

Solar Module Level Rapid Shutdown Safety Solution

BFS Series



- Module Level Rapid Shutdown
- Manual Shutdown by button switch
- Automatic Shutdown on AC Power Loss
- Over temperature Automatic Shutdown
- Compatible with most string inverters and panels
- No cross-talk with inverter or WIFI



Application

BFS-11/BFS-12/BFS-11B/BFS-12B is a module level rapid shutdown device offers fire safety for solar rooftop and building, remains the rapid shutdown function period the solar PV system whole working life.

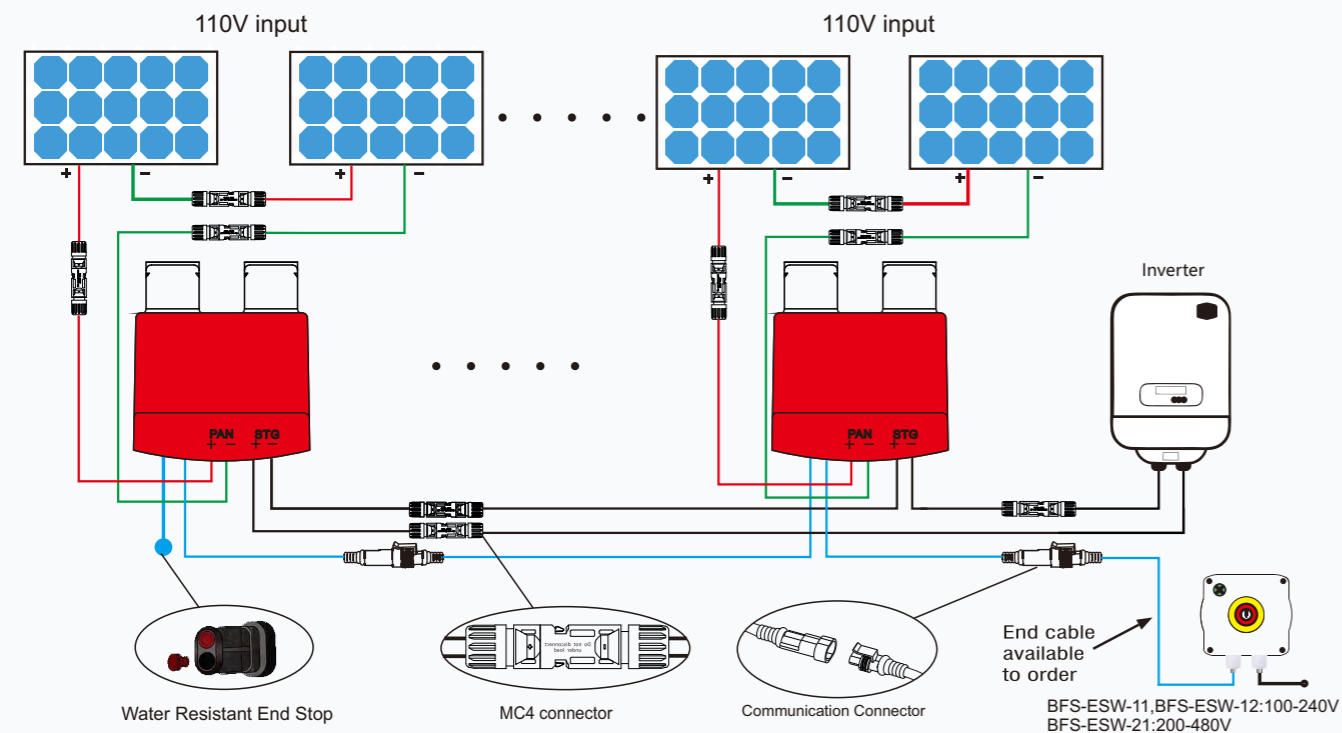
Emergency button switch/Rapid Shutdown Monitoring Device is required to initiate the rapid shutdown operating, as a trigger placed on the ground and easier to reach.

The communication cable on the rapid shutdown device should be connected in series and wire to the button switch/Rapid Shutdown Monitoring Device. So the button switch/Rapid Shutdown Monitoring Device can control the BFS rapid shutdown devices.

