BFS Series

Solar Panel Rapid Shutdown Safety Solution

Application

ZBENY BFS-11 is a module level rapid shutdown for solar rooftop fire safety.

The emergency button switch is required to initiate the rapid shutdown function, after the button switch connected with BFS-11 devices by signal cables.

This communication type is the most reliable one, ensure the PV system has RSD function in decades and the panel can be switched off to a safe voltage level in case of emergency at the lowest power consumption.

A RSD solution good for existing solar rooftop or new installations.

BFS-11 RSD SPECIFICATIONS

Max operating Voltage Voc(V dc):	90V
Max operating current (A dc):	18A
Max. output power(W):	1620W
IP Class Protection:	＞IP68
Range of operating voltage (V dc):	10-90V
Max. array short circuit current (A dc):	18A
Max. outputOperating voltage (V dc):	90V
Rated Max. output current (A dc):	18A

Communication Type:	2x1mm² Signal cables + connectors
Signal Cable Length:	1800mm(customizde)

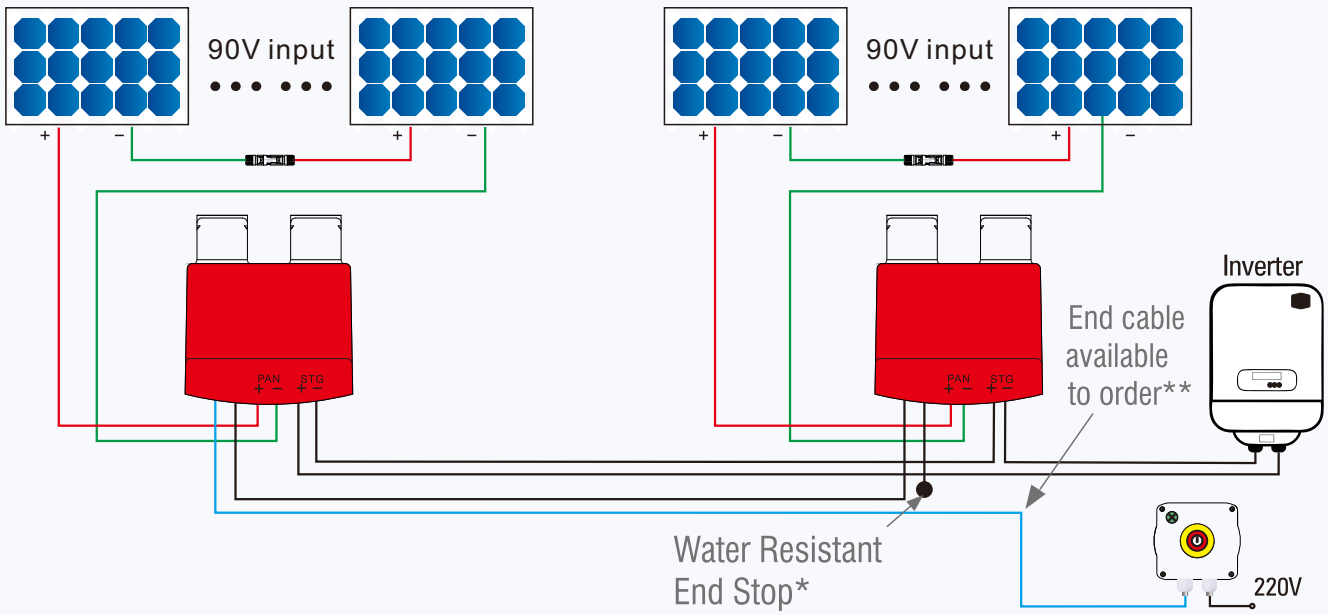
Maximum Air Ambient (°C):	55˚C
Storage/shipping Temperature range:	-30°C to- +65°C
Operating Ambient Temperature range:	-30°C to- +55°C
Standard Compliance:	EN 62109-1；EN 61000-6
PV Panel Cable Length:	180mm
PV Connectors:	Staubli MC4 (Standard)
	Jinko and QC connectors for option
Weight with cables:	

