

# SB100-090G-4-PV Solar Water Pump Controller

## SB100-090G-4-PV

### 90 kW SB100 Solar Pumping VFD

SB100 solar water pump controller with MPPT tracking efficiency up to 99%, automatic start and sleep, PV over-voltage and over-current protection, automatic over-temperature derating, optional GPRS app monitoring and an optional IP54 cabinet.



## Rated Electrical Data

Rated values from the SB100 data sheet.

|                                 |       |
|---------------------------------|-------|
| <b>Rated Output Power</b>       | 90 kW |
| <b>Rated Input Current</b>      | 168 A |
| <b>Rated Output Current</b>     | 180 A |
| <b>Maximum DC Input Current</b> | 250 A |

## Recommended Solar Modules

Recommended module power and string configuration for modules with  $37 \pm 1$  V or  $45 \pm 1$  V open-circuit voltage.

|                                |        |
|--------------------------------|--------|
| <b>37 V Module Power</b>       | 250 Wp |
| <b>37 V Modules per String</b> | 18     |
| <b>37 V Parallel Strings</b>   | 22     |
| <b>45 V Module Power</b>       | 300 Wp |
| <b>45 V Modules per String</b> | 15     |
| <b>45 V Parallel Strings</b>   | 22     |

## Installation Dimensions

Controller dimensions and installation-hole diameter in millimetres.

|                                   |          |
|-----------------------------------|----------|
| <b>W1</b>                         | 378 mm   |
| <b>W2</b>                         | 230 mm   |
| <b>H1</b>                         | 582 mm   |
| <b>H2</b>                         | 560.5 mm |
| <b>D1</b>                         | 264.5 mm |
| <b>Installation Hole Diameter</b> | 9 mm     |

## Controller Configuration

Model code and controller configuration.

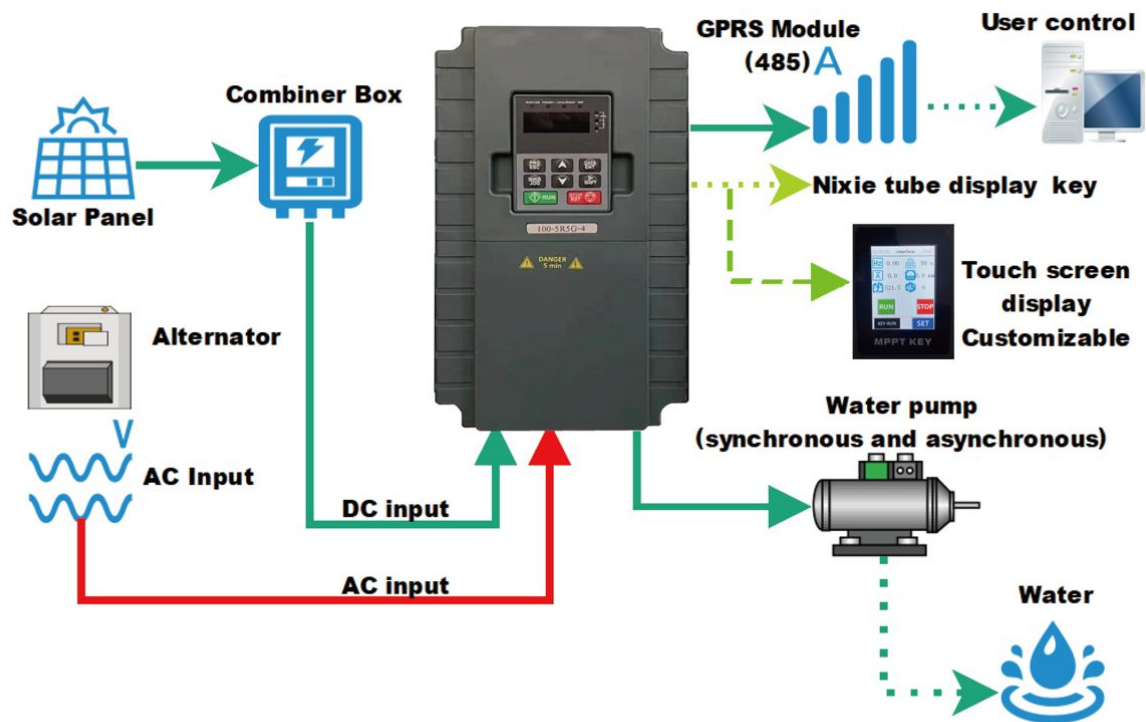
|                                 |   |
|---------------------------------|---|
| <b>Model Configuration Code</b> | 4 |
|---------------------------------|---|

## Features and Operating Notes

Shared SB100 features and configuration notes.

|                                         |                                                                                                                                      |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Maximum MPPT Tracking Efficiency</b> | 99 %                                                                                                                                 |
| <b>Protection Functions</b>             | PV over-voltage protection; over-current protection; automatic derating against over-temperature.                                    |
| <b>Remote Monitoring</b>                | Optional GPRS module for remote controller monitoring through the app.                                                               |
| <b>Automatic Start and Sleep</b>        | Yes                                                                                                                                  |
| <b>Cabinet Option</b>                   | Optional cabinet product for IP54 protection level.                                                                                  |
| <b>AC and DC Input Note</b>             | Simultaneous AC and DC access requires customization.                                                                                |
| <b>Pump Compatibility Note</b>          | Synchronous water pump configurations require customization. The factory default is DC input controlling an asynchronous water pump. |

## Solar Water Pumping System Diagram



## SB100 Solar Water Pump Controller Wiring Diagram

