



Product Manual

Product Name: Rapid shutdown module

Product Type: XRSD-xyz

Vendor name: Suzhou Xtong Photovoltaic Technologies Co. Ltd

Version: A/1





Revision History				
Rev.	Date	Revised Item	Revised Content	Remark
A/0	2023-5.15	N/A	First edition	Ym.huang
A/1	2023-6-19	Add English, typesetting		Wendy Qiu



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1、 Description

XRSD-xyz is a rapid shut down device developed by XTONG TECH to meet the market demand. It is connected with a single PV Module and is combined with a PLC communication control box to achieve rapid shut down at the PV Module level, which can effectively ensure the safe operation of the PV system.

After the installation is completed, the PLC communication control box will send "operation instruction" XRSD-xyz after receiving the instruction, the photovoltaic system will start to operate normally in case of emergency. Just cut off the PLC communication control box power supply or press the emergency stop switch, you can complete the quick shutdown of a single PV Module.

2、 Features

- ✓ PV Module-level rapid shutdown: Meets NEC2017 and NEC2020 690.12 requirements.
- ✓ Meets SunSpec RSD requirements
- ✓ PLC: Cooperate with transmitter to realize fast shutdown at component level
- ✓ Plug and play, no configuration required.
- ✓ Efficient operation: Low power consumption, wide operating voltage range.
- ✓ IP68 seal protection level

3、 Technical Specifications

- ✧ Type: XRSD-xyz
- ✧ Application: Power station
- ✧ Dimensions: 165.4mm*51.2mm*21.1mm



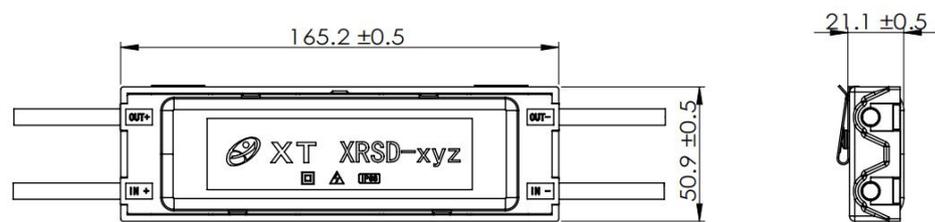
- ◇ PV Module input: 1/2
- ◇ Cable:4mm²/12AWG
- ◇ Cable length: In put 250mm/Out put1000mm or Customization
- ◇ Operating Temp: -40°C~+85°C
- ◇ Storage Temp: -40°C~+85°C
- ◇ Protection Degree: IP68
- ◇ Sealing Type: Potting
- ◇ Flammability Class: 5VB
- ◇ Connection Methods: Soldering
- ◇ Insulating material: PPO
- ◇ Reference standard: UL1741, CSA C22.2 No. 330-17, IEC/EN 62109-1 FCC
- ◇ Part 15B, ICES-003, IEC/EN 61000-6-1/-2/-3/-4
- ◇ Rated Current: 15A/20A/25A
- ◇ Max. System: 1500V
- ◇ Range of Output Voltage :Range of Output Voltage:10-100V
- ◇ Max. Input Voltage:100V

3.1 XRSD-xyz Naming rule

x=1	20A
x=2	25A
y=1	1 拖 1
y=2	1 拖 2
z=1	FLC(Simplex)
z=2	PLC(DuplexingCommunication)



