FEEO

RAPID SHUTDOWN DEVICE

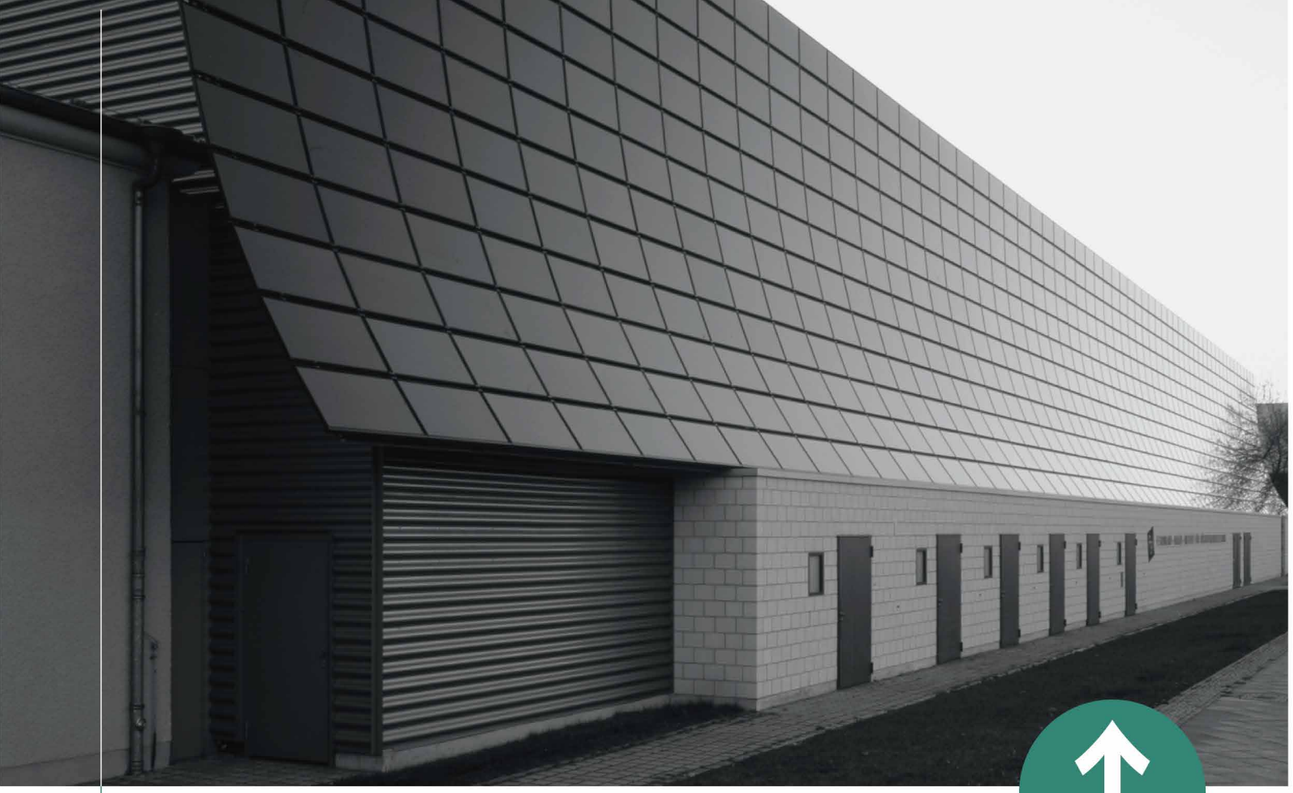
Improvement in work efficiency / Shoutdown By Tem / By AC Power cut-off

YUEQING FEEO ELECTRIC CO.,LTD.

