How to control the equipment in the solar industry perfectly?

An integrated automation landscape and innovative components for machine control provide smart solutions for machine builders.

Answers for industry.
Integrated Machine Solutions

for wafer, cell, module production

Many different process stages and various automation demands come into play during the production of photovoltaic modules. The entire span reaches from slow processes in ingot production to high-speed machines for wafer sawing or the transport of individual components.

Constant quality control of every individual production step is just as important as an integrated process and high-precision machinery.

for thin-film production

During production of thin-film modules, very high demands have to be met as well. For example, the solar cells are structured using laser technology. This means control mechanisms for lasers have to meet demanding challenges in terms of speed and precision.

Constant quality control takes place during glass coating to ensure an optimized production process.
Products and systems for the solar industry

Controls

PC-based automation with Safety Integrated on real-time Soft PLC and WindowsXP embedded in SIMATIC S7-mEC, Microbox, IPC, Panel PC

- Discrete PLC solutions based on SIMATIC S7-200, SIMATIC S7-1200, SIMATIC S7-300, SIMATIC S7-400
- Embedded solutions with S7-mEC or Panel PC with WinAC slot CPU
- PC-based control Microbox or WinAC RTX – even with failsafe technology

HMI

HMI products and automation solutions that perfectly match industry needs and requirements

- WinCC or WinCC flexible as operating and control system on various hardware platforms

Bus systems

Complete hardware and security portfolio for PROFIBUS, PROFINET, Industrial Ethernet, AS-i

- Industrial Ethernet
- PROFIBUS or PROFINET with PROFIsafe integrated
- AS-i
Integrated world of automation and drives with safety.
Safety integrated for machine builders

- Touch Panel WinCC
- Microbox PC WinAC RTX F
- Simotion D 4 x 5
- ET 200pro F
- SINAMICS S110
- ET 200eco PN
- SIMATIC S7 mEC F
- ET 200eco F
- Code Reading MV440
- PROFINET
- Industrial Ethernet
Products and systems for the solar industry

Motion Control and drives

Scalable motion control from single-axis motion controller to high-end multi-axis. SIMOTION Smart drives management copes with power failures by SINAMICS S active line modules.

- SIMOTION
- T-CPU
- SINAMICS
- MICROMASTER
- Small-, medium- and large-size motors

Decentralized periphery

Decentralized periphery with integrated failsafe technology

- Large family for decentralized I/O with SIMATIC ET 200M/S/ISP/pro
- Available in standard and failsafe technology

Sensors and instrumentation

Wide range of sensors and instrumentation portfolio fit to machine application in the solar industry

- High variety of sensors for machine instrumentation
- PROFIBUS DP and PA (e.g. SIMOCODE, pressure, temperature)
- AS-i components for installation directly at the machine
With Totally Integrated Automation (TIA), Siemens is in a unique position to offer just the right components for optimum machine concepts in every production step. We provide a span of products that reaches from individual sensors and actuators directly at the machine to decentralized control modules and solutions for the operation and monitoring level (HMI). Regardless whether operation is to be performed close to the machine or from a central point, Siemens offers a family of controls with which both options can easily be realized: SIMATIC.

Thanks to the modular concept of TIA, future enhancements and modernization can easily be integrated into existing production concepts. Open interfaces and bus systems enable an easy connection of the single components and a smart integration to superior production planning systems and warehouse data management systems. All Siemens systems are completely integrated and follow a modular design. Unique advantages are based on complete harmonization of all products and include usability, scalability, efficiency and cost savings.
Get more information

solar.industry.automation@siemens.com

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.