

Project Name : DRT  
Project No. :

Location : Europe/Greece/Xanthi  
Grid Voltage : 380V(220V/380V)

System Overview

200 × Luxor ECO LINE HALF CELL BIFACIAL(PV Array1)  
Azimuth : 0°, Tilt : 25°, Peak Power : 134.0kWp

315 × Luxor ECO LINE HALF CELL BIFACIAL(PV Array2)  
Azimuth : 0°, Tilt : 6°, Peak Power : 211.05kWp

1 × SUN2000-100KTL-M1


1 × SUN2000-100KTL-M1

2 × SUN2000-60KTL-M0

Technical Specifications			
Total Number of PV Modules:	515	Annual Energy Yield (Approx.):	505.23MWh
Peak Power:	345.05kWp	Number of Inverters:	4
Performance Ratio (Approx.):	87.33%	Rated AC Power:	320.0kW
Specific Energy( Approx.):	1464.22kWh/kWp/year	DC/AC:	1.08

Design evaluation

Group1

1XSUN2000-100KTL-M1		
Peak Power:	120.6kWp	
Total Number of PV Modules:	180	
Number of Inverters:	1	
Max. AC active power(cosφ=1):	110.0kW	
Grid Voltage:	380V(220V/380V)	
DC/AC:	1.21	
		SUN2000-100KTL-M1

Input MPPT A : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT B : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT C : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT D : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT E : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT F : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT G : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT H : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT I : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

Input MPPT J : PV Array2

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

	MPPT A	MPPT B	MPPT C	MPPT D	MPPT E
Number of PV Strings:	1	1	1	1	1
PV Modules per String:	18	18	18	18	18
PV String Peak Power (input):	12.06kWp	12.06kWp	12.06kWp	12.06kWp	12.06kWp
Normal PV String Voltage:	690.5V	690.5V	690.5V	690.5V	690.5V
PV String Startup Voltage:	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V
Inverter Startup Voltage:	200.0V	200.0V	200.0V	200.0V	200.0V
Max. PV String Voltage:	✔ 824.7V	✔ 824.7V	✔ 824.7V	✔ 824.7V	✔ 824.7V
Max. DC Voltage:	1100.0V	1100.0V	1100.0V	1100.0V	1100.0V
Max. PV String Current:	✔ 17.47A	✔ 17.47A	✔ 17.47A	✔ 17.47A	✔ 17.47A
Max. Inverter DC Current:	26.0A	26.0A	26.0A	26.0A	26.0A
	MPPT F	MPPT G	MPPT H	MPPT I	MPPT J
Number of PV Strings:	1	1	1	1	1
PV Modules per String:	18	18	18	18	18
PV String Peak Power (input):	12.06kWp	12.06kWp	12.06kWp	12.06kWp	12.06kWp
Normal PV String Voltage:	690.5V	690.5V	690.5V	690.5V	690.5V
PV String Startup Voltage:	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V
Inverter Startup Voltage:	200.0V	200.0V	200.0V	200.0V	200.0V
Max. PV String Voltage:	✔ 824.7V	✔ 824.7V	✔ 824.7V	✔ 824.7V	✔ 824.7V
Max. DC Voltage:	1100.0V	1100.0V	1100.0V	1100.0V	1100.0V
Max. PV String Current:	✔ 17.47A	✔ 17.47A	✔ 17.47A	✔ 17.47A	✔ 17.47A
Max. Inverter DC Current:	26.0A	26.0A	26.0A	26.0A	26.0A

Group2

1XSUN2000-100KTL-M1

Peak Power:	90.45kWp
Total Number of PV Modules:	135
Number of Inverters:	1
Max. AC active power(cosφ=1):	110.0kW
Grid Voltage:	380V(220V/380V)
DC/AC:	0.9



SUN2000-100KTL-M1

- Input MPPT A : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT B : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT C : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT D : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT E : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT F : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT G : PV Array2
- 18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°
- Input MPPT H : PV Array2
- 9 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 6°

