

SOLUTION R

EXPERT OF SOLAR MODULE-LEVEL CONTROL

AdvanSol Power Technology Co., Ltd



V2.5 Module-Master™ Solution R

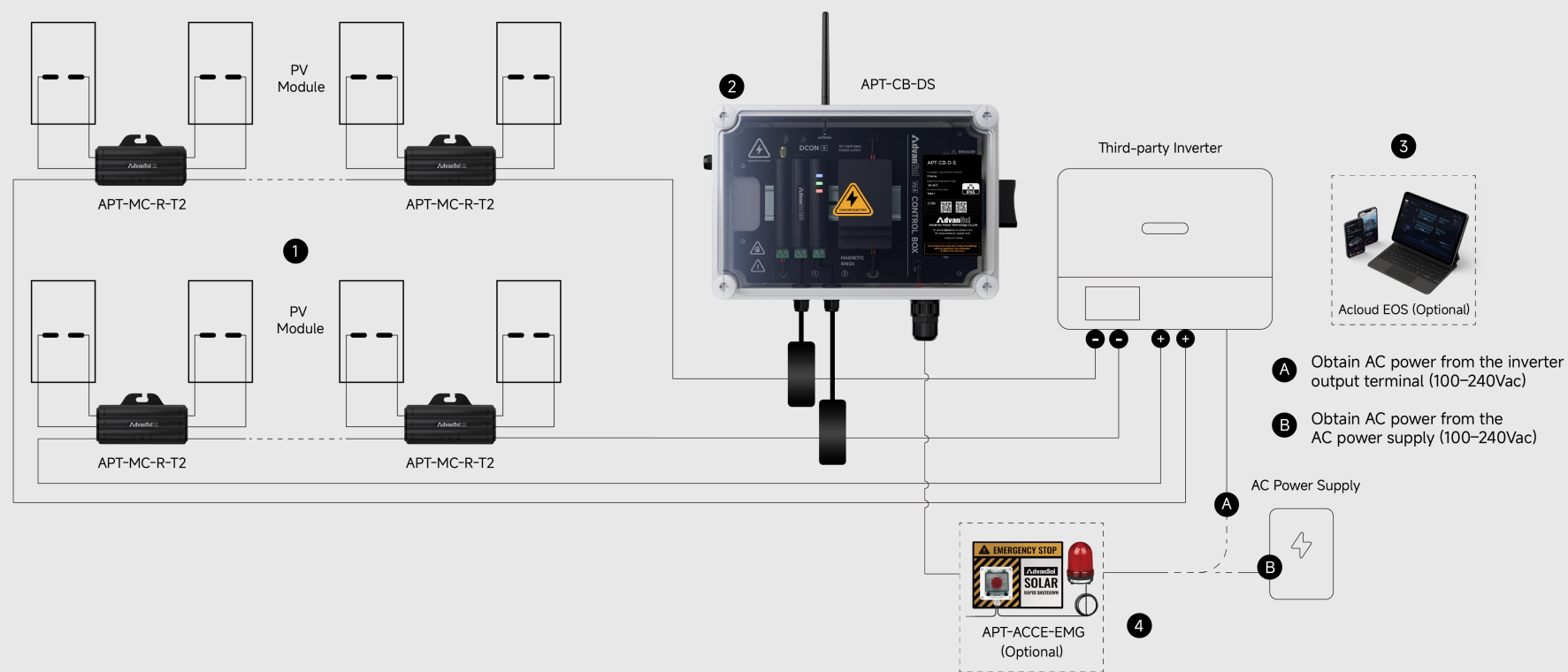
Module-Level Rapid Shutdown Solution

This solution delivers a safety upgrade through module-level safety control + optional Acloud EOS remote shutdown, while retaining the original string inverter architecture.

After deploying Solution R, the system enables module-level rapid shutdown within 15 seconds, fully compliant with NEC safety requirements. It supports automatic, manual, and online remote shutdown for comprehensive safety control, and is certified to UL 1741 / UL 3741 / CE standards.



