aerl | SOLINTEG

DATASHEET

All-In-One

Commercial Energy Storage System



25–50 kW	64.3–112.5 kWh	<10 ms	IP55
Power range	Storage capacity	Off-grid switching	Cabinet, outdoor

All-In-One

Commercial Energy Storage System

Hybrid inverter, battery modules, BMS, fire suppression and thermal management in one outdoor cabinet.

Product highlights

High energy performance

- 20 A inputs with 4 MPPTs for optimised PV yield
- 150 A charge/discharge for high-power cycling
- 100% three-phase unbalance for diverse loads
- 150% backup overload for surge protection

Flexible power architecture

- Half-wave load support for industrial applications
- Off-grid paralleling, up to 10 units
- Diesel generator compatibility for weak-grid sites
- Smart control for EV chargers and heat pumps

Robust safety & durability

- Four-level fire protection with multi-sensor detection
- IP66 inverter and IP55 cabinet for outdoor resilience
- C4/C5 anti-corrosion for challenging environments
- Integrated distribution with breakers, SPD, and UPS power

Intelligent control & O&M

- Built-in EMS with multi-mode ToU scheduling
- Dynamic pricing for automated energy optimisation
- < 10 ms seamless off-grid switching
- Remote monitoring and firmware updates

System Model	AIO-25K	AIO-29.9K	AIO-30K	AIO-40K	AIO-50K
Rated AC Output Power [kW]	25.0	29.9	30.0	40.0	50.0
Dimensions, inverter fitted [W × H × D mm]	1376 × 2262 × 1140				
Battery Expansion [kWh]	64.3 / 80.3 / 96.4 / 112.5				
Operating Temperature Range [°C]	−20 to 50				
Relative Humidity [%]	5–95 (non-condensing)				
Max. Operation Altitude [m]	3000				
Cooling	Air-conditioner with 2 kW cooling and 2 kW heating				
Noise Level [dB]	< 65				
Display	LED & OLED				
Communication	CAN, RS485				

Hybrid Inverter Model	M2HT-25-150	M2HT-29.9-150	M2HT-30-150	M2HT-40-150	M2HT-50-150
PV Input					
Max. PV Array Power [kWp]	50	60	60	80	80
Max. PV Input Voltage * [V]	1000*				
Rated PV Input Voltage [V]	620				
Start-up Voltage [V]	135				
MPPT Operating Voltage Range * [V]	200–950*				
No. of MPP Trackers	4	4	4	4	4
No. of Strings per MPPT	2/2/2/2	2/2/2/2	2/2/2/2	2/2/2/2	2/2/2/2
Max. Input Current per MPPT [A]	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40
Max. Short-circuit Current per MPPT [A]	50/50/50/50	50/50/50/50	50/50/50/50	50/50/50/50	50/50/50/50

Hybrid Inverter Model	M2HT-25-150	M2HT-29.9-150	M2HT-30-150	M2HT-40-150	M2HT-50-150
Grid Side (On-Grid)					
Rated Output Power [kW]	25.0	29.9	30.0	40.0	50.0
Max. Output Apparent Power [kVA]	25.0	29.9	30.0	40.0	50.0
Rated AC Voltage [V]	3L/N/PE; 220/380 V; 230/400 V; 240/415 V				
Rated AC Frequency [Hz]	50/60				
Rated Output Current [A]	37.9/36.2/34.7	45.3/43.3/41.5	45.5/43.5/41.7	60.6/58/55.6	75.8/72.5/69.4
Power Factor	0.8 leading ... 0.8 lagging				
THDi (@Rated Power)	< 3%				
Back-up Side (Off-Grid)					
Rated Output Power [kW]	25.0	29.9	30.0	40.0	50.0
Peak Output Apparent Power [kVA]	37.5 @ 10 s	45 @ 10 s	45 @ 10 s	60 @ 10 s	75 @ 10 s
Rated Output Voltage [V]	3L/N/PE; 220/380 V; 230/400 V; 240/415 V				
Rated Output Frequency [Hz]	50/60				
Rated Output Current [A]	37.9/36.2/34.7	45.3/43.3/41.5	45.5/43.5/41.7	60.6/58/55.6	75.8/72.5/69.4
On/Off-grid Switching Time	< 10 ms				
THDv (@Linear Load)	< 3%				
Generator Side					
Max. Input Apparent Power [kVA]	30.0	36.0	36.0	48.0	60.0
Rated Input Voltage [V]	3L/N/PE; 220/380 V; 230/400 V				
Rated Input Frequency [Hz]	50/60				
Max. Input Current [A]	45.5	54.5	54.5	72.7	90.9
Efficiency					
MPPT Efficiency	99.90%				
Max. Efficiency	97.80%				
European Efficiency	97.40%				
General Data					
Dimensions [W × H × D mm]	919 × 739 × 305				
Weight [kg]	89				
Ingress Protection	IP66				
Standby Self-consumption [W]	< 40				

Battery Model	S64	S80	S96	S112
Battery Type	$LiFePO_4$ / 314 Ah			
Battery Module Quantity	4 Packs	5 Packs	6 Packs	7 Packs
Rated Energy [kWh]	64.3	80.3	96.4	112.5
Depth of Discharge	90%			
Rated Voltage [V]	204.8	256	307.2	358.4
Operating Voltage Range [V]	166.4–233.6	208–292	249.6–350.4	291.2–408.8
Max. Charge/Discharge Current [A]	150/150			
Dimensions [W × H × D mm]	1050 × 2262 × 1140			
Weight [kg]	1101	1214	1327	1440
Ingress Protection	IP55			

* Max. operating PV input voltage is 950 V. Between 950 V and 1000 V the inverter waits (does not operate); above 1000 V it is damaged.

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