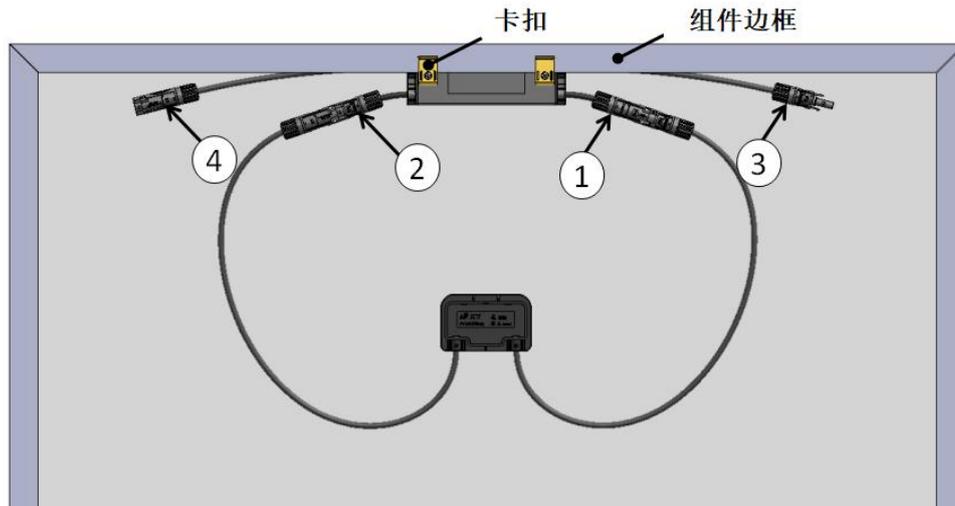
3.2 Product dimensions



4、 Installation

4. 1 XRSD-xyz connect to a PV Module JB box

XRSD-xyz products are mechanically fixed with the frame of the PV Module by the hook method, which is convenient to install and secure.



4.1.1 Description of how to connect XRSD-xyz to the PV Module junction box

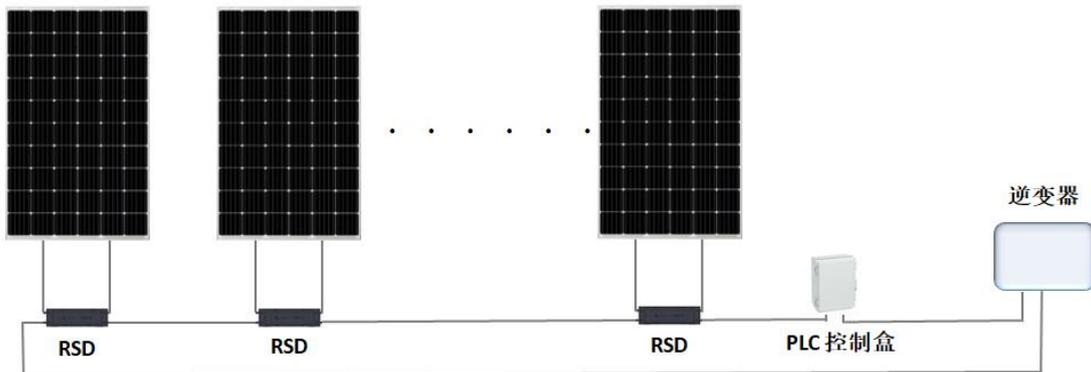
XRSD-xyz	connector
IN+	The positive terminal of PV module
IN-	The negative terminal of PV module
OUT-	
OUT+	XRSD-xyz OUT+Previous PV module positive or previous XRSD-xyz OUT+

Alert! Failure to connect in the required way will result in product damage and safety accidents.

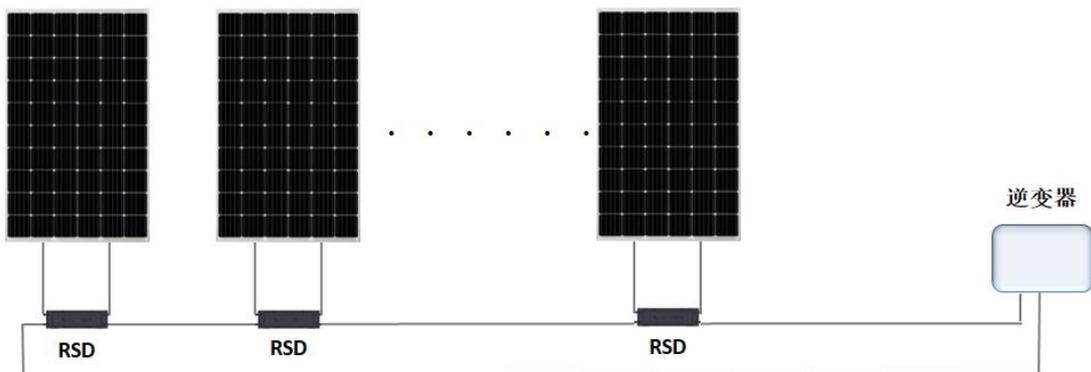


4.2 System connection pattern

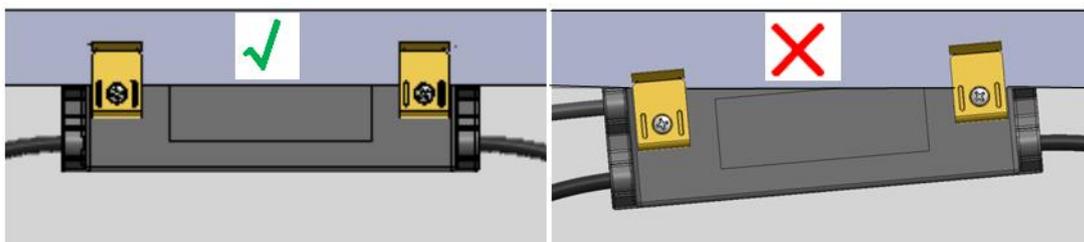
4.2.1 The inverter has no Sunspec system connection mode