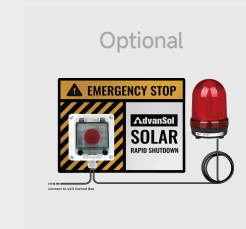
Topology Diagram & Products of Solution R



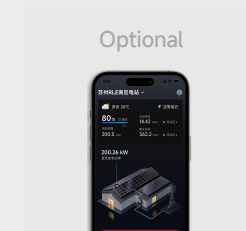
APT-MC-R-T2



APT-CB-DS



Optional
APT-ACCE-EMG



Optional
Aclound EOS APP

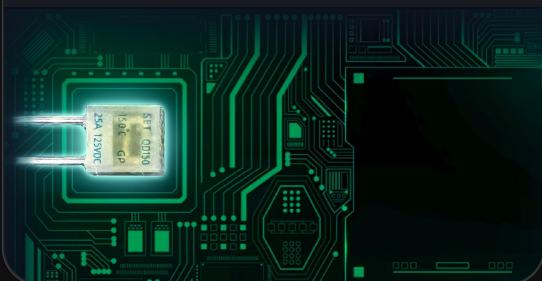
Module-Level Rapid Shutdown

Modules voltage and current drop to the safe range within 15 seconds.

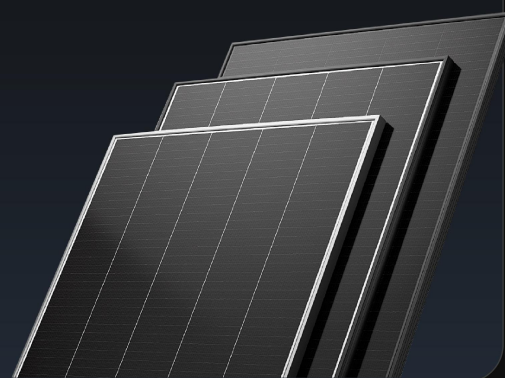


Backup Protection Design

Backup shutdown activates on communication/shutdown failure for device protection.



<800W mainstream module compatible



More shutdown modes

automatic shutdown upon abnormal module temperature, manual emergency stop, and APP remote shutdown.



Dual high standards

The product is IP68 certified and uses raw materials with high flame-retardant standards.



Global authoritative certifications





R series Micro Controller Model R-T2

APT-MC-R-T2

Product Model	APT-MC-R-T2
Function	Module-level Rapid shutdown
Number of Modules Connected	2
Input	
Rated Input Power	800W*2
Input Voltage Range	10V-80V*2
Max. Operating Current (Imp)	20A / 25A (Optional)
Max. Short-circuit Current (Isc)	25A / 31.2A (Optional)
Max. Efficiency	> 99.5%
Output	
Max. Output Voltage	160V
Max. Output Current	20A / 25A (Optional)
Bypass Output	☑
Output Shutdown Voltage	<1.5V
Shutdown Response Time	30s
Communication	
Communication Mode	PLC
PLC Maximum Communication Distance (Along the Cable)*	Distance from the data control box to the farthest micro-controller ≤ 450 m
Compatible V2.5 Control Box	APT-CB-DS
Safety Certification	
Safety	UL1741 / UL3741 / 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
RoHS Certification	☑
General Parameters	
Dimensions (L x W x D)	143 x 62 x 19.5 mm
Weight (Including Cables)	0.76KG
Input and Output Terminals	MC4 / Compatible with MC4 / Customized
Length of Cable(mm)	OUT:+1300 -1500 PV1:+950 -200 PV2:+200 -950
Operating Temperature Range	-40℃ to +85℃
Humidity Range	0%-100%
Protection Rating	IP68
Max.System Voltage	1500V