A communication without cross-talk with the inverter or WIFI source.

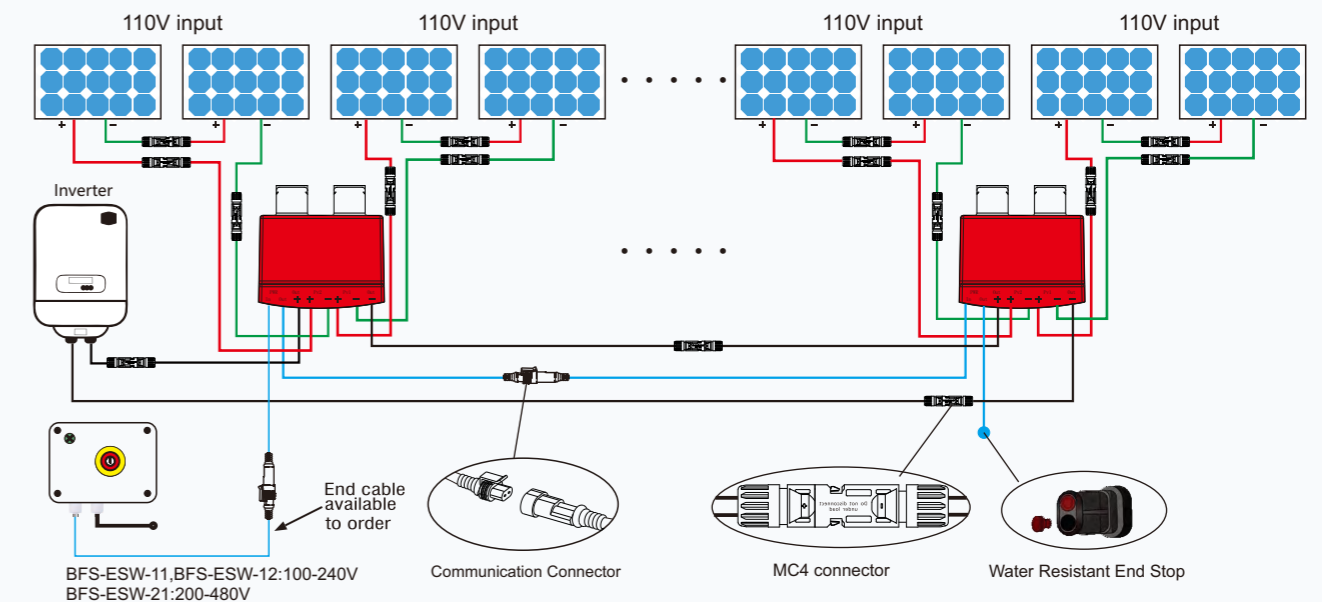
BFS-11 RSD Specifications

| Model | BFS-11 | |
|-------------------------------------|--|-------|
| Maximum Input Voltage | 110V | 70V |
| Maximum Input Current | 20A | 25A |
| Maximum Power | 2200W | 1750W |
| PV Input and Output Cables | 4.0mm ² (12AWG) Cables + MC4 Connectors | |
| PV Input Cables Length | 180mm | |
| PV Output Cables Length | 1800mm | |
| IP Protection | IP68 | |
| Operating Temperature | -40°C to +85°C | |
| Storage Temperature | -40°C to +85°C | |
| Standard Compliance | EN 62109-1:2010, EN 61058-1:2018 | |
| PV Connectors | Staubli MC4 (Standard) Jinko connectors for option | |
| DC Power Supply for each RSD | | |
| Voltage Range | 14V ~ 28V | |
| Maximum Current | 8mA | |
| Maximum Power | 0.15W | |
| Power Supply Cables (Signal Cables) | 2x0.823mm ² (18AWG) Signal Cables + Signal Connectors | |
| Power Supply Cables Length | 1800mm | |



