It can be flexibly deployed according to customer requirements. Excellent load adaptability provides the best backup experience to users.

aPower S has a 15 kWh capacity, which can provide whole home backup with a single battery. It provides a 60 MWh throughput or 15-year warranty, helping users to easily achieve reliable energy independence and freedom over the long term.


- Four built-in MPPTs
- 15 A per MPPT
- RTE 90.5%
- Safer LFP battery cell chemistry
- Built-in hybrid inverter
- 15 kWh per unit, up to 225 kWh (15 units) per aGate
- Max 11.5 kW continuous / 15 kW peak for 10 seconds
- Built-in heating blanket ensures reliable cold-weather performance
- Stable operations in extreme 131° F (55° C)
- IP67 weather protection

## PERFORMANCE SPECIFICATIONS

| | |
|---|---|
| Name | aPower S |
| SKU | APRS-10K15V1-US |
| Nameplate Model | aPower S-10 |
| Certification / CEC Listing Name | aPower Syyy |
| Battery Chemistry | Lithium Iron Phosphate (LFP) |
| Usable System Energy | 15 kWh[1] per unit, up to 15 units per aGate |
| Aggregate Warrantied Throughput | 60 MWh |
| Max Real Power (Charge) | 8 kW continuous[2] |
| Max Real Power (Discharge)<br>- With PV Input<br>- Battery Only | <br>11.5 kW continuous[2]<br>10 kW continuous[2] |
| Nominal AC Voltage | 120 / 240 V, 120 / 208 V, 60 Hz |
| Coupling | Hybrid-Coupled |
| Phase | 2 W+N+PE |
| Round Trip Efficiency (Solar – Battery – Load) | 90.5%[1] |
| Solar to Home / Grid - CEC Efficiency | 97.5%[3] |
| Maximum Short-Circuit Current Rating | 10 kA |
| Work Modes | Self-Consumption<br>Time of Use<br>Emergency Backup |

| | |
|---|---|
| Noise Emission | 30 dBA Typical<br>45 dBA Maximum |
| Flood Resistance (IP67) | Up to 29" from the aPower S base |
| AC Metering | Revenue Grade (+/- 0.5%, ANSI C12.20) |
| Safety Protections | Integrated arc fault circuit interrupter(AFCI),<br>Isolation Monitor Interrupter |
| User Interface | FranklinWH App |
| Warranty[4] | 15 years or 60 MWH throughput |

### Solar Technical Specifications

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|---|---|
| Maximum Solar STC Input | 20 kW |
| Withstand Voltage | 600 Vdc |
| PV DC Input Voltage Range | 60 - 600 Vdc |
| PV DC MPPT Voltage Range | 90 - 480 Vdc |
| MPPTs | 4 |
| Maximum Current per MPPT (Imp) | 15 A[5] |
| Maximum Short Circuit Current per MPPT (Isc) | 20 A |
| Maximum Power per MPPT | 5 kW |
| Maximum Continuous Total MPPT Output | 15 kW |

## PERFORMANCE SPECIFICATIONS

### Power Rated

| | | | | | |
|---|---|---|---|---|---|
| Nominal Output Power (AC) | 5 kW | 7.6 kW | 9.6 kW | 10 kW | 11.5 kW |
| Maximum Apparent Power | 5 kVA | 7.6 kVA | 9.6 kVA | 11.5 kVA | 11.5 kVA |
| Maximum Continuous Current | 21 A | 32 A | 40 A | 48 A | 48 A |
| Overcurrent Protection Device | 30 A | 40 A | 50 A | 60 A | 60 A |
| Maximum Continuous Input Power | 5 kW | 7.6 kW | 8 kW | 8 kW | 8 kW |
| Power Factor | ±1 | ±1 | ±1 | ±0.87 | ±1 |

