



ADM HELIOS Series Smart MPPT Inverter

The ADM Helios Series is an advanced MPPT-based solar solution engineered to deliver superior efficiency in energy generation and storage. Designed for modern energy needs, it seamlessly integrates with battery systems to ensure reliable power availability and optimized energy utilization across varying load conditions.



MPPT Technology

Maximum Power Point Tracking (MPPT) technology, continuously monitors and adjusts the operating point of the photovoltaic (PV) modules to extract maximum possible power. This dynamic optimization significantly improves system efficiency, especially under fluctuating sunlight and temperature conditions.

Benefits

- Higher energy efficiency through advanced MPPT technology
- Maximizes solar power output even in low or fluctuating sunlight
- Improved overall energy generation and system performance
- Reduced electricity costs with better energy utilization
- Seamless battery integration for reliable backup and storage
- Faster response to environmental changes (temperature, shading)
- Longer system lifespan with reduced energy losses
- Ideal for residential and commercial applications

Parameters	Units	Rating						
Models		2.5 KVA / 3.5 KVA	5 KVA	6 KVA / 7.5 KVA	10 KVA	15 KVA	15 KVA	20 KVA
Operating DC Voltage	Volts	24	48	96	120	180	240	240
System Capacity	KW	2	4	5/6	8	12	12	18
Battery Capacity (Min/Max)	AH	165-200						
SPV Parameters								
SPV Open Circuit Voltage Range (Min-Max)	Volts	36-100	72-200	144-400	180-450	270-450	360-600	360-600
Max SPV Power	KW	2.5	5	7/7.5	10	10	15	20
Solar Charge Controller Rating	AH	50	70	60	70	60	60	70
MPPT Based Charge Controller								
Switching Element		Mosfet			IGBT Module			
Controller					DSP			
Type Of Charger					MPPT			
MPPT Battery Current Limiting (Default)		25A			40A			
Efficiency		>95%						
Parameters	Units	Battery	Default Value	Default Value				
PCU Working Mode Selection by Dip Switch / Selection Switch	Mode	SMART [HYBRID] PCU			SMART	Mode Selection: Hybrid / PCU / Smart, INV / UPS Selection		
Grid Disconnect Solar Present (PCU/Smart)	Volts	According Battery Type Active Boost (Mains Disconnect After 2Min)			TUBULAR	According Battery Type Active Boost (Mains Disconnect After 2Min)		
Grid Reconnect (SMART/PCU)	Volts	11.8 / Batt ±2%			11-12V	12V		
Low Cut Off	Volts				10.5 / Batt ±2%			
Low Cut Off Recovery by SPV	Volts				11.5 / Batt ±2%			
Low Buzzer	Volts				10.7 / Batt ±2%			
High Cut Off	Volts				16.5 / Batt ±2%			
High Cut Off Recovery	Volts				15.0 / Batt ±2%			
Boost Charging Volt by SPV TUB/SMF	Volts	SMF 14.2V ±2%	TUB 14.8V ±2%		SETABLE THROUGH LCD			
Grid Boost Charging Volt TUB/SMF	Volts	SMF 14.0V ±2%	TUB 14.4V ±2%					
Float Charging Voltage	Volts	SMF 13.5V ±2%	TUB 13.7V ±2%					
Grid Charging Current Enable by Dip Switch (Normal)	Amps	12A ±2%	NA					
Grid Charging Current Enable by Dip Switch (High)	Amps	15A ±2%	High					
Grid Charging Current Disable by Dip Switch	Amps	0 Amp	Enable					
Output								
Output Voltage Noload	Volts	230 ±2%						
Output Frequency	Hz	50 ±2%						
Overload	Amps	8.6	10.4 / 17.3	17.3/26	180-450	26/34.7	34.7	52.2 / 69.5
Over Load Retry UPS Mode		50 ±2%						
Overload Retry Inverter Mode		50 ±2%						
Grid								
Battery Charging Stages		5 (Softstart, Boost, Absorption, Float, Equalise)						
No of Phase		1Phase-3Wire, P,N,E						
Voltage Range (Inverter Mode)	V	100-280 ±2%						
Voltage Range (UPS Mode)	V	175-255 ±2%						
Frequency Range	Hz	45-55 ±2%						
Display								
Display	Alphanumeric	16X2 LCD			20X4 LCD With Switch Configuration			
Output (Inverter)		Voltage, Current, Power and Frequency						
Input (Grid)		Voltage and Frequency						
Solar		Voltage, Current, Power and Energy (Optional)						
Battery		Voltage, Current						
Status/Faults		Inverter Status, Mains Status, Charger Status, Solar Status and Battery Status/Charging Stages/Over Temp, System Uptime						
Inverter								
Switching Element		Mosfet			IGBT Module			
INV/UPS (IT mode)		By Dip Switch			Front Switch			
Output voltage	Volts	230 ±2%						
Efficiency		≥80%			≥85%			
Phase		1Phase-3Wire, P,N,E						
Output Waveform		Pure Sine Wave						
Frequency	Hz	50 ±2%						
Changeover (Mains to Inverter)	ms	<10ms						
Output Power Factor	PF	0.8						
Switches		System ON/OFF, Modes Selection: Hybrid / PCU / Smart, INV / UPS Selection						
Indication (LED)		Inverter On, Mains In Range, Battery Low/High, Charger On, Overload, Faults						
Alarm (Audible)		Battery Low, Overload, Charger On, Inverter On, Solar Charger On						
Protection		Overload, Short Circuit Protection, Over Voltage, SPV Surge and Transient protection (MOV Varistors), Reverse Polarity of Battery, Over temperature Protection, Under Voltage and Over Voltage Protection						
Cooling		Forced Air cooling (Temp Controlled)						
Operating Temp	°C	0-50						
Noise @ 1Meter Distance		50dB						
Operating Humidity	%	95						
Protection Class		IP20						
Dimension (LXWXH)	mm	432x382x216	470x400x500	600x400x610	680x400x810	730x730x830		
Net Weight	kg	18	27.5	28	39.42/49.93 53.50/83.73	84.6	86.7	100

Note: Technical Specs are subject to change with prior notice, because of continuous development and improvement in design and technology.