



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 |
| MTTP 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℃ to +85℃ | |
| Humidity Range | | 0%-100% | |
| Protection Rating | | IP68 | |
| Max.System Voltage | | 1000V / 1500V | |