BFS-12 RSD Specifications

| Model | BFS-12 | |
|-------------------------------------|--|-------|
| Maximum Input Voltage | 110V*2 | 70V*2 |
| Maximum Input Current | 20A | 25A |
| Maximum Power(Input1+Input2) | 4400W | 3500W |
| PV Input and Output Cables | 4.0mm ² (12AWG) Cables + MC4 Connectors | |
| PV Input 1 Cables Length | 180mm | |
| PV Input 2 Cables Length | 300mm | |
| PV Output Cables Length | 1800mm | |
| IP Protection | IP68 | |
| Operating Temperature | -40°C to +85°C | |
| Storage Temperature | -40°C to +85°C | |
| Standard Compliance | EN 62109-1:2010, EN 61058-1:2018 | |
| PV Connectors | Staubli MC4 (Standard) Jinko connectors for option | |
| DC Power Supply for each RSD | | |
| Voltage Range | 14V ~ 28V | |
| Maximum Current | 12mA | |
| Maximum Power | 0.2W | |
| Power Supply Cables (Signal Cables) | 2x0.823mm ² (18AWG) Signal Cables + Signal Connectors | |
| Power Supply Cables Length | 1800mm | |

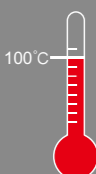


Each BFS-11/BFS-12 device can hold solar modules output max: 1500V total, the modules connect in series as solar string goes to inverter as PV system designing. The connection of BFS-11/BFS-12 RSD and button switch is via communication cable.

Note: If your market requires NEC2017/NEC2020 requirement, we recommend one RSD BFS-11 connects 1 panel($\geq 40V$) or 2 panels($< 40V$); BFS-12 connects 2 panels($\geq 40V$) or 4 panels($< 40V$).

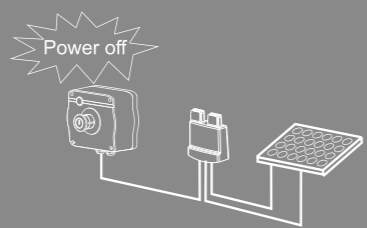
A Complete RSD Solution

Method1



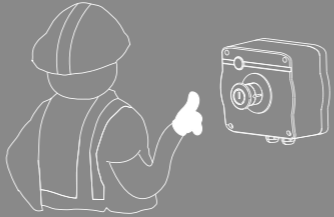
Automatic shutdown the panels when there is a temperature in the area higher than 100°C detected.

Method2



Automatic shutdown the panels when the power supply loss in the button switch box.

Method3



The fireman and people can manual the button switch to shutdown the panels when there is an emergency.



Emergency Shutdown Switch



The Emergency Switch offers the manual shutdown of solar panels on the rooftop by pushing the button. AC power from grid or AC side at solar inverter both could be the power source for the emergency switch.

And when the AC power loss, automatically shuts down the DC panels at the meantime. (The green light is ON only indicates the AC power supply is live on).

Emergency Button Switch Specifications

| Model | BFS-ESW11(-K) | BFS-ESW12(-K) | BFS-ESW21(-K) |
|--|--|---------------|----------------|
| Input Voltage Range | 100~240VAC | | 200V~480VAC |
| Maximum Working Current | 0.5A | 0.88A | 0.7A |
| Input Frequency Range | 47~63Hz | | |
| Rated Output Voltage | 24VDC | | |
| Maximum Output Current | 315mA | 750mA | 1250mA |
| Maximum Output Power | 7.06W | 18W | 30W |
| Power Supply Cables | 0.823mm ² / 18AWG | | |
| Cables Torque | 0.5 NM/4.5lbin | | |
| DIN Terminal Connector Wiring | 0.5-4mm ² /26AWG-10(Note:BFS-11/ BFS-12 uses communication connector 2x0.823mm ²) | | |
| DIN Terminal Torque | 0.5-0.8Nm/4.5-7lbin | | |
| Ambient Operating Temperature | -30°C to +70°C | | -30°C to +85°C |
| Maximum BFS-11 Units | 40 Units | 90 Units | 90 Units |
| Maximum BFS-12 Units | 20 Units | 45 Units | 45 Units |
| Maximum Distance (First RSD to the Emergency Button Switch) | 150m | | |