



Project Name : MŠ Komenského
Project No. : 64


Location : Europe/Czech Republic/Boskovice
Grid Voltage : 400V(230V/400V)


System Overview

217 × LONGI LR4-72HIH-450M(Střecha 1)
Azimuth : -10°, Tilt : 10°, Peak Power : 97.65kWp
82 × LONGI LR4-72HIH-450M(Střecha 2)
Azimuth : -10°, Tilt : 10°, Peak Power : 36.9kWp

 2 × SUN2000-40KTL-M3

 216 × SUN2000-450W-P2

 1 × SUN2000-36KTL-M3

 82 × SUN2000-450W-P

Technical Specifications			
Total Number of PV Modules:	298	Annual Energy Yield (Approx.):	131.17MWh
Peak Power:	134.1kWp	Number of Inverters:	3
Performance Ratio (Approx.):	87.12%	Rated AC Power:	116.0kW
Specific Energy(Approx.):	978.12kWh/kWp/year	DC/AC:	1.16
Number of Optimizers:	298		

Design evaluation

Group1

2XSUN2000-40KTL-M3

Peak Power:

97.2kWp

Total Number of PV Modules:

216

Number of Inverters:

2

Max. AC active power(cosφ=1):

44.0kW

Grid Voltage:

400V(230V/400V)

DC/AC:

1.22



SUN2000-40KTL-M3

Input MPPT A : Střecha 1

36 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

Input MPPT B : Střecha 1

36 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

Input MPPT C : Střecha 1

18 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

Input MPPT D : Střecha 1

18 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

	MPPT A	MPPT B	MPPT C	MPPT D
Number of Optimizers:	36	36	18	18
Number of PV Strings:	2	2	1	1
PV Modules per String:	18	18	18	18
PV String Peak Power (input):	16.2kWp	16.2kWp	8.1kWp	8.1kWp
Normal PV String Voltage:	702.0V	702.0V	702.0V	702.0V
PV String Startup Voltage:	✔ 200.0V	✔ 200.0V	✔ 200.0V	✔ 200.0V
Inverter Startup Voltage:	200.0V	200.0V	200.0V	200.0V
Max. PV String Voltage:	✔ -	✔ -	✔ -	✔ -
Max. DC Voltage:	-	-	-	-
Max. PV String Current:	✔ 18.0A	✔ 18.0A	✔ 9.0A	✔ 9.0A
Max. Inverter DC Current:	26.0A	26.0A	26.0A	26.0A

Group2

1XSUN2000-36KTL-M3

Peak Power:	36.9kWp
Total Number of PV Modules:	82
Number of Inverters:	1
Max. AC active power(cosφ=1):	39.6kW
Grid Voltage:	400V(230V/400V)
DC/AC:	1.02



