

SIEMENS

SIMATIC ET 200

The IO system for both inside and outside the control cabinet

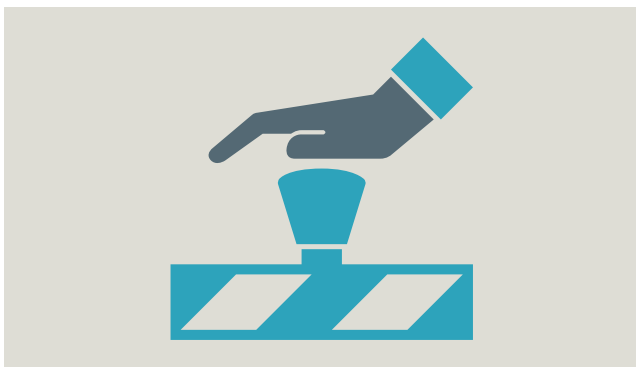
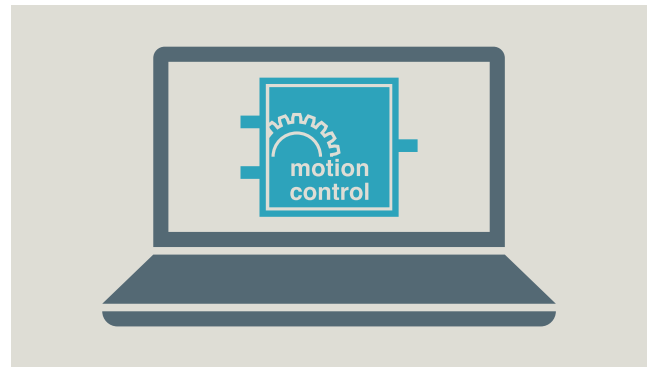
siemens.com/io-system

System properties

With the SIMATIC ET 200, the widest range of IO systems is available – for solutions in the cabinet or without a cabinet directly on the machine. The modular design allows the ET 200 system to be scaled up and expanded in easy and small steps: digital and analog inputs/outputs, intelligent modules with CPU functionality, safety technology, motor starters, frequency converters, and diverse technology modules.

High-speed parameter assignment of motion functionalities – for both standard and high-end motion applications

With the aid of technology objects, typical motion processes can be programmed and tested just once, then reused as often as required. In addition to control tasks, the technology objects also include communication with the converter and its parameter assignment. In this way, Motion Control makes a considerable contribution to shorter engineering and maintenance times.



Standard and safety technology in one system

The TIA Portal makes the integration of safety technology into your automation solution easier and more efficient than ever before. Shared controller, shared engineering and the shared use of existing communication structures for standard and safety functions ensure an excellent cost-benefit ratio.



Maximum industrial suitability – due to extremely rugged design

Each standard product from the SIMATIC range is characterized by the highest quality and ruggedness and is perfect for use in industrial environments. Specific system tests ensure the planned and required quality. SIMATIC components meet all relevant international standards and are certified accordingly. Temperature and shock resistance are defined in the SIMATIC quality guidelines, as are vibration resistance or electromagnetic compatibility.

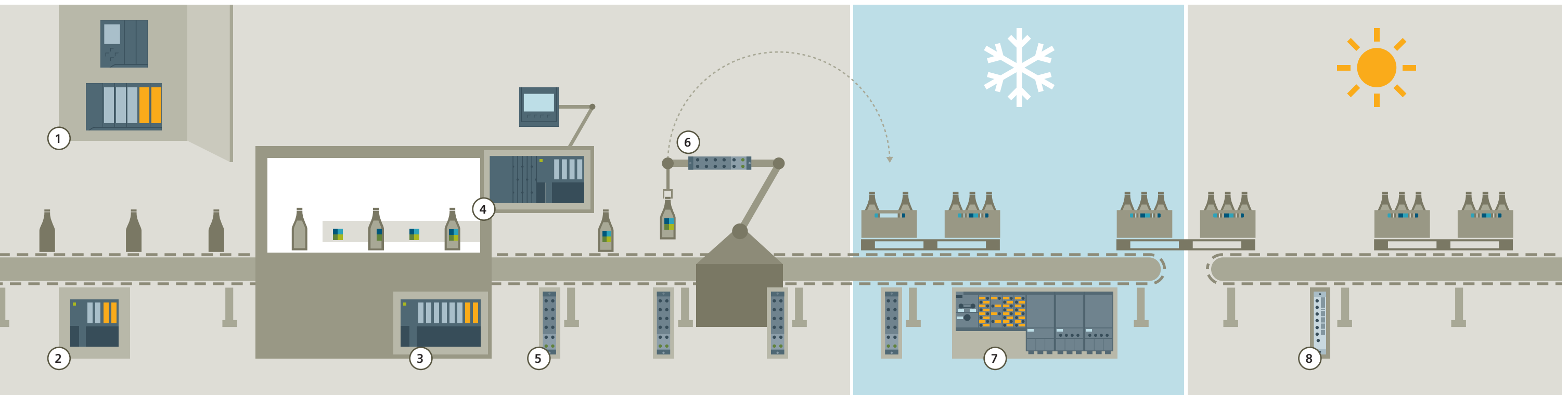
For conditions of use rated as demanding to extreme, special versions such as SIPLUS extreme or special versions of SIMATIC ET 200 are available. These include an increased degree of protection (IP67), extended temperature ranges, and exceptional environmental stress.

