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EnergyPal

Solar Panel Guide Specification Data Sheet

**SweModule
RSE260 - 295 Wp
RSE270**

Also available on the web at
EnergyPal.com/swemodule-solar-panels/rse270

- Made in Sweden.
- Optimized to produce more kWh per year than any other module.
- The most automatized PV manufacturing site in Europe.
- Employees with long experience in PV-module manufacturing.
- More than 2 million modules produced at site



Description of module

- Solar Modules produced at SweModule by Renewable Sun Energy Sweden AB are designed for various markets and applications. High quality production, combined with strictest process control, ensure maximum lifespan and the highest performance.
- The robust construction is resistant to heavy wind and snow load.
- Special low iron glass with an unique etched antireflection treated surface, achieves up to 2 % higher measured output power, however the modules gives 5-8% higher energy yield performance in the field during scattered and low light conditions, especially in morning, evening and in the winter months.
- Encapsulant of high performance polyolefin, will stay transparent and maintain the high energy yield over long period of time.
- All joints soldered or welded in Junction Box, to prevent contact corrosion and arcing.

RSE270A

RSE275A

RSE280A

RSE285A

RSE290A

RSE295A

Product portfolio

- **RSExxxA Clear** Aluminum frame, white backsheet.
- **RSExxxA Dark** Black frame, white backsheet
- **RSExxxA Black** Black frame, black backsheet

All products in portfolio can be manufactured with either 4BB poly or mono crystalline cells.
(xxx = P_{max})



Production Site

Modern machines, stable processes and own module Design and Development, gives a unique position to meet customer expectations. The staff is accustomed to the plant and very experienced. Over 2 million modules produced at the production site.

Current capacity of 100 MW per year.

Automation

Automated to the highest level, thereby securing outstanding quality and module performance.



Quality control

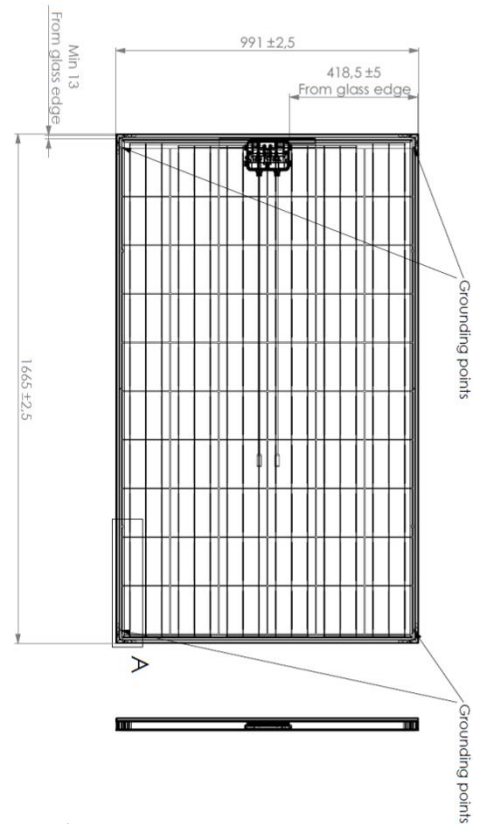
The production site allocates its own test equipment, to ensure the high quality of the manufactured modules.

Each module is measured and visually inspected.

Furthermore new module design and new components can be long term tested in own laboratory.

General Data

Module power:	260 - 295 Wp.
Dimensions (L x W x H):	1665 x 991 x 35 mm
Module area:	1,65 m ²
Weight:	19 Kg
Cell type:	156,75 x 156,75 mm Mono crystalline 156,00 x 156,00mm Poly crystalline
Number of cells:	60 pcs
Cells per bypass diode:	20 pcs
Number of bypass diodes:	3 pcs
Number of cell bus bars:	4
Front cover:	High transparency low iron solar glass with etched antireflection surface treatment.
Front cover thicknesses:	3,2 mm.
Junction-box:	QC Solar with 2 x 1,0 m cable 4mm ² . QC4-10 / IEC1500V connectors IP67 rating (flush safe).
Frame:	Anodized aluminum, or black powder coating.
Wind load	Suction pressure of 2400 Pa (Wind speed 130 km/h with safety factor 3).
Snow load	8000 Pa approved.



Electrical data

Max system voltage	1000V or 1500V
Bypass diode rating:	15 A
Rated surge voltage (junction box)	8000 V
Series resistance of module:	305 mΩ

Temperature ratings

Nominal operation cell temperature (NOCT)	47,5 °C
Temperature coefficient of P _{mpp}	-0,394 %/K
Temperature coefficient of V _{oc}	-0,310 %/K
Temperature coefficient of I _{sc}	0,040 %/K

Module type Electrical data	RSE xxxA (xxx=P _{max})							
	Multi-crystalline cells				Mono-crystalline cells			
Nominal power (P _{mpp})	260	265	270	275	280	285	290	295
Power sorting from nominal (W _p)	0 - 5	0 - 5	0 - 5	0 - 5	0 - 5	0 - 5	0 - 5	0 - 5
Maximum power voltage V _{mpp} (V)	31,1	31,4	31,5	31,8	32,1	32,3	32,6	32,8
Maximum power current I _{mpp} (A)	8,4	8,4	8,6	8,7	8,7	8,8	8,9	9,0
Open circuit voltage V _{oc} (V)	37,9	38,0	38,1	38,3	38,4	38,6	38,7	38,8
Short circuit current I _{sc} (I)	9,1	9,2	9,2	9,4	9,5	9,5	9,6	9,7
Cell efficiency (%)	17,8	18,1	18,5	18,8	19,2	19,6	19,9	20,2
Module efficiency (%)	15,8	16,1	16,4	16,7	17,0	17,3	17,6	17,9
Fill factor	0,76	0,76	0,76	0,77	0,77	0,77	0,78	0,78
Power output tolerance P _{mpp} (%)	±5							

Limited warranty conditions

12 years	materials and workmanship.
25 years	linear module power output warranty, down to 80% . The minimum value in the first year is 97% of the labelled nominal power.
50 years	energy generating.

Certification - TBD

IEC 61215:2005, IEC 61730-1/-2:2007
TÜV Safety Class II, Factory Inspection
Corrosive gas (NH₂) resistant
Salt mist resistant

