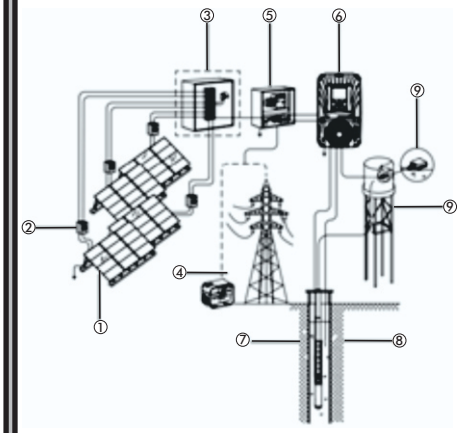
GRUNDFOS®

RSI
AC Solar Pump Controllers

RSI

PowerAdapt



1. Solar Panel
2. DC Switch
3. Combiner Box
4. Generator/Grid
5. PowerAdapt
6. RSI
7. Submersible Pump, SP
8. Dry-run Switch
9. Tank or Water Tower
10. Level Switch

GRUNDFOS RSI SOLAR CONTROLLERS

Recent innovations in DC/AC inverter technology have led to the development of solar solutions for large system outputs, which use standard AC motors controlled by specially designed inverters. Grundfos RSI inverter systems have been re-engineered and improved and are especially compatible with a wide range of the world renowned Grundfos Submersible and surface pumps to create a modular system that can be customised to the requirements of each installation. Specific features include:-

- Suitable for all AC 3 phase motor sizes.
- Designed for all Grundfos SP pump models and can be retro fitted to existing installations.
- Advanced MPPT capability that optimises system performance by compensating for environmental condition improving water output by 30%.
- Set-up wizard that is pre-progmammed with Grundfos motors making it easy to set up or pre-programme at the workshop before installation.
- Hybrid capability with option of switching between AC or DC power ensuring that the pump can be operated at any time of day . An external switch over box is required to connect the two power sources
- Adjustable operating parameters.
- Multiple sensor input.
- PowerAdapt controller available as an option for power blending where it uses solar power as primary source and tops up any deficit power from connected AC power supply to create a constant power output.

CONTROLLER FUNCTIONS

The controller offers the following control functions:-

- Detachable control interface
- Settable minimum and maximum frequency and open circuit voltage.
- Display of operating parameters including frequency, voltage, amperage, input power and pump speed.
- Display of historical data including energy generation, maximum power and operating times.
- Protection against over and under voltage, over current, system overload and module over temperature.
- Fault detection with error code display.

INSTALLATION

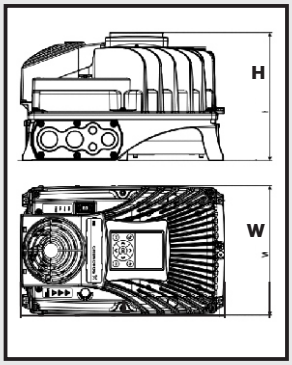
As a rule all PV powered solar pumping systems should be provided with a solar module array with a nominal output about 30% greater than the motor size. The arrays should be wired in a combination of series and parallel connections to ensure that the correct voltage is available in to the inverter. It is important that the connection arrangement is approved by the pump supplier.

OPERATING CONDITIONS

Ambient Temperature: -10°+60°
Relative Humidity: 100%
Enclosure Class: IP66
Voltage: 3x380V
Frequency: 5-60Hz

CONTROLLER DATA

RSI Controller										PowerAdapt		
Model	Motor Power (kW)	Solar Input Power (kW)	Max DC Input Voltage (VDC)	Min. MPP Voltage (VDC)	Output Current (A)	Dimensions(mm)			Weight (kg)	Current (A)	Dimensions LXWXH	Weight (kg)
						L	W	H				
RSI003	3	3.9	800	400	8	315	191	214	9	16	500x250x530	23
RSI055	5.5	7.2			12	368	233	231	15			
RSI075	7.5	9.8			14							
RSI110	11	14.5			16							
RSI150	15	19.5			31	500	322	254	32	31	600x300x630	30
RSI220	22	28.6			46					72	640x300x630	34



Ambient Temperature: -10°+60° ***Relative Humidity:*** 100% ***Enclosure Class:*** IP66