



Ground mounted solar power plant

Features of the plant:

For the implementation of this project were used mono-crystalline modules type Sinski PV SPV180M-24 with nominal power of 180 Wp and voltage of VMPP = 36V. The system consists of 288 modules, forming static structures with inclination of 25°.

The modules feed the generated electricity to 6 inverters. To each inverter are connected 48 modules, distributed in 4 strings of 12 modules. The successive connection of the modules in string is carried out by installed factory cables and connectors.

For the PV system are used SMA Technologies inverters, model Sunny Mini Central SMC 8 000TL. They are without transformers, with IP65 level of protection against weather conditions and independent control system of the network parameters „SMA grid guard“. There is a regular monitoring of voltage and frequency of the connected to the PV generator network with predefined parameters. In case of violation of any parameters, the power supply in the network is suspended

The earthing system is built from a common grounding circuit, composed of galvanized steel bar 40/4mm, laid under the ground. The grounding of inverters, intermediate switchboards and all metal non-current-carrying parts is carried out by welding or bolting them to the grounding circuit.

The lightning protection system consists of an early streamer emission lightning conductor E.S.E.S-A1 and lightning shaft height of 6 m above the ground, which ensures protection zone of the installed to the PV system equipment. The installation of the lightning shaft is at a safe distance from the solar modules and there is no shading.

The central monitoring and control device is „Sunny Web Box“, with integrated radiation sensor (pyrometer) and interface for connection of various sensors for measuring of environmental parameters.

Power Plant Specification

Size:	51.84DC
Commissioned:	June 2012
Type:	Ground-mounted
Site Area:	1389 m ²
Output:	48 kW
CO ₂ Displacement:	~ metric tons per year
Module Surface Area:	368 m ²
Modules Used:	Type: SPV180M-24
	Quantity: 288
Angles:	Mounting Tilt: 25°
	Azimuth: 0°



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