SIMATIC ET 200 – a strong family

Do you need your IO system to be as individual as your requirements?

Flexible, distributed solutions are an essential part of modern automation – solutions that are tailored to your requirements and permit significant cost savings. With SIMATIC ET 200, we offer you a multifunctional, modular, finely scalable system for distributed automation: for solutions in the control cabinet or without a control cabinet directly at the machine, as well as for applications in hazardous areas.

The modular design allows the ET 200 system to be scaled up and expanded in easy and small steps: Communication over PROFINET and PROFIBUS, uniform engineering, transparent diagnostic options as well as ideal interfacing to SIMATIC controllers and HMI units prove the unique consistency of Totally Integrated Automation.



1. S7-1500 IO / ET 200MP

The S7-1500 IOs/ET 200MP is particularly suitable for use in the control cabinet directly at an S7-1500 or as an extension to the row.

2. ET 200SP CPU

The ET 200SP CPU with an integral S7-1500 CPU can be installed in compact control boxes mounted directly on the machine.

3. ET 200SP

The SIMATIC ET 200SP IO system can be expanded with as many as 64 modules and covers all requirements with its host of functions.

4. ET 200SP Open Controller

An HMI for visualization purposes can be connected directly to the SIMATIC ET 200SP Open Controller.

5. ET 200AL

Easy expansion of the ET 200SP with IP67 protection using the ET 200AL

6. ET 200AL

The ET 200AL can be used flexibly, even where motion is involved.

7. ET 200pro

As a modular IP67 system, the SIMATIC ET 200pro is also available with a fail-safe option.

8. ET 200eco PN

SIMATIC ET 200eco PN is a compact block IO with a PROFINET connection with IP65/IP67 degree of protection for cabinet-free installation directly at the machine.

The perfect solution for any application

SIMATIC ET 200SP

SIMATIC ET 200SP is a multifunctional IO system for a wide range of applications. Thanks to its scalable design, you can gear the IO station exactly to the on-site requirements. SIMATIC ET 200SP is approved for the IP20 degree of protection and designed for installation in a compact control cabinet.

The IO system, with its compact design, guarantees the most economical use of the control cabinet. SIMATIC ET 200SP supports a host of communication protocols (PROFINET, PROFIBUS, AS-I, IO Link etc.). Its high speed and data transfer rate result in a significantly higher performance than conventional systems. Interface modules with integrated CPU (S7-1500) and PROFINET connection are also available for the SIMATIC ET 200SP. The ET 200SP offers the option of direct connection of a 2-, 3- or 4-wire sensor or actuator.



S7-1500 IO / ET 200MP

The ET 200MP IO system with IP20 degree of protection is scalable and is used not only as a central IO system for S7-1500, but also in a distributed configuration connected to PROFINET. As many as 30 IO modules can be inserted into each station. The modules use a limited variety of parts and the front connector is standardized for all 35 mm wide modules. This considerably simplifies ordering, logistics and storage of spare parts. S7-1500 IO/ET 200MP permits particularly easy wiring and has a very transparent structure.

SIMATIC ET 200eco PN

The SIMATIC ET 200eco PN is used above all in applications directly at the machine where space is at a premium. Thanks to its ruggedness, it is particularly suitable for a wide range of applications in machine building and the automotive industry. The ET 200eco PN is excellently suited for use on tool changing machines. Thanks to its fully-sealed zinc die-cast housing, the ET 200eco PN is mechanically very rugged and resistant to vibrations, dust, oil, or humidity.



SIMATIC ET 200pro

Various interface modules are available for the SIMATIC ET 200pro in both standard and fail-safe versions for connection to PROFINET or PROFIBUS. In addition, the ET 200pro is also available with CPU functionality. The ET 200pro can be used universally in a wide variety of industries thanks to its comprehensive range of modules. In particular, it is used where a detailed modular structure with different functions is demanded in harsh environments directly at the machine. The SIMATIC ET 200pro is used in warehouse logistics, e.g. for the direct control of drives for electric monorails, conveyor belts and lifting trucks.



SIMATIC ET 200AL

SIMATIC ET 200AL modules can easily be installed in any position. They are mounted directly in a machine or assembly line on site, where they use M8 or M12 connections to connect sensors and actuators.

