Let the sunshine drive your pump!

Altivar 312 Solar

Variable speed drives for pumps with photovoltaic arrays
From 0.18 kW (0.25 HP) to 5.5 kW (7.5 HP)

Schneider Electric

1,000,000,000*

people worldwide do not have access to clean water

Schneider Electric, global specialist in energy management embraces its responsibility to promote innovative solutions and products to allow sustainable usage and better access to natural resources for all without endangering the climate.

* source: www.savethechildren.org

Altivar 312 Solar meets the challenge!

The first variable speed drive compatible with a wide choice of pumps and solar arrays available on the local market.

Flexibility:
- Compatible with the majority of locally sourced components and open to most makes of pumps or solar arrays

Cost effectiveness:
- Available worldwide
- Easy to install and maintain using local resources

Reliability:
- High availability for improved access to clean water

Open + Off-roads + Autonomous + Economical

Open
- Compatible with any IEC three-phase asynchronous motors
- Compatible with photovoltaic arrays or grid main supply

Autonomous
- Automatic regulation of pump flow
- Self-adaptation to the drive used in the installation
- On-board commands

Off-roads
- Stand-alone installation
- Designed for harsh environments
- Easy integration with IP cabinets

Economical
- Ready for use – no additional components required
- Embedded motor protection and pump functions
- Part of Schneider Electric's compact drive range

Fast and easy installation

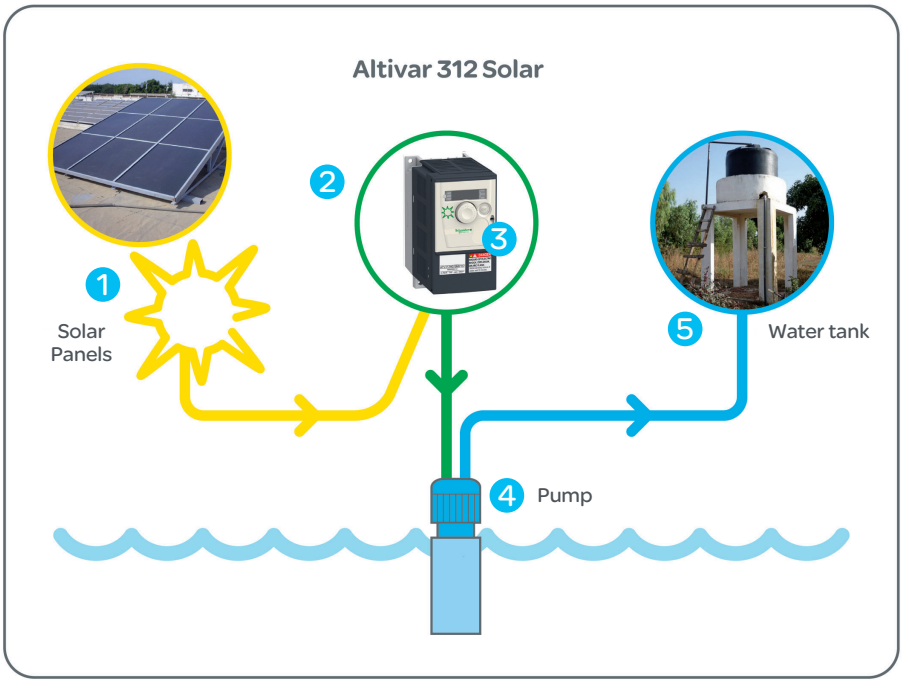
The Altivar 312 Solar drive is designed to help provide drinking water at a lower cost for people with limited or no access to electrical grids.

