

Location:	Daruvar
Climate Data Record:	Daruvar (1986-2017)
PV Output:	99,00 kWp
Gross/Active PV Surface Area:	634,43 / 635,05 m ²

PV Array Irradiation:	1.094.760 kWh
Energy Produced by PV Array (AC):	138.542 kWh
Energy to Grid:	138.541,8 kWh
Direct Use of PV Energy:	0 kWh
Energy from Grid:	302,6 kWh

System Efficiency:	12,6 %
Performance Ratio:	81,0 %
Inverter Efficiency:	94,7 %
PV Array Efficiency:	13,3 %
Specific Annual Yield:	1.396 kWh/kWp
CO2 Emissions Avoided:	122.562 kg/a

The results are determined by a mathematical model calculation. The actual yields of the photovoltaic system can deviate from these values due to fluctuations in the weather, the efficiency of modules and inverters, and other factors. The System Diagram above does not represent and cannot replace a full technical drawing of the solar system.

System in Grid Connected Operation

Location:	Daruvar	PV Output:	99,00 kWp
Climate Data Record:	Daruvar	Gross/Active PV Surface Area:	634,4 m2 / 635,1 m2
Number of Arrays:	1		

Array 1: Array Name

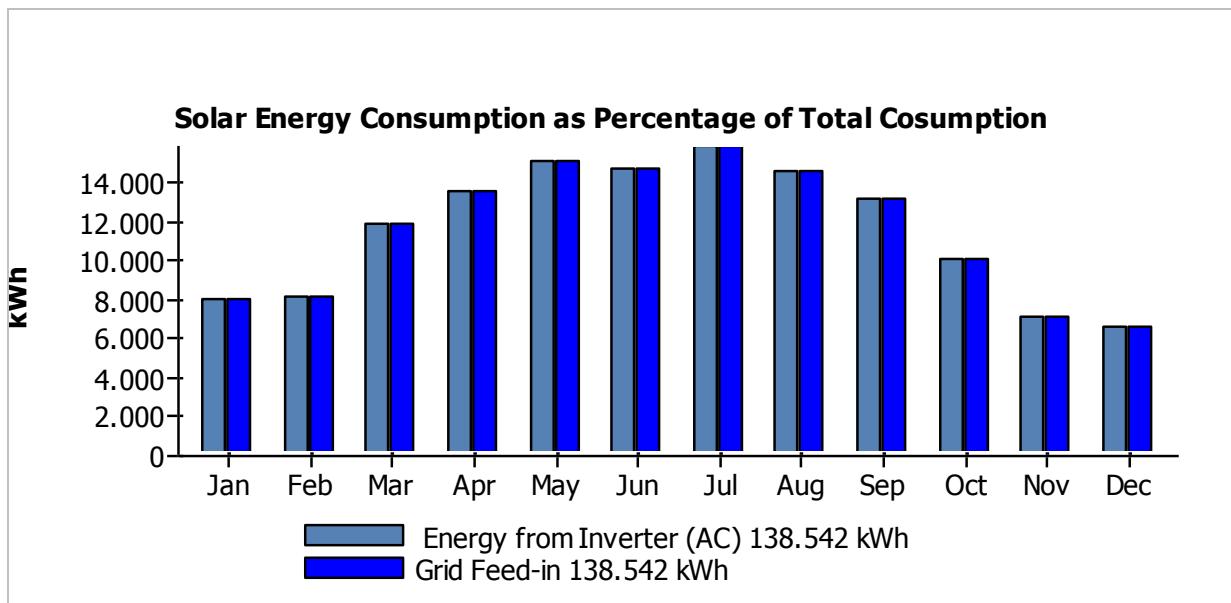
Output:	99,00 kW	Ground Reflection:	20,0 %
Gross/Active Solar Surface Area:	634,4 m2 / 635,1 m2	Output Losses due to... deviation from AM 1.5:	1,0 %
PV Module	300 x	deviation from Manufacturer's Specification:	2,0 %
Manufacturer:	alfasolar	in Diodes:	0,5 %
Model:	AR 80P - 330	due to Pollution:	0,0 %
Nominal Output:	330 W	Inverter	3 x
Power Rating Deviation:	0 %	Manufacturer:	Fronius International
Efficiency (STC):	15,6 %	Model:	FRONIUS CL 36,0
No. of Modules in Series:	10	Output:	36,00 kW
MPP Voltage (STC):	404 V	European Efficiency:	95,3 %
Orientation:	0,0 °	No. of MPP Trackers:	1
Inclination:	30,0 °	MPP Tracking:	230 V To 500 V
Mount:	with Ventilation		
Shade:	No		

Individual Appliances Total Consumption: 0 kWh

Individual Appliance 1	Model: User-Independent Appl.	0 kWh
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Simulation Results for Total System

Irradiation onto Horizontal:	955.936 kWh	Own Use:	302,6 kWh
PV Array Irradiation:	1.094.760 kWh	Energy Produced by PV Array:	145.924 kWh
Irradiation minus Reflection:	1.057.671 kWh	Solar Fraction:	0,0 %
Energy from Inverter (AC):	138.542 kWh	System Efficiency:	12,6 %
Energy to Grid:	138.542 kWh	Performance Ratio:	81,0 %
Consumption Requirement:	0 kWh	Final Yield:	3,8 h/d
Direct Use of PV Energy:	0 kWh	Specific Annual Yield:	1.396 kWh/kWp
Energy from Grid:	303 kWh	Array Efficiency:	13,3 %



Economic Efficiency Calculation

System Data

PV Output: 99,00 kWp
 System Operating Start: 1.4.2017.

Electricity Feed-in

Grid Concept:	Own Use
For the First 20 Years:	0,1453 kn/kWh
Thereafter:	0,0000 kn/kWh
Savings due to Own Use:	0,0000 kn/kWh

Basic Economic Efficiency Parameters

Assessment Period:	20 Years
Interest on Capital:	3,00 %
All entries without sales tax	

Income and expenditure

Investments:	138.600,00 kn
Operating Costs:	970,20 kn/a
Feed-in Payment Received in First Year:	20.085,59 kn/a

Results According to Net Present Value Method

Net Present Value:	151.488,17 kn
Payback Period:	8,4 Years
Yield:	12,1 %
Electricity Production Costs:	0,07 kn/kWh