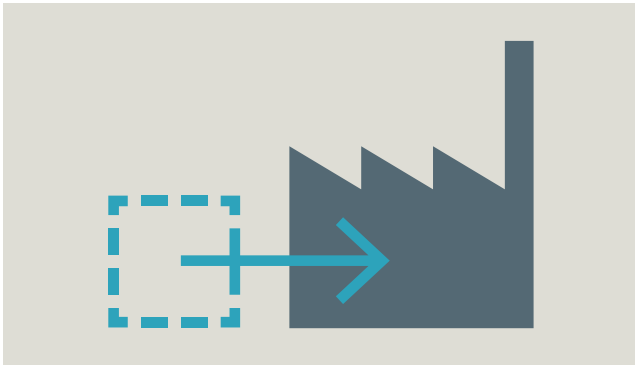
The standardized engineering in the TIA Portal permits consistent system diagnosis and efficient operation. The option of connecting to SIMATIC ET 200SP and the CAx-compliant labeling of all interfaces also ensure a high degree of efficiency during configuration and maintenance. In order to implement flexible machine concepts, ET 200AL supports configuration management (option handling).

☒ in the control cabinet

☐ without control cabinet

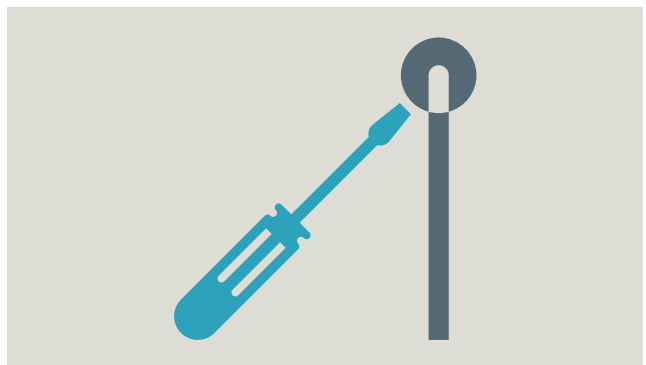
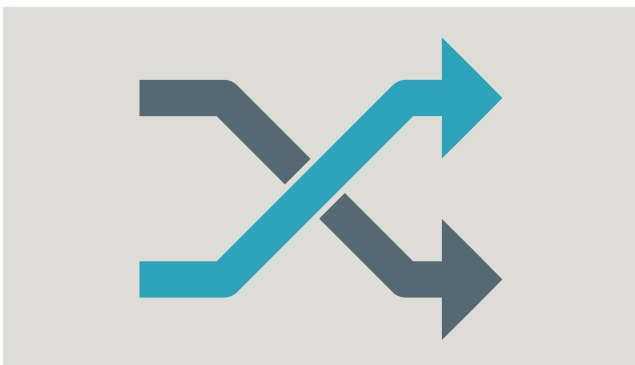
Quick and easy commissioning

Quick commissioning saves time, money and effort – and speeds up the time-to-market. With the aid of the free PC-based software tool PRONETA, we offer you support when commissioning the PROFINET network of machines. The tool automatically reads the topology of the network and indicates all connected PROFINET devices so that their configuration, e.g. adaptation of IP addresses and device names, can be performed promptly. The IO check by PRONETA can then be used to test conveniently whether all components in the PROFINET network are correctly wired – in some cases, even before the machine has been fully set up and the controller installed.



Fast troubleshooting by integrated system diagnosis

Configuration of the diagnosis is a user-friendly procedure, integrated in the system and activated with a single click. The new, uniform display concept enables plaintext error messages to be displayed identically in the TIA Portal, on the HMI, in the web server and on the SIMATIC S7-1500 display. The efficient fault analysis and the fast troubleshooting speed up commissioning and minimize production downtimes.



Wide range of functions

The ET 200 system enables a multitude of functions to be covered. Both digital and analog input and output modules are available. With this system, communication can also be connected by means of an IO-Link. Modules are also available for applications such as weighing or energy management.

The ET 200 system enables customer-specific requirements to be adapted with considerable ease. Complex automation projects only need to be configured once for the maximum configuration. Thereafter, different options can be defined and selected with flexibility when required. In this way, new solutions for automation architectures become possible. The option handling improves flexibility and thus ensures that greater savings are made.

Simple cabling in all circumstances

Due to the separation of mechanical and electronic components, permanent wiring is possible, i.e. the station can be pre-wired before installation or start-up. Thanks to push-in technology (ET 200SP), both processes can be realized very quickly and easily, without the need for any special tools.

The front connectors (ET 200MP) have a pre-engaged position in which they are not yet electrically connected, enabling convenient pre-wiring of the front connectors. This means that rewiring and fault rectification are possible during operation. SIMATIC TOP connect – preassembled system cabling for digital and analog signals – is available to ensure fast assembly and to prevent wiring errors.

Find out more:

siemens.com/io-system

- Everything about the TIA Portal at www.siemens.com/tia-portal
- Everything about the TIA Selection Tool at www.siemens.com/tia-selection-tool
- Everything about PRONETA at www.siemens.com/proneta

Everything
at a glance!



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