



APT-MC-MRO

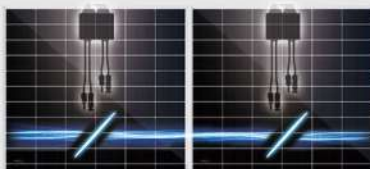


APT-MC-MRO-120

MRO Series Module-Level Micro Controller Optimization Function Series

Module-Level Rapid Shutdown

Reduce module voltage below 1V within 30s



Module-Level Monitoring

1:1 digital virtual power station. Real-time monitoring and diagnosis of panel status



Module-Level Optimization

panels in the same string are not troubled by power generation mismatch



The MRO series module-level micro controller has module-level rapid shutdown, module-level monitoring and module-level MPPT power generation optimization functions. The optimization function ensures the optimal power output of each module in the solar system.

The new PLC has efficient dual-channel communication, no additional communication wiring is required, and the instability of wireless communication is avoided, so that the system always runs in an efficient and stable state.



Reduce module voltage below 1V within 30s

Compatible with any third party PV inverters
Achieving module-level safe and rapid shutdown within 30s (safety mode)



Intelligent operation costs reduced by 50%

1:1 digital virtual power plant
Achieving intelligent power plant operation and maintenance and in-depth module-level health scan



Power generation increased by 10% to 30%

With module-level MPPT optimization function, to achieve optimal power generation for each panel. The power generation can be increased by up to 30%+



Installation capacity increased by 30%+

No afraid of partial shading or different orientation of the roof. The installation capacity is increased by fully using roof area

Technical Parameters	APT-MC-MRO	APT-MC-MRO-120
Functions	Module-level Rapid Shutdown ; Module-level Monitoring ; Moudle-level MPPT Optimization	
Number of Modules Connected	1	2
Input		
Rated Input Power	800W	1600W
Max.Input Voltage	80V	120V
MPPT Operating Range	12V-80V	15V-105V
Max. Operating Current (I _{mp})	20A	20A
Max. Short-circuit Current (I _{sc})	25A	25A
Max. Efficiency	99.5%	99.5%
Output		
Max. Output Voltage	80V	80V
Max. Output Current	22A	22A
Bypass Output	✓	✓
Output Shutdown Voltage	< 1V	< 2V
Shutdown Response Time	30s	30s
Communication		
Communication Mode	PLC	PLC
Communication Rate	200k-1M/s Self-Adaptive	200k-1M/s Self-Adaptive
Compatible V2.5 Control Box	DCON-4G (S/M/L), DCON-WIFI (S/M/L)	DCON-4G (S/M/L), DCON-WIFI (S/M/L)
Safety Certification		
Safety	UL1741 / CSA C22.2 No.107.1 / CSA C22.2 No.330 comply with NEC Code Article 690.12 module-level shutdown characteristics	
EMC	FCC part 15b	FCC part 15b
RoHS Certification	✓	✓
General Parameters		
Dimensions (L x W x D)	123.8 x 112 x 27 mm	133.8 x 115 x 37 mm
Weight (Including Cables)	0.66KG	0.86KG
Input and Output Terminals	MC4 / Compatible with MC4 / Customized	MC4 / Compatible with MC4 / Customized
Length of Output Cable	+0.7,-0.7m / Customized	+1.3,-1.5m / Customized
Operating Temperature Range	-40℃ to +85℃	-40℃ to +85℃
Humidity Range	0%-100%	0%-100%
Protection Rating	IP68	IP68
Max.System Voltage	1000V / 1500V	1000V / 1500V