Warranty:	BFS-11:25Years BFS-ESWXX(-K):5Years

*Rapid Shutdown initiate of BFS-11 requires button switch as a complete solution

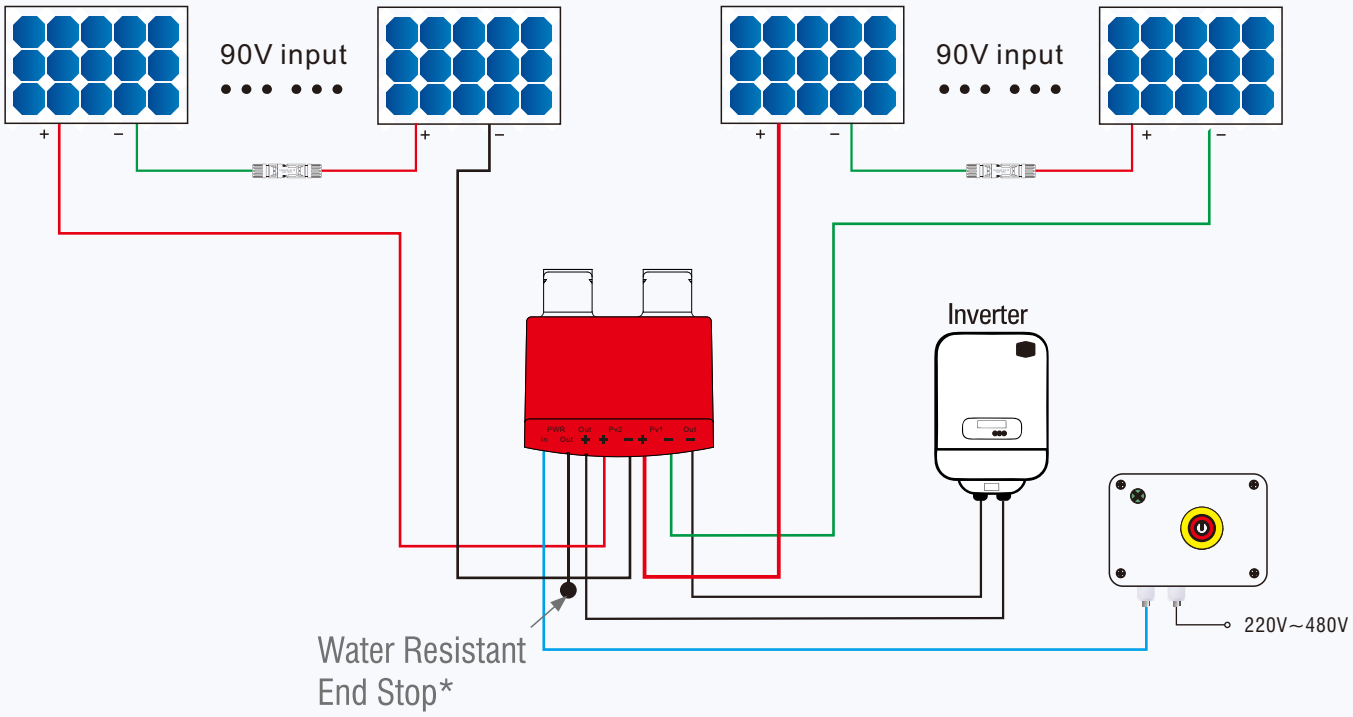
How the solution works?

BFS-11



To meet NEC2017, we recommend one RSD BFS-11 operates 1 panel (≥40V) or 2 panels (<40V)

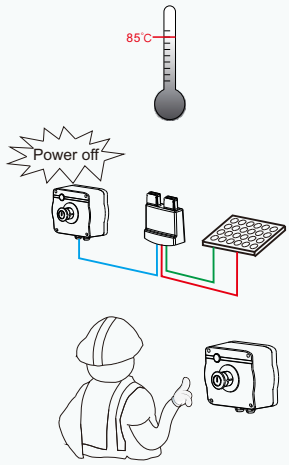
BFS-12



To meet NEC2017, we recommend one RSD BFS-12 operates 2 panels (≥40V) or 4 panels (<40V)

Each BFS-11 device operates solar modules, the modules in series go to inverter sting as usual. The only difference is the communication signaling cables connect the BFS-11 in series and go to the button switch complete the RSD solution.

