

Object Library for the Solar Industry



Simulation in Solar Technology

The complexity of the processes necessary for producing photovoltaic cells and facilities rise steadily with the increasing demand.

Therefore manufacturers face the challenge to increase throughput and produce more cost-efficiently at the same time. However, the costs for the construction, operation and maintenance of photo-

voltaic facilities are comparatively high, so that their utilization has to be maximized in order to be profitable. For this reason, simulation is increasingly used to support the planning and optimization of photovoltaic facilities.

Based on the Siemens Tecnomatix software Plant Simulation and a multitude of successful simulation projects, SimPlan offers an object library that facilitates modelling of the following processes:

- solar cell production using wafer technology,
- module production and
- production of thin-film solar cells.

This object library contains objects for all process steps and the connecting conveyor technology in the facilities. It especially contains objects for modelling the following sub-processes in the cell production, using wafer as well as thin-film technology:

- cleaning,
- coating,
- doping,
- structuring,
- contacting and
- passivating.



For the module production, library objects for modelling the entire facility are included, from glass washing to power measurement. Process steps like laying films or string can be modelled in detail.

All library objects have pre-defined interfaces that allows them to be linked flexibly. Furthermore they allow for application-specific expansion. Library objects for data management, order generation and the analysis of simulation runs are also included.

Example projects in the solar industry

- Q.Cells
 - Assistance and advice in the selection of a simulation tool and introduction of simulation
- Reis Robotics
 - Simulation of a facility for the production of solar panels
 - Simulation of a module production facility
 - Simulation of a welding facility for the production of pressure containers

The SimPlan group

We consider ourselves to be a cross-sector full-range supplier with regard to simulation, accompanying you with extensive know-how, experience and modern methods in the optimisation of business processes.

Our services range from process analysis and consulting through material flow and logistics simulation, simulation-based detailed production planning to support with the commissioning of control software. Furthermore we are a neutral distributor of simulation software and we will lend you our support with the selection, training and implementation in your company.

Why SimPlan?

- Objective and independent analysis
- Detailed knowledge of logistics and production processes with over 25 years project experience
- Sufficient capacities for prompt respond to your questions
- Close cooperation and project integration with high on-site quota
- Development of innovative solutions for the efficient handling of questions

Where to find us

SimPlan Group

Headquarters

Sophie-Scholl-Platz 6
63452 Hanau
Germany

Phone: +49 6181 40296-0
Fax: +49 6181 40296-19
Email: info@SimPlan.de
Web: www.SimPlan.de

Offices Germany

Braunschweig • Bremen • Dresden • Holzgerlingen • Munich • Regensburg

SimPlan Integrations GmbH, Witten (GER)
SimPlan Systems GmbH, Maintal (GER)
induSim GmbH, Langenau (GER)

International Offices

SimPlan Austria, Neufelden / Wien
Sales office China, Shanghai