Main benefits

By reducing the number of components, Altivar 312 Solar increases the reliability of your installation.
The system:

- Adjusts the pump flow to the availability of energy
- Increases the service life of the installation and facilitates its maintenance
- Detects system malfunctions

Components available on site



1. Solar panels
2. Electrical cabinets
3. Variable speed drive: Altivar 312 Solar
4. Pump submerged in well or bore hole
5. Water tank

Easy to connect

Even non-specialists can easily carry out the connection

Ecological

- Design in line with Schneider Electric's eco-conception rules
- No batteries, no lead

Dedicated features for solar pumping units

Embedded functionalities

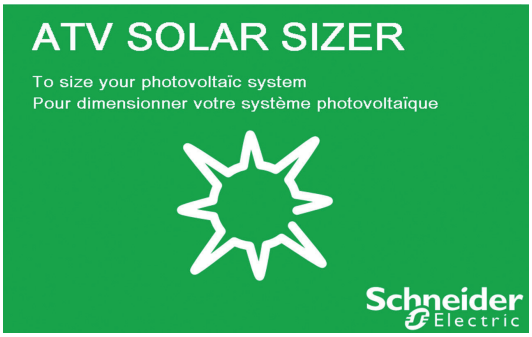
- Solar power regulation algorithm (tracking point) for power optimisation related to available sunshine
- Tank control level probe
- Under-load control for pump protection in the event of water supplies running dry
- All-day Run-Stop-Restart mode management
- Easy-to-use “Sun” menu for fast commissioning
- Diagnostics and self-protection features

Advanced capabilities

- Adjustment to pipe length
- Suitable for all IEC three-phase asynchronous motors
- Full pump management and protection
- Advanced parameters for optimized performance
- Dedicated output for power availability
- Compatible with grid main supply

Altivar Altivar 312 Solar: Flexible and easy to connect

- Altivar 312 Solar controls any three phases pumps and motors
- Compatible with most of existing solar panels
- The Altivar 312 Solar Sizer wizard helps you choose the best configuration for your installation, whatever the tank volume, bore hole, pipe length



Easy to build and install locally

1 – Select your pump with your local supplier

The pump motor of the pump must be:

- A three-phase asynchronous motor
- Compatible with variable speed drive operation

To optimise pumping during half-sunny weather conditions, select the pump with the widest speed range

2 – Select your solar panels with your local supplier

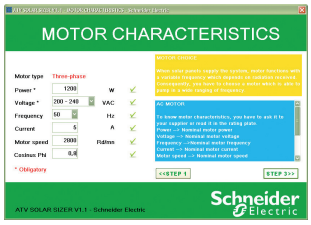
Their sizing must:

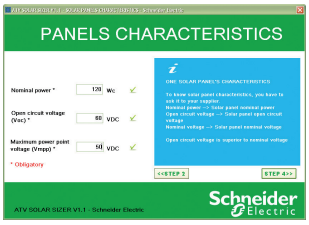
- Cover the power requirements of the pumping system
- Attain the correct inverter voltage values Vmpp and Voc (see next page)

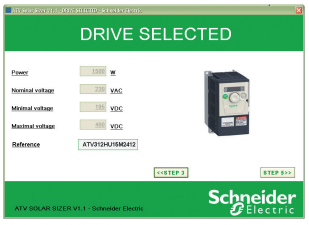
3 – Configure your installation using the free Altivar 312 Solar Sizer tool

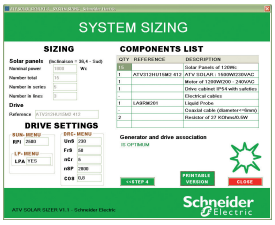
The Altivar 312 Solar Sizer helps you:

- Size the solar array
- Check compatibility of pump and drive
- Select the appropriate Altivar 312 Solar reference
- Define the parameters of the drive









Altivar 312 Solar Sizer: free download on www.schneider-electric.com

4 – Connect and start your pump

All along the process we provide you with support and advice through technical documentation and local experts.

Altivar 312 Solar Selection Guide

Drive with heat sink - IP20 - Single-phase 200V – Up to 2.2 kW for 200V motors - Vmpp = 283VDC-373VDC (1)/Voc = 382VDC max.

