



Hybrid Inverter 75–125kW

M2HT-75/80/99/100/125K-300

48A

Max. PV Input Current

100%

Unbalanced Output

300A

Max. Charge/Discharge

- Commercial Application
- Three-Phase System
- High-Voltage Battery
- 6 MPPT Inputs

Product Highlights



High Power & Performance

- 200% PV oversizing for higher yield
- 300A charge/discharge for high-capacity battery
- 165KVA backup peak for 10 seconds
- 24A PV input current per string



Advanced Energy Management

- AIEMS with PV forecasting
- Dynamic pricing & ToU optimization
- Accurate export control compliance
- Six preset operating modes



System Integration & Flexibility

- Dual independent battery ports
- On-grid / off-grid / parallel support
- Support diesel generator connection
- 100% unbalanced & half-wave loads



Industrial Reliability & Protection

- IP66 & C4 outdoor durability
- 330A high-current contactor
- <20 ms seamless transfer
- Auto-reverse fan dust removal



Australian Energy Research Laboratories

📍 1/75 Bluestone Circuit, Seventeen Mile Rocks, QLD, 4073.

✉ sales@aerl.com.au

🌐 www.aerl.com.au

AERL reserves the right to change any product, product specifications and data without notice to improve reliability, function or design or otherwise.

Copyright © 2026 AERL Pty. Ltd. All Rights Reserved.

Hybrid Inverter 75–125kW

M2HT-75/80/99/100/125K-300

Models	M2HT-75K-300	M2HT-80K-300	M2HT-99K-300	M2HT-100K-300	M2HT-125K-300
PV Side					
Max. PV Array Power [kWp]	150	160	200	200	250
Max. PV Input Voltage * [V]	1000*				
Rated PV Input Voltage [V]	620				
Start-up Voltage [V]	180				
MPPT Operating Voltage Range * [V]	160–950*	160–950*	160–950*	160–950*	160–950*
No. of MPP Trackers	6	6	6	6	6
No. of Strings per MPPT	3	3	3	3	3
Max. Input Current per MPPT [A]	6 x 48	6 x 48	6 x 48	6 x 48	6 x 48
Max. Short-circuit Current per MPPT [A]	6 x 60	6 x 60	6 x 60	6 x 60	6 x 60
Battery Side					
Battery Type	Lithium-Ion				
Battery Voltage Range [V]	300–950				
No. of Battery Input	1 or 2				
Max. Charge/Discharge Current [A]	300 or 150+150				
Max. Charge/Discharge Power [kW]	75/75	80/80	100/100	100/100	125/125
Grid Side (On-Grid)					
Rated Output Power [kW]	75.0	80.0	99.0	100.0	125.0
Max. Output Apparent Power [kVA]	75.0	80.0	99.0	100.0	125.0
Rated AC Voltage [V]	3L/N/PE; 220/380V; 230/400V; 240/415V				
Rated AC Frequency [Hz]	50/60				
Rated Output Current [A]	113.9/108.3/104.3	121.6/115.5/111.1	150.4/142.9/137.7	151.9/144.3/139.1	189.9/180.4/173.9
Max. Output Current [A]	113.9	121.6	150.4	151.9	189.9
Power Factor	0.8 leading ... 0.8 lagging				
THDi (@Rated Power)	<3%				
Max. Input Apparent Power ** [kVA]	150.0	160.0	198.0	200.0	207.0
Rated AC Voltage [V]	3L/N/PE; 220/380V; 230/400V; 240/415V				
Rated AC Frequency [Hz]	50/60				
Max. AC Input Current [A]	227.8	227.8	243.1	243.1	273.4
Back-up Side (Off-Grid)					
Rated Output Power [kW]	75.0	80.0	99.0	100.0	125.0
Peak Output Apparent Power [kVA]	165 @10S	165 @10S	165 @10S	165 @10S	165 @10S
Rated Output Voltage [V]	3L/N/PE; 220/380V; 230/400V; 240/415V				
Rated Output Frequency [Hz]	50/60				
Rated Output Current [A]	113.9/108.3/104.3	121.6/115.5/111.1	150.4/142.9/137.7	151.9/144.3/139.1	189.9/180.4/173.9
On/Off-grid Switching Time [ms]	< 20ms				
THDv (@Linear Load)	<3%				
Efficiency					
MPPT Efficiency	99.90%				
Max. Efficiency	98.10%				
European Efficiency	97.50%		97.60%		
Protection					
Integrated Protection	DC reverse polarity protection / Battery input reverse connection protection / Insulation resistance protection / Surge protection(DC: Type I+II, AC: Type II) / Over-temperature protection / Residual current protection / Islanding protection / AC over-voltage protection / Overload protection / AC short-circuit protection				
General Data					
Dimensions [W×H×D mm]	1226×932×356				
Weight [KG]	89				
Ingress Protection	IP66				
Anti-corrosion Degree	C4				
Standby Self-consumption [W]	< 35				
Topology [°C]	Transformerless				
Operating Temperature Range [%]	-30–60				
Relative Humidity [m]	0–100				
Max. Operation Altitude	3000				
Over Voltage Categoror	II(PV+Battery), III(Mains)				
Cooling	Smart Fan				
Display	LED & OLED				
Communication	CAN, RS485				

* Max. PV input voltage is 950V, otherwise inverter will be waiting;

** Max input apparent power means the maximum power imported from the grid used to satisfy the backup loads and charge the battery;

Australian Energy Research Laboratories

1/75 Bluestone Circuit, Seventeen Mile Rocks, QLD, 4073.

sales@aerl.com.au

www.aerl.com.au

AERL reserves the right to change any product, product specifications and data without notice to improve reliability, function or design or otherwise. Copyright © 2026 AERL Pty. Ltd. All Rights Reserved.