



Product Datasheet

Version 1.0

Arc Fault Protection Box_FR-DCBS-AFS8B



Scan code to learn more

Fonrich (Shanghai) New Energy Technology Co., Ltd.

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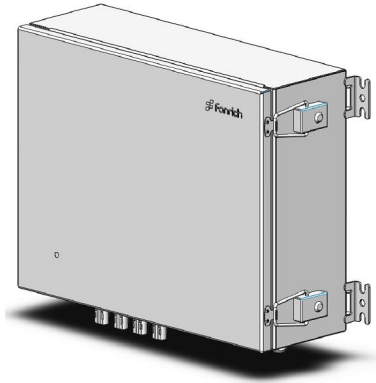
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Introduction

FR-DCBS-AFS8B Arc Fault Protection Box is a solar AFCI (Arc Fault Circuit Interrupter), which is mainly used in middle sizes of distributed PV system, such as 20-200KW rooftop solar system. Its main function is to detect the arc fault of the PV strings and disconnect the string cables when arc fault occurs. If the arc fault is detected, it will issue an alarm signal by local LCD and RS485. At the same time, the DC relay will be driven to break off the fault circuit, which can effectively prevent fire hazard. In addition, it has the function of real-time monitoring the current of each PV string and communicating with the host PC by RS485 to realize remote monitoring.



Features

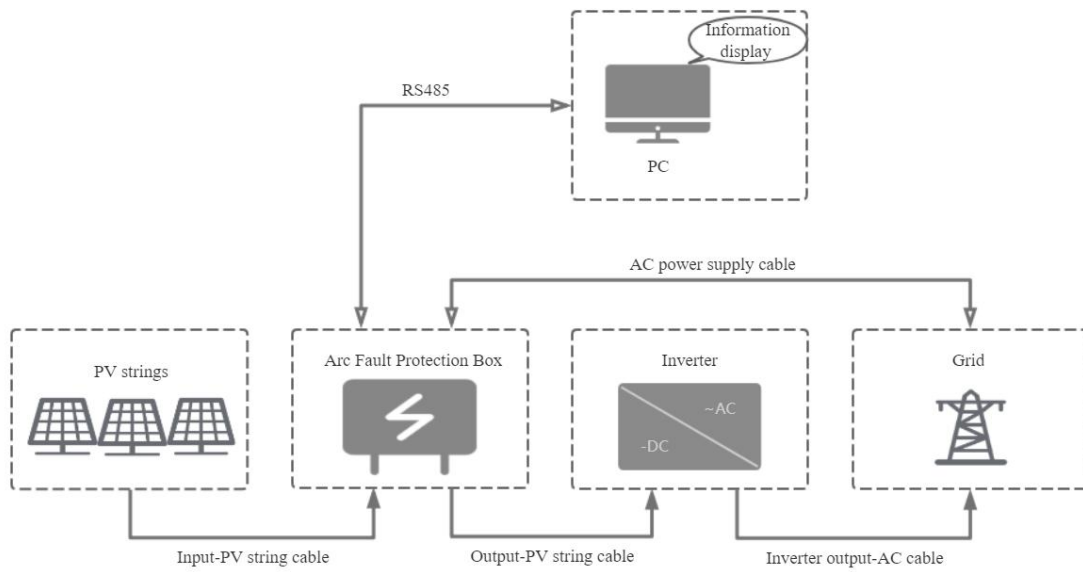
- 8 PV strings each box supports, be parallel running to support larger system
- Fonrich IP technology to self-adapt with different invertors
- UL 1699B 2018 conformity
- The protection arc sensitivity is adjustable
- Arc fault detecting of each PV string
- Remote monitoring with Modbus RS485

Key Technical Specifications:

Classification	Item	Parameter
Arc detection	Maximum number of detection channels	8 channels
	Current range	$\pm 15\text{A}$
	Maximum system voltage	DC1000V
	Arc type	UL1699B(Type 1)
Current measurement	Maximum number of detection channels	8 channels
	Current range	-20A~+20A
	Rated current	-10A~+10A
	Imbalance offset	$\leq \pm 0.1\text{A}$
	Temperature drift	$\leq \pm 0.005\text{A}/^\circ\text{C}$
	Linearity	$\leq 1\%\text{FS}$
Local display (Inside)	Channel number, current, alarm ,etc	Dot matrix display (LCD)
	Operating status indicator	2 LEDs respectively indicate power supply and communication status
Local operation	Operation content	Display operating status and set parameters
	Keys	4
RS-485	Communication protocol	Modbus-RTU
	Communication rate	2400/4800/9600/19200/38400 bps
	Byte format	8N1, 8O1, 8E1
	Input voltage of power supply	85~265VAC