SUN2000-36KTL-M3

Input MPPT A : Střecha 2

34 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

Input MPPT B : Střecha 2

16 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

Input MPPT C : Střecha 2

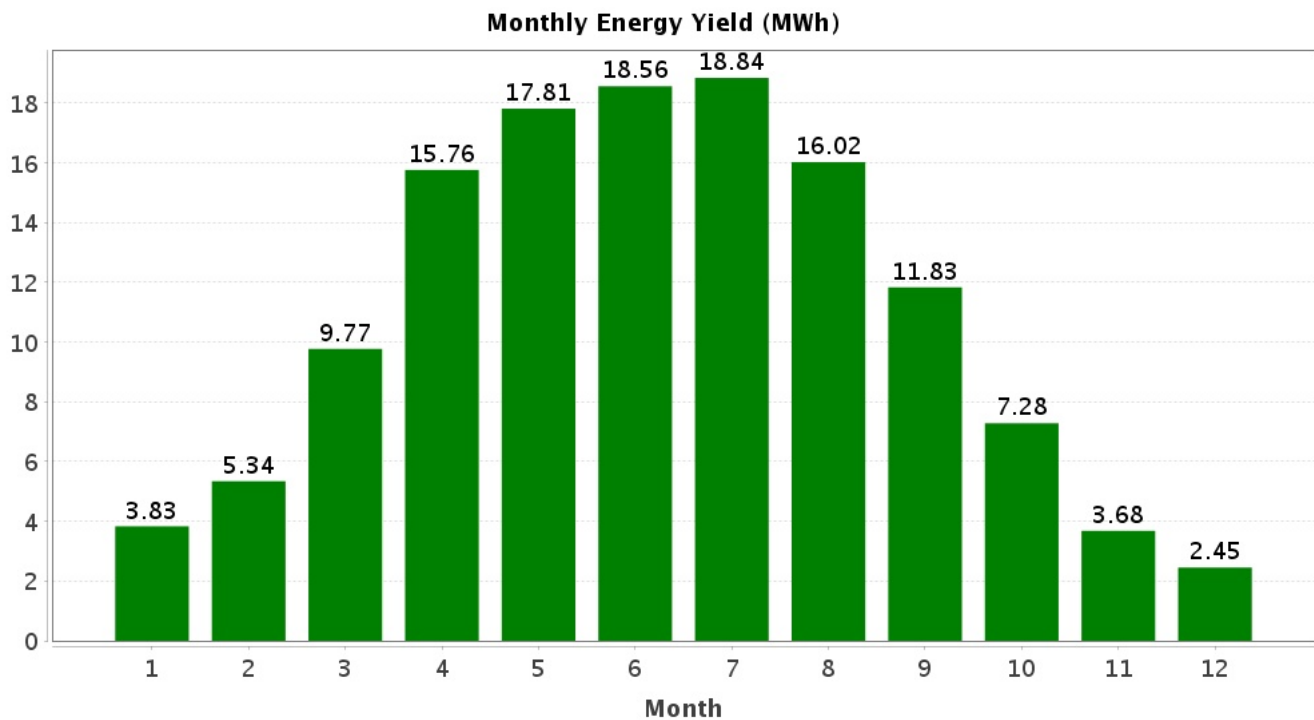
16 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

Input MPPT D : Střecha 2

16 × LONGI LR4-72HIH-450M, Azimuth : -10°, Tilt : 10°

	MPPT A	MPPT B	MPPT C	MPPT D
Number of Optimizers:	34	16	16	16
Number of PV Strings:	2	1	1	1
PV Modules per String:	17	16	16	16
PV String Peak Power (input):	15.3kWp	7.2kWp	7.2kWp	7.2kWp
Normal PV String Voltage:	702.0V	664.0V	664.0V	664.0V
PV String Startup Voltage:	✓ 200.0V	✓ 200.0V	✓ 200.0V	✓ 200.0V
Inverter Startup Voltage:	200.0V	200.0V	200.0V	200.0V
Max. PV String Voltage:	✓ -	✓ -	✓ -	✓ -
Max. DC Voltage:	-	-	-	-
Max. PV String Current:	✓ 17.0A	✓ 8.0A	✓ 8.0A	✓ 8.0A
Max. Inverter DC Current:	26.0A	26.0A	26.0A	26.0A

Details



	Number of PV Inverters	PV Inverter Rated AC Power	Total Number of PV Modules	Peak Power	Number of Optimizers
MŠ Komenského	3	116.0 kW	298	134.1 kWp	298
Power Generation Unit	3	116.0 kW	298	134.1 kWp	298
Group1	2	80.0 kW	216	97.2 kWp	216
Group2	1	36.0 kW	82	36.9 kWp	82

	✓ DC Power Cable	✓ AC Power Cable	Total
Power Loss under Rated Conditions	175.11W	307.36W	482.47W
Relative Power Loss at Rated Voltage	0.13 %	0.26 %	0.39 %
Cable Cross-sectional Area/Length	4mm ² /80.0 m	16mm ² /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.