A No.298,Wei 17th Road,Yueqing Economic Development Zone,Yueqing City,Wenzhou City,Zhejiang Province,China
W https://www.feeo-solar.com/
E enquiry@feeo.com.cn
T +86 15382523069

MADE IN CHINA

WWW.FEEO.COM.CN



Enhance the safety
of PV systems

1 Product Overview

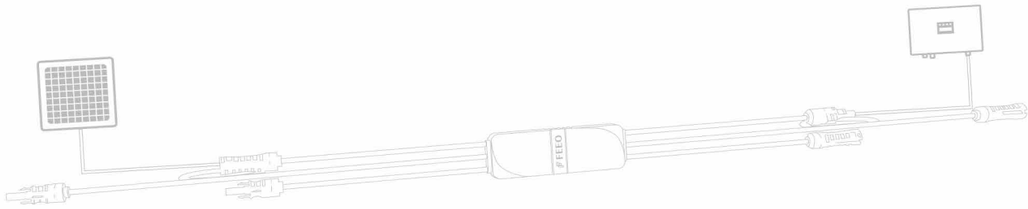
The FEEO FRSP-1/FRSP-2 Rapid shutdown system is designed to enhance the safety of PV systems.It provides a reliable and efficient way to quickly reduce the voltage in PV arrays to safe levels during shutdown ,in compliance with relevant safety standards and regulations.

2 Product Features

> Safety- First Design: Prioritizes safety by ensuring rapid voltage reduction in PV arrays,minimizing the risk of electrical shock during maintenance,emergency situations, or system shutdown.

> Easy Integration: Can be easily integrated into existing PV systems,regardless of the type of PV modules or inverters being used.It offers a seamless solution for upgrading the safety features of PV installations.

> Compliance: Meet international safety standards UL1741& UL3741/IEC/EN62109/IEC/EN61000.， and regulations related to PV system rapid shutdown, providing users with confidence in its performance and reliability.



3 Technical Specifications

> **Voltage Reduction Capability**: Reduces the voltage in PV arrays to 80V within 8 seconds during rapid shutdown.

> **Compatibility**: Compatible with a wide range of PV module types, including FRSP-1/FRSP-2.It also works with various inverters that support the required communication protocols.

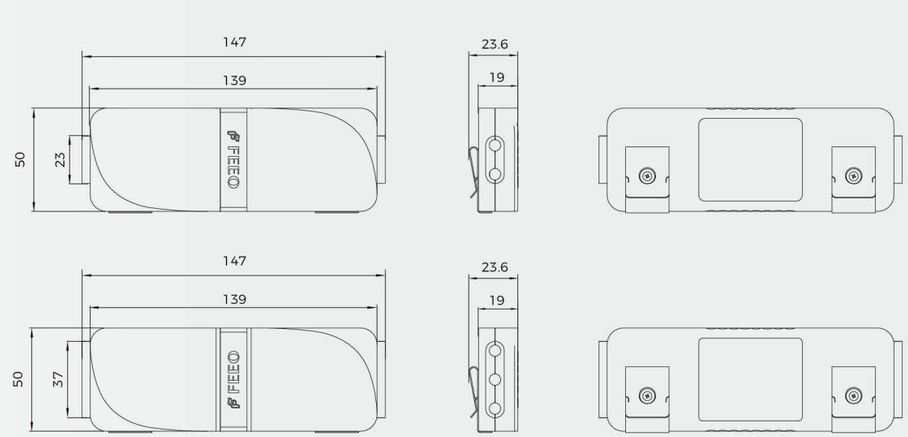
> **Communication Protocols**: Utilizes Sunspec Modbus,carrier communication to communicate with other components of the PV system,such as inverters and monitoring devices.

Specifications

Standard	Data
Maximum allowable input voltage	80V
maximum output voltage	80V / 160V
Number of Connectable Channels	1 route/2 routes 1/2
Maximum input current	20A
Maximum System Voltage	1500V
Interface type	MC4
Warranty period	10 Years
Enter the length of the photovoltaic cable	120CM
Output photovoltaic cable length	180CM
communication method	PC

