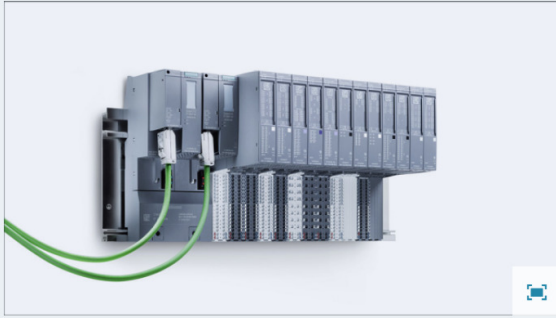


The distributed I/O system SIMATIC ET 200SP HA is perfectly suited for the requirements of the process industry. Special characteristics are the compact design, flexible connection possibilities, and high system availability due to redundant PROFINET connections.

SIMATIC ET 200SP HA: Highly available distributed I/O system for maximum flexibility in control cabinet construction ✕



Enclosed space in a plant is a scarce commodity. And expensive. Our answer is SIMATIC ET 200SP HA! The compact modular I/O creates space in the control cabinet and offers plant planners and operators advantages. Their highly scalable design makes it possible to align the expansion in the control cabinet exactly with the actual requirements. And the tool-free connection technology with push-in terminals and vertical wiring reduces engineering, assembly and cabling costs. SIMATIC ET 200SP HA compact design, saves costs for enclosed space and for air conditioning, energy requirements, etc. for the I/O in the control cabinet. Thanks to its extended temperature range from -40°C to +70°C and conformal coating, the I/O system is ideally suited for use in the field. Further advantages: Change in run through redundant design and increase in the number of modules at the head-end station from 12 to 56.

The system basically consists of the following components:

- **Carrier modules for interface modules:** The carrier modules are used for the electrical and mechanical connection of the individual modules.
- **Interface modules (IM)** for connection to PROFINET single or redundant. The fieldbus is connected via the Busadapter (BA), which allows connection technology and physics to be freely selected according to the application requirements.
- **Server module** closes the station.
- **Carrier modules for I/O modules:** By connecting the carrier modules to the terminal blocks, the slots for the I/O modules are created.
- **Terminal blocks:** The terminal blocks provide the process terminals for connecting the sensors, actuators and other devices.
- **I/O modules** determine the function of the module at the terminals. I/O modules are subdivided into module types. These are characterized in each case by modul-type-specific and colored square printed on the front.
  - Digital input (DI), color: white
  - Fail-safe digital input (F\_DI), color: white/yellow
  - Digital output (DQ), color: black
  - Fail-safe digital output (F\_DQ), color: black/yellow
  - Analog input (AI), color: light blue
  - Analog output (AQ), color: dark blue
  - Analog/Digital (CIQ), color: grey
- **Accessories (optional)**
  - **Labeling strips** and **color identification labels** are offered for individual labeling.
  - For the color identification of the potentials defined by the plugged I/O module, there are module-specific **color identification labels**.
  - A **shield connection** is available for fast, low-impedance connection of cable shields.

| Product                                    | Article number     |
|--|--------------------|
| <b>I/O modules</b>                         |                    |
| ET 200SP HA, AI 16xI 2-wire HART HA        | 6DL1134-6TH00-0PH1 |
| ET 200SP HA, AI16xTC/8xRTD 2-/3-/4-wire HA | 6DL1134-6JH00-0PH1 |
| ET 200SP HA, AI-DI 16/DQ16x24VDC HART HA   | 6DL1133-6EW00-0PH1 |
| ET 200SP HA, AQ 8xI HART HA                | 6DL1135-6TF00-0PH1 |
| ET 200SP HA, DI 16x24VDC HA                | 6DL1131-6BH00-0PH1 |

