

O Series

Module-Level Micro Controller
(Optimization Function Series)

Product Introduction

AdvanSol O series Module-Level Micro Controllers have a common function of module-level optimization, and can combine with the module-level rapid shutdown or module-level monitoring function for the refined control of the solar system.

A system combining an O series micro controller with an AdvanSol string controller or a traditional string inverter can achieve the optimized power output of each module in real time. In the event of an emergency or system-detected danger, the micro controller will stop and disconnect the output of each module to ensure the safety of the system.

The new PLC efficient dual-channel communication is able to achieve efficient and stable system communication without additional wiring, and avoid any instability of wireless communication.



High utilization ratio, simple-designed systems and the voltage and length of the strings can be adjusted



Improving power generation: system power generation is optimized given that it is not afraid of mismatched-type problems caused by occlusion, shadow, and degradation inconsistency of modules



Rapid shutdown and ARC detection realize solar system safety management, guarantee the safety of people and property, and meet the requirements of fire protection

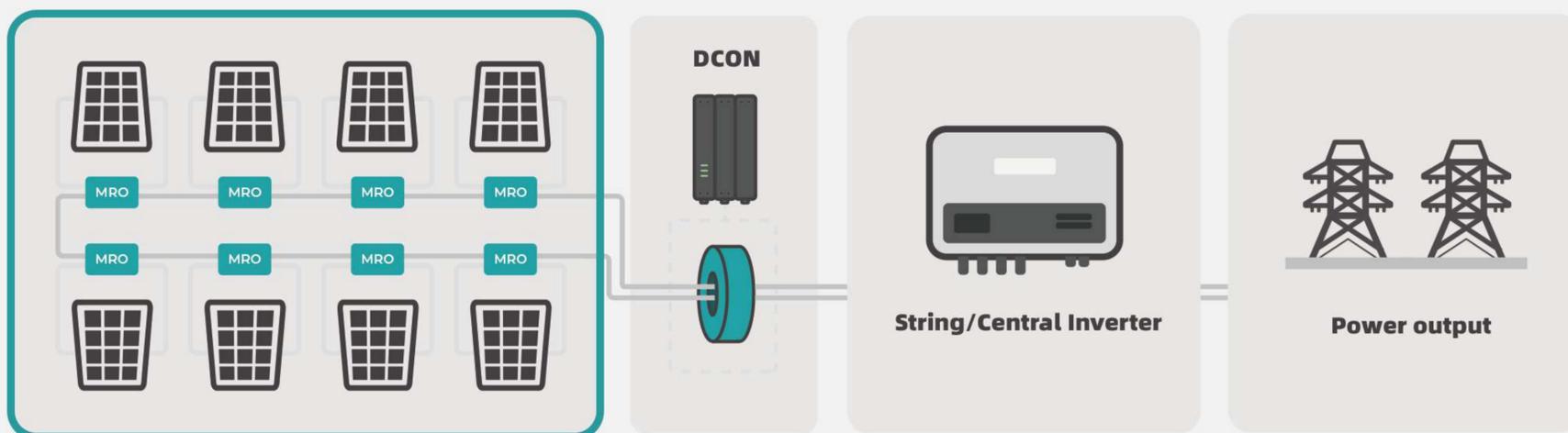


Compatible with various brands of string solar inverters to form a module-level control solution



Real-time and accurate monitoring, module-level IV intelligent diagnosis, and accurate fault positioning to realize smart solar system operation and maintenance

Technical Parameters	APT-MC-O	APT-MC-RO	APT-MC-MRO
Functions			
Module-Level MPPT Optimization	✓	✓	✓
Module-Level Rapid Shutdown		✓	✓
Module-Level Monitoring			✓
Input			
Rated Input Power	700W	700W	700W
Max.Input Voltage	70V	70V	70V
MTPP Operating Range	10V-70V	10V-70V	10V-70V
Max. Operating Current (I _{mp})	18A (20A)	18A (20A)	18A (20A)
Max. Short-circuit Current (I _{sc})	22.5A (25A)	22.5A (25A)	22.5A (25A)
Max. Efficiency	99.5%	99.5%	99.5%
Output			
Max. Output Voltage	43V	43V	43V
Max. Output Current	18.8A (20.8A)	18.8A (20.8A)	18.8A (20.8A)
Bypass Output	✓	✓	✓
Output Shutdown Voltage	/	1V	< 1V
Weighted Efficiency	99.0%	99.0%	99.0%
Communication			
Communication Mode	/	Sunspec	PLC
Communication Rate	/	/	200k-1M/s Self-Adaptive
Compatible Data Controller	/	DCON-S	DCON
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 (Reduced to within 30V in 30s)		
EMC		FCC part 15b	
RoHS Certification	✓	✓	✓
General Parameters			
Dimensions (L x W x D)	123.8 x 112 x 27 mm		
Weight (Including Cables)	0.66KG		
Input and Output Terminals	MC4 / Compatible with MC4 / Customized		
Length of Output Cable	1.2m / Customized		
Operating Temperature Range	-40°C to +85°C		
Humidity Range	0%-100%		
Protection Rating	IP68		
Max.System Voltage	1000V / 1500V		



ACLOUD
Module-level monitoring ✓

RSD
Module-level rapid shutdown ✓

Module-level optimization ✓