

# AFD DC Arc Fault Detection Solution



**A LEADER IN  
CLEAN ENERGY SAFETY**

# ◆ DC Arc Fault Detector

## ◆ Product Introduction

Used in DC transmission and distribution, such as string inverters, PV combiner boxes, energy storage cabinets, DC charging piles and data centers, DC Arc Fault Detectors detect fault arcs in DC circuits in real time. Once detected, they immediately trigger alarms and notify actuators to cut off faulty circuits, effectively preventing fire hazards.

## ◆ Application Scenarios

DCMG Series



## ◆ Arc Fault Detector

Millisecond-Level Proactive AFCI Protection

**10+ Years**  
Arc Fault Detection  
Experience

**100+**  
Inverter & ESS  
Brand Compatibility

**0~1000A**  
Covers Diverse  
Application Needs

**Rapid Integration**  
Lower Costs  
Higher Efficiency

### Low False Alarm | Fast Integration | Low Cost

- Achieve integration in just 3 days. Cut costs by 20% and boost efficiency by 30%.
- Handle ultra-high currents up to 48A to meet advanced demands.

- Accurate Identification**  
Real-time Arc Calculation
- 48A High Current**  
Supports Higher Power Requirements
- Intelligent O&M**  
OTA Update & Remote Learning for Easy O&M.
- Fast Integration**  
Compact Size, Lower Cost

NEW



FR-DCMG-AS2L

NEW



FR-DCMG-AS4L



FR-DCMG-AS4A

### Inverter Model

2-Channel | 4-Channel

### Early Warning | Fast Cutoff | High Current

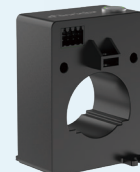
- Support up to 300A high current, fully compatible with leading ESS brands.
- Build a solid safety barrier for energy storage systems at the ultimate cost.

- 1000A High Current**  
Designed for ESS
- Fast Integration**  
Compatible with ESS Brands

World's First  
ESS AFD



FR-DCMG-AS1D



FR-DCMG-AS1E

### ESS Model

Single-Channel

## ◆ Global Certifications

Compliant with UL 1699B, IEC 63027 and other global standards  
Covers solar-storage-charge integration, industrial lighting, data centers and other applications.

「Full coverage of solar-storage-charge scenarios」

\*All patents and certifications cover main products and accessories. Details refer to official certificates.



## ◆ Patent Technology

Fonrich New Energy

**280+** Patent Applications

**100+** Invention Patents\*



\*As of 2026, patents stated for this series cover all related patent achievements of Fonrich.

## ◆ Specifications & Parameters

Model	FR-DCMG-AS4A	FR-DCMG-AS2L	FR-DCMG-AS4L	FR-DCMG-AS1D	FR-DCMG-AS1E
Max. Number of Detection Channels	4	2	4	1	1
Arc Detection Range	±30 A DC	±48 A DC	±48 A DC	±300 A DC	±1000 A DC
Max. Loop Detection Distance	1600m				
Arc Type	UL1699B (Type1)				
Communication Protocol	Modbus-RTU				
Power Supply Input Voltage	5 ± 0.2 V DC	3 ~ 3.6 V DC	3 ~ 5.2 V DC	10 ~ 28 V DC	10 ~ 28 V DC
Max. Power Consumption	0.4 W	≤ 0.2 W	≤ 0.2 W	≤ 1 W	≤ 1 W
Operating Ambient Temperature Range	-30°C ~ +85°C				
Storage Temperature Range	-40°C ~ +105°C				
IP Rating	IP20				
Installation Method	DIN Rail	Screw Mount	Screw Mount	Busbar / Screw Mount	Busbar / Screw Mount

\*Specifications listed for product models are subject to the latest official datasheet.

\*FR-DCMG-AS4A: Supports arc fault detection function for inverter and combiner box systems.



Guard Energy Security  
Empower Green Development

# FONRICH NEW ENERGY

The Leader in DC AFCI Technology

Backed by 100+ Invention Patents

Safeguarding Global Renewable Energy Systems

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