| Product                                  | Article number     |
|--|--------------------|
| ET 200SP HA, DI 8x230VAC HA              | 6DL1131-6GF00-0PK0 |
| ET 200SP HA, DI 8x24 ...125VDC HA        | 6DL1131-6DF00-0PK0 |
| ET 200SP HA, DI 16xNAMUR HA              | 6DL1131-6TH00-0PH1 |
| ET 200SP HA, DI 32x24VDC HA              | 6DL1131-6BL00-0PH1 |
| ET 200SP HA, F-DI 16x24VDC HA            | 6DL1136-6BA00-0PH1 |
| ET 200SP HA, DQ 16x24VDC/0.5A HA         | 6DL1132-6BH00-0PH1 |
| ET 200SP HA, DQ 32x24VDC/0.5A HA         | 6DL1132-6BL00-0PH1 |
| ET 200SP HA, F-DQ 10x24VDC/2A HA         | 6DL1136-6DA00-0PH1 |
| ET 200SP HA, RQ 4x120VDC-230VAC/5A CO HA | 6DL1132-6HD50-0PK0 |

| Carrier modules  |                    |
|--|--------------------|
| Carrier module IM redundant with server module         | 6DL1193-6BH00-0RM0 |
| Carrier module IM single with server module & IM cover | 6DL1193-6BH00-0SM0 |
| Carrier module for 2 I/O modules (with Powerbus)       | 6DL1193-6GA00-0NN0 |
| Carrier module for 8 I/O modules (with Powerbus)       | 6DL1193-6GC00-0NN0 |
| Carrier module for 8 I/O modules (without Powerbus)    | 6DL1193-6GC00-8NN0 |

| Interface modules |                    |
|-------------------|--------------------|
| IM 155-6 PN HA    | 6DL1155-6AU00-0PM0 |

| Busadapter                      |                    |
|---------------------------------|--------------------|
| ET 200SP HA, Busadapter 2xRJ45  | 6DL1193-6AR00-0AA0 |
| ET 200SP HA, Busadapter 2xFC    | 6DL1193-6AF00-0AA0 |
| ET 200SP HA, Busadapter 2xLC    | 6DL1193-6AG00-0AA0 |
| ET 200SP HA, Busadapter LC/RJ45 | 6DL1193-6AG20-0AA0 |
| ET 200SP HA, Busadapter LC/FC   | 6DL1193-6AG40-0AA0 |
| SIMATIC BA 2xRJ45VD HA          | 6GK5991-2VA00-8AA2 |

| Server modules                          |                    |
|---|--------------------|
| ET 200SP HA, server module (spare part) | 6DL1193-6PA00-0AA0 |

| Mounting rails             |                    |
|----------------------------|--------------------|
| Mounting rail 482mm (19")  | 6DL1193-6MC00-0AA0 |
| Mounting rail 1500mm (59") | 6DL1193-6MD00-0AA0 |

| Terminal blocks                       |                    |
|---------------------------------------|--------------------|
| Terminal block Type K0 (dark colored) | 6DL1193-6TP00-0BK0 |

|   |                    |
|---|--------------------|
| Terminal block Type K0 (light colored)        | 6DL1193-6TP00-0DK0 |
| Terminal block Type H1 (dark colored)         | 6DL1193-6TP00-0BH1 |
| Terminal block Type H1 (light colored)        | 6DL1193-6TP00-0DH1 |
| Terminal block Type M1 (dark colored)         | 6DL1193-6TP00-0BM1 |
| Terminal block Type M1 (light colored)        | 6DL1193-6TP00-0DM1 |
| Terminal block Type P0 (dark colored)         | 6DL1193-6TP00-0BP0 |
| Terminal block Type P0 (light colored)        | 6DL1193-6TP00-0DP0 |
| Terminal block Type N0 (dark colored)         | 6DL1193-6TP00-0BN0 |
| Terminal block Type N0 (light colored)        | 6DL1193-6TP00-0DN0 |
| Terminal block Type H0, D-SUB (black colored) | 6DL1193-6TC00-0DH0 |

#### Cover

|   |                    |
|---|--------------------|
| 5 TM-Cover, 22,5MM, to protect empty PM slots | 6DL1133-6CV22-0AM0 |
| 5 IM-Cover, 50MM, to protect empty IM slots   | 6DL1133-6CV50-0AM0 |

