

FHM Series

3-8kW Hybrid Inverter



Maximized Energy Harvesting

- 160% DC oversizing boosts solar capture
- Starts at 80V for more generation time
- Continuous 110% AC overloading sustains power
- 10ms UPS-level switch secures supply



Engineered for Versatility

- Wide 85-450V range fits diverse batteries
- IP65 protects both indoors and outdoors
- Silent 25dB operation for comfort



Simplified Interaction

- Remote upgrades maintain system health
- Solinteg I-light for quick status checks
- OLED and App for easy control



Intelligent Energy Dynamics

- Five work modes for diverse use
- Six charge/discharge intervals optimize control
- Centralized smart management for efficiency

Single Phase Hybrid

Model

Model	FHM-3k-HY-1P	FHM-3.6k-HY-1P	FHM-4.2k-HY-1P	FHM-5k-HY-1P	FHM-6k-HY-1P	FHM-8k-HY-1P
PV Input						
Recommended Maxinput power [kW]	4.80	5.76	6.72	8.00	9.60	12.80
Start-up voltage [V]	80	80	80	80	80	80
Max.DC input voltage* [V]	600*	600*	600*	600*	600*	600*
Rated DC input voltage [V]	360	360	360	360	360	360
MPPT voltage range* [V]	100-550*	100-550*	100-550*	100-550*	100-550*	100-550*
No.of MPP trackers	1	1	2	2	2	2
No.of DC inputs per MPPT	1	1	1/1	1/1	1/1	1/1
Maxinput current [A]	15	15	15/15	15/15	15/15	15/15
Max.short-circuit current [A]	20	20	20/20	20/20	20/20	20/20
Battery Side						
Battery type	Lithium Battery(with BMS)					
Battery voltage range [V]	85-450					
Maximum charging/discharge current [A]	30/30					
Rated output power [kW]	3.00	3.60	4.20	5.00 ¹⁾	6.00	8.00
Max.output apparent power [kVA]	3.30	3.96 ¹⁾	4.60	5.50 ⁴⁾	6.60	8.00
Maxinput apparent power** [kVA]	6.00	7.20	8.40	10.00	10.00	12.00
Max.charging power of battery [kW]	3.00	3.60	4.20	5.00	6.00	8.00
Rated AC voltage	L/N/PE; 220/230/240V					
Rated AC frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Max.output current [A]	15.00	18.00 ²⁾	21.00	25.00 ⁵⁾	28.70	36.30
Power factor	0.8 leading ...0.8 lagging					
Max.total harmonic distortion	<3% @Rated output power					
DCI	<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In	<0.5%In
Back-up Side						
Rated output power [kW]	3.00	3.60	4.20	5.00	6.00	8.00
Max.output apparent power [kVA]	3.30	3.96	4.60	5.50	6.60	8.00
Max.output current [A]	15.00	18.00	21.00	25.00	28.70	36.30
UPS switching time	<10ms	<10ms	<10ms	<10ms	<10ms	<10ms
Rated output voltage	L/N/PE; 220/230/240V					
Rated output frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Voltage harmonic distortion	<3% @Linear load					
Efficiency						
Max.efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
European efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Protection						
DC reverse polarity protection	Integrated					
Battery input reverse connection protection	Integrated					
Insulation resistance protection	Integrated					
Surge protection	Integrated					
Over-temperature protection	Integrated					
Residual current protection	Integrated					
Islanding protection	Integrated					
AC over-voltage protection	Integrated					
Overload protection	Integrated					
AC short-circuit protection	Integrated					
General Data						
Over voltage category	PV: II Main: III					
Dimensions [W×H×D mm]	534×418×210					
Weight [KG]	27.0					
Protection degree	IP65					
Standby self-consumption [W]	<15					
Topology	Transformerless					
Operating Temperature Range [C]	-30~60					
Relative Humidity [%]	0~100					
Operating Altitude [m]	3000(>3000m derating)					
Cooling	Natural Convection					
Noise Level [dB]	<25					
Display	OLED&LED					
Communication	CAN,RS485,WiFi/LAN(Optional)					

* PV Max. Input voltage is 550V without battery, or 500V with battery, otherwise inverter will be waiting;

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

1) G98: 3.68kVA; 2) G98: 16.00A; 3) AS 4777.2: 5.0kW, VDE-AR-N 4105: 4.6kW; 4) AS 4777.2: 5.0kVA, VDE-AR-N 4105: 4.60kVA, C10/11: 5.0kVA;

5) AS 4777.2: 21.7A, VDE-AR-N 4105: 21.0A, C10/11: 21.7A;