

# Smart Power Optimizer

Single Input 1 For 1



PLC Transceiver

Single Input 1 For 2



Emergency Switch Box



Smart Logger



SafeSolar

## Product Features



### Improved Power Generation Efficiency

Solve power generation losses caused by shading, different orientation and mismatching



### Module-level Data Monitoring

Snapshots include voltage, current, power, power generation, IV working point, temperature, etc.



### Automatic/Manual Rapid Shutdown

Automatic or manual shutdown, to ensure maintenance and fire safety



### 1600M PLC Communication

Supports super-long communication distance



### Flexible Configuration

Optimized long string design for reduce installation costs



### Fault Notification

Real-time fault information on abnormal situations of PV panels

Model	FR-PVMB-C65C	FR-PVMB-C80H	FR-PVMB-C140E	FR-PVMB-C140J
Number of Module	1 For 1	1 For 1	1 For 2	1 For 2
Max. Input/Output Power	650 W	800 W	1400 W	1400 W
Max. Input Voltage	80 Vdc	80 Vdc	125 Vdc	125 Vdc
Max. Continuous Input/Output Current	15 Adc	20 Adc	17 Adc	21 Adc
Dimension （ Without Cable & Connectors ）	132 × 120 × 25 mm	132 × 120 × 45 mm		
Operating Ambient Temperature Range	-40 °C ~ +85 °C <sup>1</sup>			
Installation Part	PV Rail <sup>2</sup>			
Weight	≤ 750 g			
IP Rating	IP68			
Max. System Voltage	1500 Vdc			
Max. Cable Loop Length	1600 m			
Communication Protocol	PLC （Power Line Commnication）			
Cable Specs & Connectors Type	4.0 mm <sup>2</sup> Cables + MC4 Connectors <sup>3</sup>			
Safety Compliance	NEC 2017, 2020 & 2023 (690.12); IEC 62109-1; EN 62109-1; UL 1741, UL 3741			
Standard Features				
Module-level Optimization	√			
Advanced Features				
Automatic Rapid Shutdown	√			
Manual Rapid Shutdown	√			
Monitoring Platform				
Module-level Asset Management	√			
2D & 3D Module-level Data Display	√			
Multi-Module Data Comparison Analysis	√			
Real-time Status Protection	√			
Physical Plants Overview	√			
Energy Management	√			
Data Dashboard	√			
Smart Fault Analysis	√			

\*1 When the ambient temperature reaches between 70°C to 85°C, it might operate under the over-temperature protection.

\*2 The product is designed exclusively for installation on PV rail and should not be installed on the module frame.

\*3 The cable specifications and length can be customized.