Part Number	kW	HP	Dimensions mm (ins.)		
			Width	Depth	Height
ATV312H018 M2 412	0.18	0.25	72 (2.83)	145 (5.70)	132 (5.19)
ATV312H037 M2 412	0.37	0.50	72 (2.83)	145 (5.70)	132 (5.19)
ATV312H055 M2 412	0.55	0.75	72 (2.83)	145 (5.70)	142 (5.59)
ATV312H075 M2 412	0.75	1	72 (2.83)	145 (5.70)	142 (5.59)
ATV312HU11 M2 412	1.1	1.5	107 (4.21)	143 (5.63)	152 (5.98)
ATV312HU15 M2 412	1.5	2	107 (4.21)	143 (5.63)	152 (5.98)
ATV312HU22 M2 412	2.2	3	142 (5.59)	184 (7.24)	152 (5.98)

Drive with heat sink - IP20 - Three-phase 200V - Up to 5.5 kW for 200V motors. Vmpp = 283VDC-373VDC (1)/Voc = 382VDC max.

Part Number	kW	HP	Dimensions mm (ins.)		
			Width	Depth	Height
ATV312H018 M3 412	0.18	0.25	72 (2.83)	145 (5.70)	122 (4.80)
ATV312H037 M3 412	0.37	0.50	72 (2.83)	145 (5.70)	122 (4.80)
ATV312H055 M3 412	0.55	0.75	72 (2.83)	145 (5.70)	132 (5.19)
ATV312H075 M3 412	0.75	1	72 (2.83)	145 (5.70)	132 (5.19)
ATV312HU11 M3 412	1.1	1.5	105 (4.13)	143 (5.63)	132 (5.19)
ATV312HU15 M3 412	1.5	2	105 (4.13)	143 (5.63)	132 (5.19)
ATV312HU22 M3 412	2.2	3	107 (4.21)	143 (5.63)	152 (5.98)
ATV312HU30 M3 412	3	-	142 (5.59)	184 (7.24)	152 (5.98)
ATV312HU40 M3 412	4	5	142 (5.59)	184 (7.24)	152 (5.98)
ATV312HU55 M3 412	5.5	7.5	180 (7.09)	232 (9.13)	172 (6.77)

Drive with heat sink - IP20 - Three-phase 400V - Up to 5.5 kW for 400V motors. Vmpp = 537VDC-777VDC (1)/Voc = 792VDC max.

Part Number	kW	HP	Dimensions mm (ins.)		
			Width	Depth	Height
ATV312H037 N4 412	0.37	0.5	107 (4.21)	143 (5.63)	152 (5.98)
ATV312H055 N4 412	0.55	0.75	107 (4.21)	143 (5.63)	152 (5.98)
ATV312H075 N4 412	0.75	1	107 (4.21)	143 (5.63)	152 (5.98)
ATV312HU11 N4 412	1.1	1.5	107 (4.21)	143 (5.63)	152 (5.98)
ATV312HU15 N4 412	1.5	2	107 (4.21)	143 (5.63)	152 (5.98)
ATV312HU22 N4 412	2.2	3	142 (5.59)	184 (7.24)	152 (5.98)
ATV312HU30 N4 412	3	-	142 (5.59)	184 (7.24)	152 (5.98)
ATV312HU40 N4 412	4	5	142 (5.59)	184 (7.24)	152 (5.98)
ATV312HU55 N4 412	5.5	7.5	180 (7.09)	232 (9.13)	172 (6.77)

Free tools
- Altivar 312 Solar Sizer
- Technical documentation

(1) Tolerance -15%/+0% — Vmpp and Voc values are related to solar arrays characteristics

Make the most of your energy

Schneider Electric Industries SAS

Head office:
35 rue Joseph Monier
CS 30323
92506 Rueil-Malmaison Cedex
France

www.schneider-electric.com

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