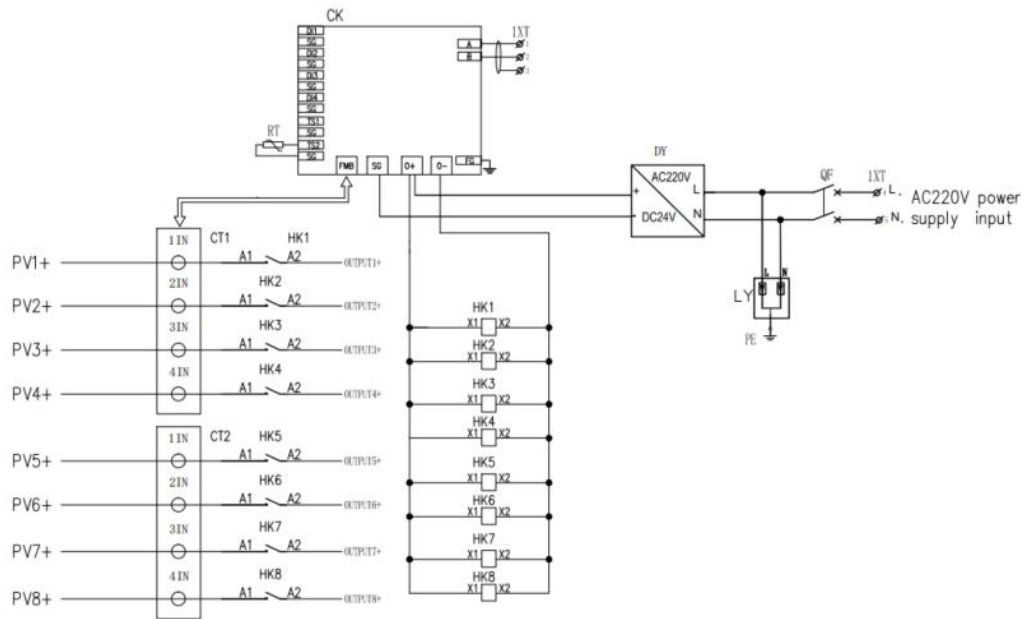
Power supply and power consumption	Maximum input current	0.35A
	Maximum power consumption	≤30W
Environment	Operating Temperature	-30°C ~ +60°C
	Storage temperature	-40°C ~ +85°C
	Operating humidity	0 ~ 95%
	Waterproof level	IP65

Typical Application

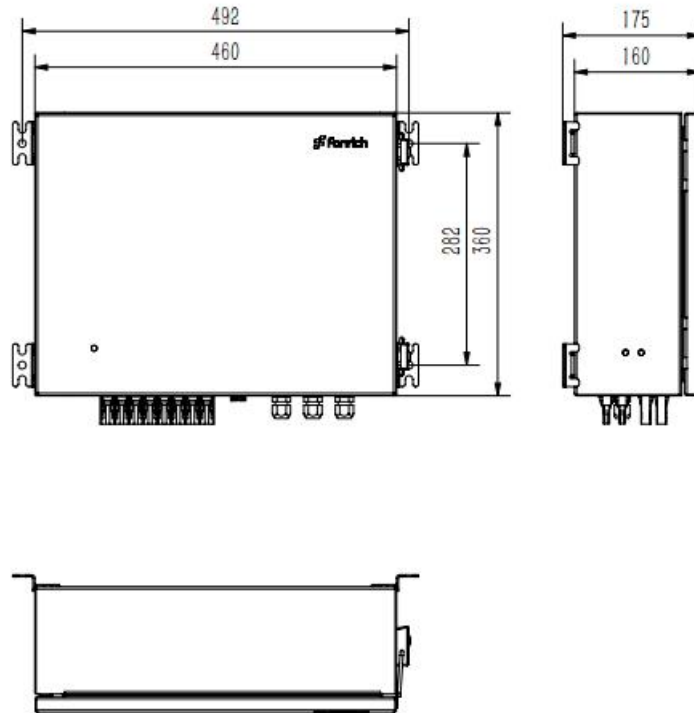


Typical Application of AFS8B

Schematic diagram



Mechanical Data (mm)



Revision Log

Version number	change content	Revision date
1.0	First edition	2021.04.08

Contact us

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Appendix 1

Arc Fault Dectector (FR-DCMG-AS4A) CSA Certificate

	
<h2>Letter of Attestation</h2>	
Document: 80057054	Master Contract: 301511
Project: 80057054	Date Issued: April 2, 2021
Issued to: Fonrich (shanghai) New Energy Technology Co., Ltd 1st Floor, Building 5, No.999, Jiangyue Road, Minhang District Shanghai, Shanghai 201114 China	
Attention: Yuan Xiao	
<i>CSA Group hereby confirms that it has completed an evaluation of: Arc-fault detector (AFD), model: FR-DCMG-AS4A</i>	
<i>CSA Group hereby attests that the products identified above and described in test report 80057054 dated April 2, 2021 complies with the following standards/tests, to the extent applicable:</i>	
<i>UL 1699B - Photovoltaic (PV) DC Arc-Fault Circuit Protection (First Edition, Revision Dated August 22, 2018)</i>	
<i>Issued by: Magic Zhang <u>Magic Zhang</u></i>	
CSA Group	
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