### Off-Grid Specifications[6]

| | |
|---|---|
| THDU | <1% |
| Voltage Regulation Accuracy | ±1% |
| Frequency Accuracy | ±0.1 Hz |
| Max Half-Wave Load Capability | 5 kW[2] |
| Max Peak Output Power | 15 kW @ 10 S[2] |
| Max Transient load capacity | 25 kW @ 1 S[2] |
| Load Imbalance Ratio | 100% |
| Load Start Capability | 185 A LRA[2] |

## COMPLIANCE INFORMATION

| | |
|---|---|
| Certifications | UL9540; UL9540A; UL1973; UL1741; UL1741 SB; UL1741 PCS; UL 1741 Multimode; UL 1741 CRD; UL 3141; UL1699B; UL1998; UN38.3; IEEE 1547; IEEE 1547.1; CSA 22.2 No.107.1; |
| Seismic | AC 156, OSHPD, IEEE 693-2005 (high) |
| Environmental | California Proposition 65 |
| Emissions | FCC Part 15 Class B, ICES 003 |

## ENVIRONMENTAL SPECIFICATIONS

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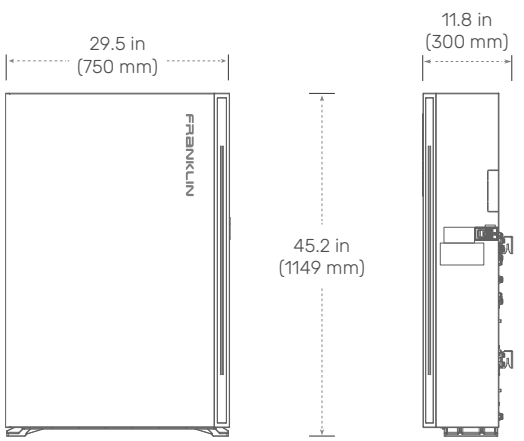
|---|---|
| Enclosure Type | Type 3R |
| Ingress Protection | IP55 (Wiring)<br>IP67 (Battery Pack & Inverter) |
| Operating Temperature | -4 °F to 122 °F (-20 °C to 50 °C)<br>Operates up to 131 °F (55 °C) derated output |
| Operating Humidity (RH) | Up to 100% RH, condensing |
| Altitude | Maximum 9,843 ft (3,000 m) |
| Environment | Indoor / Outdoor |

## MECHANICAL SPECIFICATIONS

| | |
|---|---|
| Dimensions (H × W × D) | 45.2 in × 29.5 in × 11.8 in<br>(1149 mm × 750 mm × 300 mm) |
| Weight, aPower S complete | 388 lbs (176 kg) |
| Weight, without Cover | 365 lbs (166 kG) |
| Mounting | Wall or floor mount |
| Cooling | Natural |




1. At beginning of life: 3 kW charge/discharge power, 77° F (25° C).
2. At rated power of 11.5 kW.
3. Tested in accordance with the CEC-weighted efficiency approach.
4. For more details, please refer to the FranklinWH System Limited Warranty for End Users available in the Documentation Center on the FranklinWH website.
5. If the selected PV module has an IMPP exceeding 15 A, the MPPT will automatically limit the current to 15 A. The total open-circuit voltage must not exceed the maximum input voltage of 600 V.
6. The output performance is designed with reference to IEC 62040-3 (Uninterruptible Power Systems - Part 3: Method of specifying the performance and test requirements. A number of core indicators meet the requirements of high-performance UPS.

For aPower connection, use ONLY copper conductors, rated to a minimum of 194° F (90° C).

**Note:**
At launch, the aPower S will only be compatible with external RSD transmitter products. It is certified and listed as a Photovoltaic Rapid Shutdown System (PVRSS) when installed with approved equipment. For a list of compatible devices and installation requirements, please refer to the Documentation Center or contact engineering@franklinwh.com.

The aPower S (SKU: APRS-10K15V1-US) is available in the United States and Canada. For product availability in other regions, please visit our official website or contact a local authorized dealer.

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