4.2.2 The inverter uses the Sunspec system connection mode

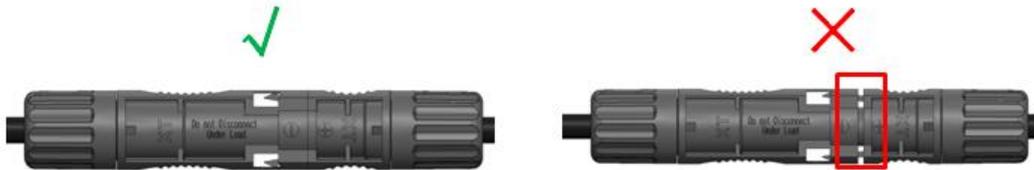


5. Notice





- XRSD-xyz must be properly connected to the PV Module frame to avoid faults caused by product disconnection from the PV Module.



XRSD-xyz's connector Interconnect with PV module connectors and XRSD-xyz end connectors
Ensure that connectors are properly installed to avoid failure.



- Do not bend or squeeze cables at the box body or connector outlet. The bending radius should be R or more than 5 times cable OD!

XRSD-xyz 's connectors Connect to PV Module connectors and to XRSD-xyz end connectors as required to prevent product failure and safety.

XRSD-xyz 's connector and PV Module connector should be the same brand and model connector, to avoid product failure caused by incompatibility affecting safety!

- During storage and use, avoid contact with oil and chemicals, otherwise it will cause product failure and affect the safety of use!
- Do not insert or remove connectors with power on during installation, operation and maintenance to avoid electric shock.



6、 Safety Instructions

The product should be assembled by people who were professionally trained and aware of related safety codes.

- (1) A set of specific PV Modules and tools is recommended to assemble the connectors. XTONG shall take no responsibility whatsoever for any problems caused by unspecified PV Modules or tools.
- (2) Do not deviate from the preparation and assembly steps described here. Do not modify the product in any way. XTONG shall give no guarantee as to safety or conformity with the technical parameter in the case of non-observance of XTONG's manual or instructions.
- (3) Products cannot be stored, transferred or used in the environment that have the chemicals listed in Appendix Form 1 and labeled by "incompatible".
- (4) Do not over pressure, impact or pollute the products. XTONG shall take no responsibility whatsoever for any broken, shape change and other problems caused by over pressing, impact or pollution.
- (5) The maximum storage time for this product is 1 year. Please assemble the product to end products within 1 year.
- (6) The product must not be plugged together with any other connectors with different brands.
- (7) Products shall not be used in non-PHOTOVOLTAIC systems or non-photovoltaic environments.
- (8) The connectors cannot be used or operated under water or the rain.
- (9) The unplugged connectors should be placed away from dust, water and pollution, and be protected by sealing caps.
- (10) The connector should not be under continuously mechanical tension or stretching. The connectors or cables are recommended to be fixed.
- (11) Cable which used to connect with the connector must be tin plated. PVC cables are prohibited for safety reasons.

 No actions mentioned in this document can be carried out on live or load-carrying parts.

 Electric shock protection is essential in final systems or assured by the end product and its user.

 Unplugging and plugging are not allowed when the system is under load.



7、 Exclusion Terms

XTONG shall not be responsible for defects subjected to any situations as listed below:

- ❖ Inobservance in instructions or manuals from XTONG.
- ❖ Connectors be plugged with a different brand connector.
- ❖ Accident.
- ❖ Connectors be used inappropriately.
- ❖ Connectors be destroyed or broke by human.
- ❖ Destruction or pollution caused by abnormal using environment.
- ❖ Natural hazard.
- ❖ Natural depletion.
- ❖ Force majeure.

Xtong reserves the right of interpretation for this Specification and manual.

当中英文内容出现不一致时，以中文表述为准。

If the contents in English have any inconsistency or conflicts compared with Chinese version, the contents in Chinese shall prevail.

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