SIMATIC ET 200SP is the first Open Simatic ET 200SP CPU with IP20 degree of protection. It also features interface modules for PROFINET. The new generation of SIMATIC ET 200SP is especially small, extremely compact, and digital and analog I/O modules, there is also a motor module. The failsafe ET 200SP CPUs enable the connection to a higher-level CPU can be implemented in exactly the same way as with a standard interface connection to a higher-level CPU can be implemented. The SIMATIC ET 200SP is the new generation of distributed I/O systems with IP20 degree of protection and is particularly small. ET 200SP CPUs are also certified according to EN 61508 (2nd Edition) for functional safety and are suitable for use in safety-related applications up to SIL 3 according to IEC 62061 functional safety and are suitable for use in safety-related applications up to SIL 3 according to IEC 62061. ET 200SP CPUs contain diagnostics for the ET 200SP distributed controller for the ET 200pro I/O system with PROFINET interface modules.
Flexible from commissioning: ET 200SP offers a high degree of flexibility due to the active backplane bus connection. This allows for a high-speed replacement of modules without programming disturbance. ET 200SP provides the maximum possible flexibility when extending the system. The ET 200SP has a powerful processor and a high data rate for high-speed commissioning.

Active backplane bus

- Fast replacement of modules with multi hot swapping
- Simple expandability thanks to configuration with dummy modules
- Configuration control with option handling for complete modules

The active backplane bus allows a high degree of flexibility in configuration and expandability. ET 200SP has a powerful processor and a high data rate for high-speed commissioning.

Integrated technology

- Communication: MODBUS TCP, PROFINET, DeviceNet, CANopen, CAN, Profinet IO, OPC-UA, EtherCAT, Modbus RTU
- Motion: axis position, axis movement, axis control, axis positioning
- Safety: safety-related applications up to SIL 3 according to IEC 62061 and PL e according to ISO 13849.

Distributed safety

The fail-safe ET 200SP CPUs enable processing of standard and safety programs. They are certified according to EN 61508 (2nd Edition) for functional safety, and are suitable for use in safety-related applications up to SIL 3 according to IEC 62061 and PL e according to ISO 13849.

Openness for PC applications

In addition to the 5 standard programming languages of IEC 61131, high-level language applications in the international PLCopen standard, thereby providing users with a flexible means of programming. SIMATIC ET 200SP supports 

- C and C++
- VB
- .NET
- MATLAB
- Simulink
- S-Function Interface

Integrated visualization

For additional HMI functionality. Visualization can be simply realized via a SIMATIC Industrial Flat Panel connected via the graphics interface, optionally also with multitouch functionality. For additional HMI functionality, the ET 200SP Open Controller is optionally supplied with pre-installed WinCC Runtime Advanced. Synchronous integration is also possible with programs in C and C++.

Communication

Communication is realized via the PROFINET Industrial Ethernet standard. The ET 200SP CPUs, just like the ET 200SP Open Controller, are flexibly expandable with the I/O range up to 64 modules. In addition to the digital input and output and analogous input and output modules, ET 200SP modules among other things the following modules are available: Energy Meter, weighing module, Hart, Namur, counting and positioning module. Single-line expansion is possible with up to 64 modules. In addition to PROFIBUS DP, in ET 200SP the active backplane bus interface is realized via Ethernet. ET 200SP CPUs and ET 200SP Open Controllers can communicate via PROFIBUS, IO-Link, PROFINET, DeviceNet, CANopen, CAN, Profinet IO, OPC-UA, EtherCAT, Modbus RTU, Modbus TCP, PtP, ASCII, 3964R, USS.

ET 200SP Open Controller

The ET 200SP Open Controller is optionally supplied with pre-installed WinCC Runtime Advanced. Synchronous integration is also possible with programs in C and C++.

Motion control

The Motion Control functionality encompasses all control tasks for the operation of drives as well as the acquisition of position values using position encoders. The tasks range from control of single axes to control of multiple coordinated axes. The motion instructions are based on the international PLCopen standard, thereby providing users with a flexible means of programming.