Dimensions

Screw type



4 Installation Guide

Safety Precautions

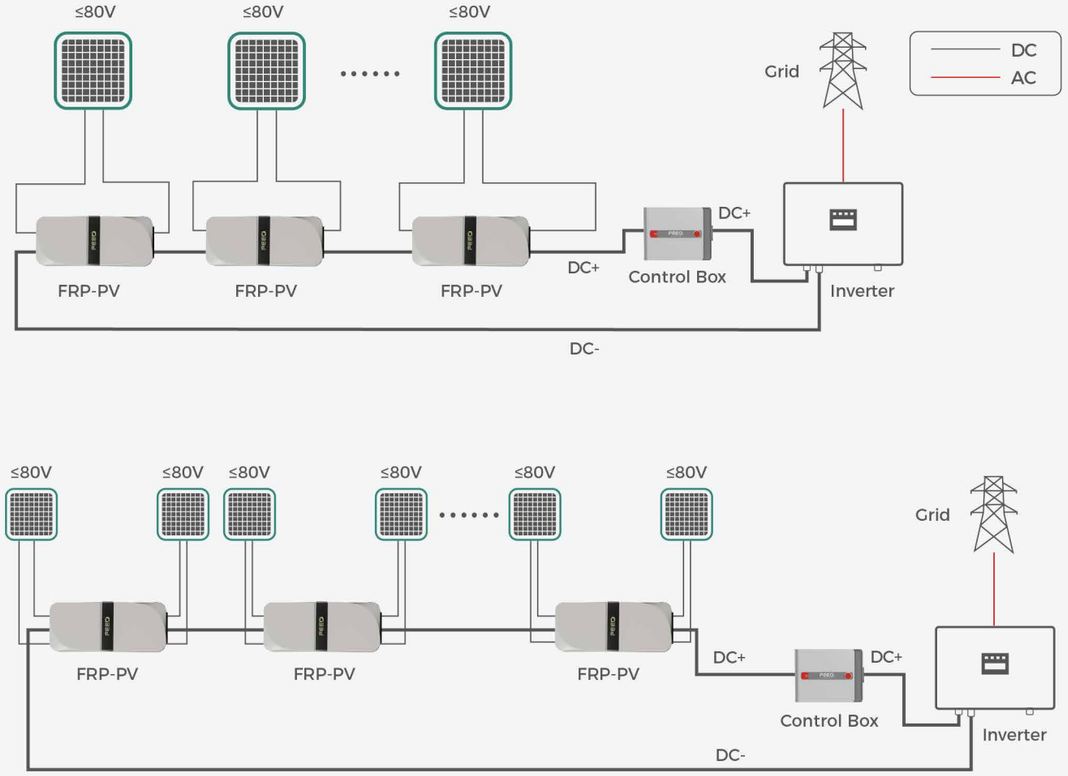
Before installation,ensure that the work area is free from flammable and combustible materials.Do not touch any live parts of the PV array or the system during installation. Follow all local electrical codes and regulations.Only qualified professionals should preform the installation.

Installation Steps

First, connect the input cables of the FRSP-1/FRSP-2 to the PV module according to the polarity markings.Ensure a secure and proper connection.

Then, connect the positive and negative phases of the output cables of FRSP-1/FRSP-2 in series, connect the output terminals of all units in sequence, connect the input terminal of the photovoltaic panel to the control box, and connect the output terminal to the inverter.

Install the control box in a suitable location,following the provided instructions.Ensure proper communication between the FRSP-1/ FRSP-2 units and the control box.



▲ Wiring diagram

5 Operation Manual

Normal Operation

During normal operation,the FRSP-1/FRSP-2 system continuously monitors the status of the PV array. It does not interfere with the normal power generation and operation of the PV system.

The system is equipped with status indicator lights to display the normal operating status. Please regularly check these indicator lights to ensure proper system operation.

Shutdown Operation

There are two ways to shut down. One is the AC shutdown of the controller, and the other is the quick shutdown button on the controller panel.

After shutdown,wait for 30 seconds before disconnecting the DC cables or turning off the DC disconnect. This ensures that any residual charge in the system has dissipated.

By AC Power cut-off

6 Maintenance and Trouble shooting

Regular Checks

! Periodically inspect the units for any signs of physical damage, such as cracks or loose connections.

! Check the communication between the units and the control box.Ensure that there are no error messages or communication failures.

! Clean the units to remove dust and debris,especially from the ventilation openings.

Trouble shooting

If the system fails to enter rapid shutdown mode when required, check the wiring connections,power supply to the units,and the configuration of the transmitter.

In cast of abnormal voltage reading in the PV array ,verify the integrity of the units and their connections to the PV modules.
If the problem persists,contact FEEO technical support for further assistance.