#### Labeling stripes

|   |                    |
|---|--------------------|
| 450 Labeling stripes, light grey, 10 sheets DIN A4, perforated, paper 280g/m <sup>2</sup> | 6DL1193-6LA00-0AA0 |
| 450 Labeling stripes, yellow, 10 sheets DIN A4, perforated, paper 280g/m <sup>2</sup>     | 6DL1193-6LA00-0AG0 |
| 500 Labeling stripes, light grey, roll with 500 labels                                    | 6DL1193-6LR00-0AA0 |

#### Color identification labels

|  |                    |
|--|--------------------|
| 10 color identifications labels, color code CC00 | 6DL1193-6CP00-2HH1 |
| 10 color identifications labels, color code CC01 | 6DL1193-6CP01-2HH1 |
| 10 color identifications labels, color code CC02 | 6DL1193-6CP02-2HH1 |
| 10 color identifications labels, color code CC40 | 6DL1193-6CP40-2HK0 |
| 10 color identifications labels, color code CC42 | 6DL1193-6CP42-2HK0 |

#### Maximum availability

Plant downtime considerably reduces the economic efficiency of process plants. Redundant, flexible components significantly increase the availability of the plant. Besides operating the SIMATIC ET 200SP HA station redundantly via the PROFINET interface, there is also the possibility of a redundant set up of the I/O modules. This is realized by using a terminal block for integrated I/O redundancy which results in both economy of space and cost efficiency. With the new design and its standardized terminal blocks, redundant and single wiring are related to the same wiring effort.

#### Compact design

The compact size with up to 56 peripheral modules per station and the high channel density of up to 32 channels on a 22.5 mm wide module reduces the space requirement in the control cabinet to a minimum.

#### System requirements

System requirements are SIMATIC PCS 7 V9.0, SIMATIC PCS neo V3.0, STEP 7 V5.6, TIA Portal V16 and PROFINET. Fail-safe I/O modules can be used with PCS 7 from V9.0 SP3.

#### Documentation

The documentation for the SIMATIC ET 200SP HA is modular. It consists of several documents that guide you, contain reference information or show you functions independent of the product. The documents are available in English and German. About four weeks later the languages follow Chinese, Italian, French and Spanish.

| Manual SIMATIC ET 200SP HA   | Entry ID                  |
|--|---------------------------|
| System manual (including carrier modules, terminal blocks and Accessories) | <a href="#">109781000</a> |
| Interface module   | <a href="#">109761536</a> |
| Busadapter   | <a href="#">109773801</a> |
| Digital input module DI 16x24VDC HA  | <a href="#">109747249</a> |
| Digital input module DI 32x24VDC HA  | <a href="#">109761513</a> |
| Digital input module DI 16xNAMUR HA  | <a href="#">109747246</a> |
| Digital input module DI 8x24...125VDC HA                                   | <a href="#">109775581</a> |
| Digital input module DI 8x230VAC HA  | <a href="#">109747243</a> |
| Digital input module F-DI 16x24VDC HA                                      | <a href="#">109780930</a> |
| Digital output module DQ 16x24VDC/0.5A HA                                  | <a href="#">109747248</a> |
| Digital output module DQ 32x24VDC/0.5A HA                                  | <a href="#">109761512</a> |
| Digital output module F-DQ 10x24VDC/2A HA                                  | <a href="#">109780931</a> |
| Digital output module RQ 4x120VDC-230VAC/5A CO HA                          | <a href="#">109747244</a> |
| Analog input module AI 16xI 2-wire HART HA                                 | <a href="#">109770922</a> |
| Analog input module AI 16xTC/8xRTD 2-/3-/4-wire HA                         | <a href="#">109770926</a> |
| Analog/digital module AI-DI 16/DQ16x24VDC HART HA                          | <a href="#">109770921</a> |
| Analo output module AQ 8xI HART HA   | <a href="#">109747242</a> |
| High-precision time stamping when using SIMATIC ET 200SP HA                | <a href="#">109772337</a> |

ET 200SP Distributed I/O



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