	MPPT A	MPPT B	MPPT C	MPPT D	MPPT E
Number of PV Strings:	1	1	1	1	1
PV Modules per String:	18	18	18	18	18
PV String Peak Power (input):	12.06kWp	12.06kWp	12.06kWp	12.06kWp	12.06kWp
Normal PV String Voltage:	690.5V	690.5V	690.5V	690.5V	690.5V
PV String Startup Voltage:	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V
Inverter Startup Voltage:	200.0V	200.0V	200.0V	200.0V	200.0V
Max. PV String Voltage:	✔ 824.7V	✔ 824.7V	✔ 824.7V	✔ 824.7V	✔ 824.7V
Max. DC Voltage:	1100.0V	1100.0V	1100.0V	1100.0V	1100.0V
Max. PV String Current:	✔ 17.47A	✔ 17.47A	✔ 17.47A	✔ 17.47A	✔ 17.47A
Max. Inverter DC Current:	26.0A	26.0A	26.0A	26.0A	26.0A
	MPPT F	MPPT G	MPPT H	MPPT I	MPPT J
Number of PV Strings:	1	1	1	-	-
PV Modules per String:	18	18	9	-	-
PV String Peak Power (input):	12.06kWp	12.06kWp	6.03kWp	-	-
Normal PV String Voltage:	690.5V	690.5V	345.2V	-	-
PV String Startup Voltage:	✔ 200.0V	✔ 200.0V	✔ 200.0V	-	-
Inverter Startup Voltage:	200.0V	200.0V	200.0V	-	-
Max. PV String Voltage:	✔ 824.7V	✔ 824.7V	✔ 412.4V	-	-
Max. DC Voltage:	1100.0V	1100.0V	1100.0V	-	-
Max. PV String Current:	✔ 17.47A	✔ 17.47A	✔ 17.47A	-	-
Max. Inverter DC Current:	26.0A	26.0A	26.0A	-	-

## Group3

### 2XSUN2000-60KTL-M0

Peak Power:	134.0kWp
Total Number of PV Modules:	200
Number of Inverters:	2
Max. AC active power( $\cos\phi=1$ ):	66.0kW
Grid Voltage:	380V(220V/380V)
DC/AC:	1.12