V2.5 Control Box DCON-S

APT-CB-DS

Product model	APT-CB-DS
Data controller	DCON-S
Compatible micro controller	R series
Communication mode with Acloud	WIFI*
Communication mode with micro controller	PLC
PLC Maximum Communication Distance (Along the Cable)**	Farthest microcontroller ≤ 450m
Number of Communication Magnetic Rings	2
Max. number of strings supported	8 strings/mag ring (Rec.) Total max Isc/mag ring ≤ 180A
Max.number of Modules each ring	/
Power Supply	100-240VAC
Communication Interval	/
Local Data Storage time	/
Working ambient temperature	-20°C~65°C
Dimensions(L×W×D)	280 x 190 x 130 MM
Protection Rating	IP65

R series Micro Controller Model T2

Rapid Shutdown Device

- Module-Level Rapid Shutdown
- Patented Hardware Protection Module
- International Authoritative Certifications
- Remote APP-Based Shutdown Control
- Wide Compatibility & Flexible Integration
- High-Level Protection & Flame-Retardant Design

APT-MC-R-T2



V2.5 Control Box DCON-S/4G/WIFI

Data Controller

- V2.5 Module-Master™ Solution Accessories
- Super-HPLC | Unlimited Communication Distance (4G WIFI)
- Multi-String Management
- Premium Design × Plug-and-Play
- All-in-One Integrated Design
- Compatible with Third-Party String Inverters



EMERGENCY BUTTON KIT

【Accessory】

- One-Click Emergency Shutdown
- On-Site Warning Indication
- Compliance with International Safety Standards
- V2.5 Module-Master™ Solution Accessories

APT-ACCE-EMG



Acloud EOS AI Cloud Platform

Energy Operating System

- APP Remote Rapid Shutdown
PV system reduces to safe voltage and current within 30 seconds
- Optional Configuration

ACLOUD EOS APP



Thailand TY Project

- Challenge: High power load + 24/7 production; industrial-grade solar-storage system for extreme safety requirements.
- Goal: Absolute production line safety + cut power costs + long-term stable energy management.
- Results: 80% enhanced system safety
≥99% equipment continuous operation rate
40% higher O&M efficiency (automated maintenance)

3MWP

Power Station Scale

2000+

Installation Quantity



APT-MC-R-T2

Product

Rayong

Location



Suzhou RLE Project

- Challenge: Different structures, waterproofing and safety standards of color steel and concrete roofs posed challenges to PV system compatibility, load and integration.
- Goal: To improve energy efficiency and lower operating costs through intelligent, large-scale system control.
- Results: Energy consumption reduced, cutting costs by 20%–30% Stable operation, system availability over 99% Intelligent management lifts O&M efficiency by 40%+

400kWp

Power Station Scale

500+

Installation Quantity



APT-MC-R-T2

Product

Suzhou

Location



Global Case Study



BI Project

1.5MWp



APT-MC-MR-T2



Zhuhai China



WSE Project

1.2MWp



APT-MC-MR-T2



Shanghai China



FLK Project

649 kWp



APT-MC-MR-T2



GuangDong China



ZR Project

1.5MWp



APT-MC-MRO-120 、 APT-MC-MR



Changzhou China



RLE Project

400 kWp



APT-MC-MRO



SuZhou China



YZ Project

400 kWp



APT-MC-MRO



Yangzhou China

Global Case Study



NMP Project

649 kWp



APT-MC-MR-T2



Malaysia



JMC Project

649 kWp



APT-MC-MR-T2



Philippines



KB Project

200 kWp



APT-MC-R-T2



Thailand



GTZ Project

255 kWp



APT-MC-MRO



Panan China



CDH Project

128 kWp



APT-MC-MRO



Philippines



XN Project

150 kWp



APT-MC-MRO



Xuzhou China

Global Case Study



LM Project

122 kWp



APT-MC-MRO



Wuxi, China



LS Project

121 kWp



APT-MC-MRO



Zhuhai, China



CPD Project

161 kWp



APT-MC-MRO



Philippines



GMH Project

100 kWp



APT-MC-MRO



Shanghai China



Solar Ark 5.0 Project

22 kWp



APT-MC-MRO



Panan China

Contact AdvanSol for the best solution

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