A complete RSD solution:



Automatic shutdown the panels when there is a temperature in the area higher than 85°C detected.

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

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

EMERGENCY SHUTDOWN SWITCH

The Emergency Shutdown Switches offer manual way of shutdown the solar panels on the roof by pushing the button switches are installed at easy to reach site.

A 24VDC power supply suitable for up to 60 panels operation. The 24VDC power is supplied by solar inverter AC side,so when the AC power loss at solar.

inverter brings rapid shutdown units off.(ON indicates the 24VDC supply is live).

The max distance allowed from button switch to RSD:150M.

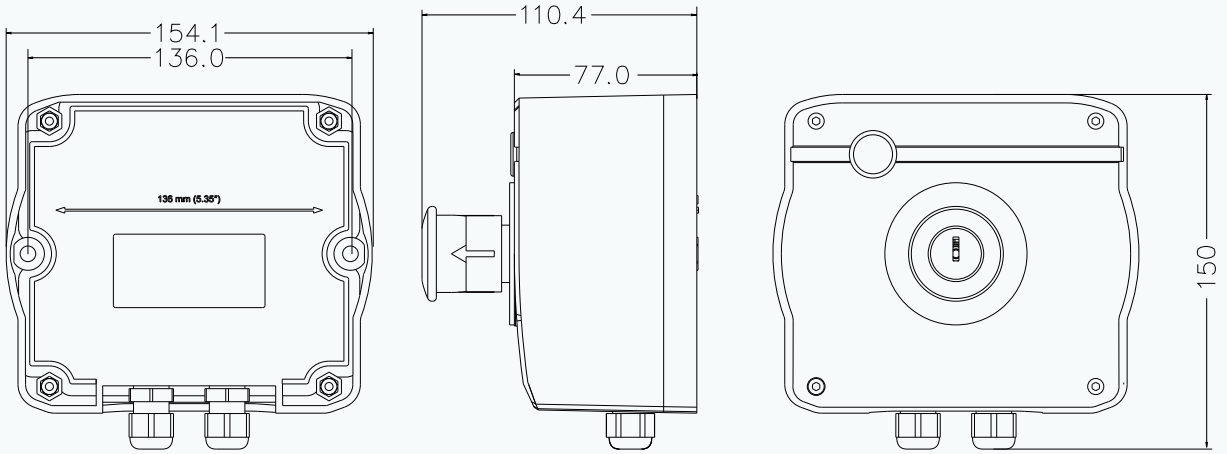
SPECIFICATION

Part Number	Description
BFS-11	Rapid Shutdown Unit for solar panel/panels 90V input
BFS-12	Rapid Shutdown Unit for solar panel/panels 2x90V input
BFS-ESW11	Emergency Rapid Shutdown Switch for BFS-11, max 60 units RSD.
BFS-ESW12	Emergency Rapid Shutdown Switch for BFS-11, max 125 units RSD.
BFS-ESW11-K	Emergency Rapid Shutdown Switch with Key Lock for BFS-11, max 60 units RSD.
BFS-ESW12-K	Emergency Rapid Shutdown Switchwith Key Lock for BFS-11, max 125 units RSD.
BFS-ESW21	Emergency Rapid Shutdown Switch for BFS-11, max 125 units RSD (200V-480V AC power input).
BFS-ESW21-K	Emergency Rapid Shutdown Switchwith Key Lock for BFS-11, max 125 units RSD (200V-480V AC power input).
BFS-CCABLE	20m signal cable with female communication connector for end of string
BFS-CCABLES	2m signal cable with male and female communication connectors for between strings or panels.

INSTALL DIMENSION

mm

BFS-ESW11-(K)/BFS-ESW12-(K)



Note: Customized solutions are available