SUN2000-60KTL-M0

#### Input MPPT A : PV Array1

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 25°

#### Input MPPT B : PV Array1

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 25°

#### Input MPPT C : PV Array1

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 25°

#### Input MPPT D : PV Array1

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 25°

#### Input MPPT E : PV Array1

18 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 25°

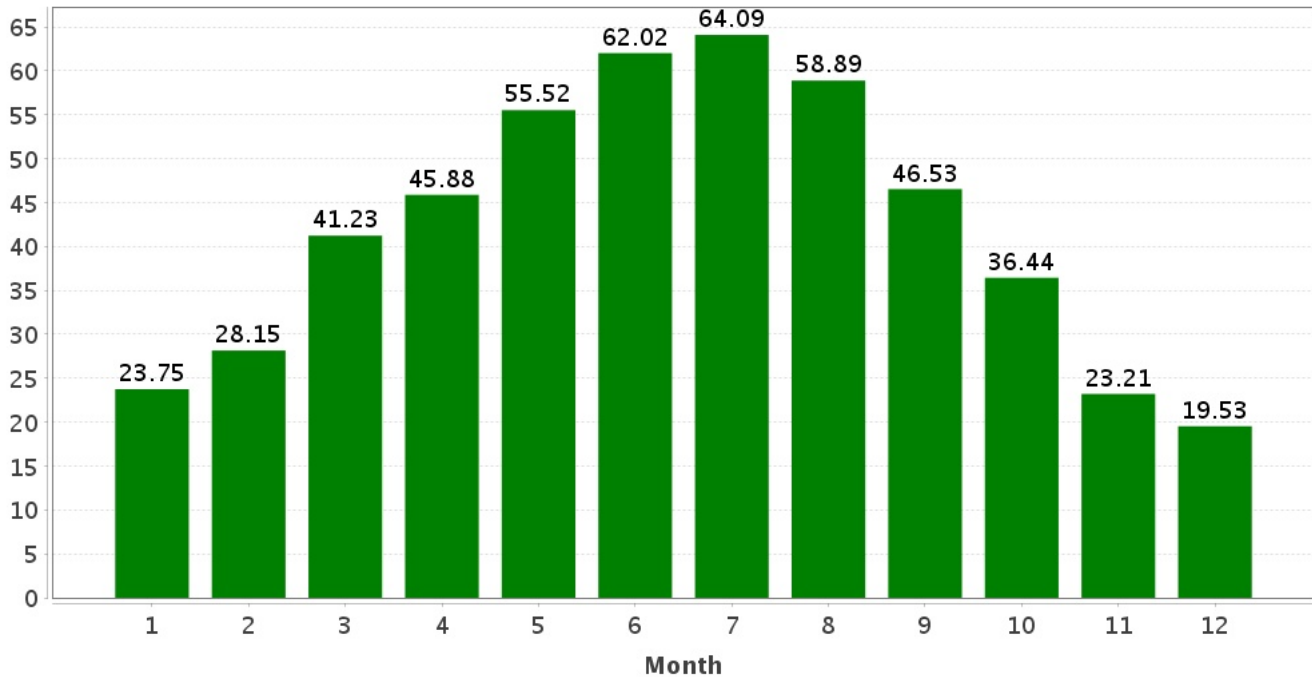
#### Input MPPT F : PV Array1

10 × Luxor ECO LINE HALF CELL BIFACIAL, Azimuth : 0°, Tilt : 25°

	MPPT A	MPPT B	MPPT C	MPPT D	MPPT E	MPPT F
Number of PV Strings:	1	1	1	1	1	1
PV Modules per String:	18	18	18	18	18	10
PV String Peak Power (input):	12.06kWp	12.06kWp	12.06kWp	12.06kWp	12.06kWp	6.7kWp
Normal PV String Voltage:	690.5V	690.5V	690.5V	690.5V	690.5V	383.6V
PV String Startup Voltage:	✓ 200.0V	✓ 200.0V	✓ 200.0V	✓ 200.0V	✓ 200.0V	✓ 200.0V
Inverter Startup Voltage:	200.0V	200.0V	200.0V	200.0V	200.0V	200.0V
Max. PV String Voltage:	✓ 824.7V	✓ 824.7V	✓ 824.7V	✓ 824.7V	✓ 824.7V	✓ 458.2V
Max. DC Voltage:	1100.0V	1100.0V	1100.0V	1100.0V	1100.0V	1100.0V
Max. PV String Current:	✓ 17.47A	✓ 17.47A	✓ 17.47A	✓ 17.47A	✓ 17.47A	✓ 17.47A
Max. Inverter DC Current:	22.0A	22.0A	22.0A	22.0A	22.0A	22.0A

## Details

**Monthly Energy Yield (MWh)**



	Number of PV Inverters	PV Inverter Rated AC Power	Total Number of PV Modules	Peak Power
DRT	4	320.0 kW	515	345.05 kWp
Power Generation Unit	4	320.0 kW	515	345.05 kWp
Group1	1	100.0 kW	180	120.6 kWp
Group2	1	100.0 kW	135	90.45 kWp
Group3	2	120.0 kW	200	134.0 kWp

	✓ DC Power Cable	✓ AC Power Cable	Total
Power Loss under Rated Conditions	801.15W	450.05W	1251.2W
Relative Power Loss at Rated Voltage	0.23 %	0.14 %	0.37 %
Cable Cross-sectional Area/Length	4mm <sup>2</sup> /240.0 m	25mm <sup>2</sup> /10.0 m 240mm <sup>2</sup> /20.0 m	

Signature:\_\_\_\_\_

\*Note: The displayed energy yield is an estimated value, and is calculated through a formula. SmartDesign is not liable for any difference between the actual energy yield and the displayed value. The difference depends on various conditions, such as the PV module stains or efficiency fluctuation.