

# SIMATIC S7-300

## Central processing units

### Standard CPUs

5

| Ordering data                                                                                                                                                                                                         | Order No.                                                                                                                                                                        | Order No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CPU 312</b><br>32 KB work memory, 24 V DC power supply, MPI; MMC required                                                                                                                                          | <b>6ES7 312-1AE14-0AB0</b>                                                                                                                                                       | <b>SIMATIC manual collection</b> J <b>6ES7 998-8XC01-8YE0</b><br>Electronic manuals on DVD, multi-lingual: LOGO!, SIMADYN, SIMATIC bus components, SIMATIC C7, SIMATIC distributed I/O, SIMATIC HMI, SIMATIC Sensors, SIMATIC NET, SIMATIC PC Based Automation, SIMATIC PCS 7, SIMATIC PG/PC, SIMATIC S7, SIMATIC Software, SIMATIC TDC                                                                                                                                                                                                                                                                                                                                |
| <b>CPU 314</b><br>128 KB work memory, 24 V DC power supply, MPI; MMC required                                                                                                                                         | <b>6ES7 314-1AG14-0AB0</b>                                                                                                                                                       | <b>SIMATIC manual collection update service for 1 year</b> D <b>6ES7 998-8XC01-8YE2</b><br>Current "Manual Collection" DVD and the three subsequent updates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>CPU 315-2 DP</b><br>256 KB work memory, 24 V DC power supply, MPI, PROFIBUS DP master/slave interface, MMC required                                                                                                | <b>6ES7 315-2AH14-0AB0</b>                                                                                                                                                       | <b>Power supply connector</b> <b>6ES7 391-1AA00-0AA0</b><br>10 units, spare part                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>CPU 315-2 PN/DP</b><br>384 KB work memory, 24 V DC power supply, combined MPI/PROFIBUS DP master/slave interface, Ethernet/PROFINET interface with 2-port switch; MMC required                                     | <b>6ES7 315-2EH14-0AB0</b>                                                                                                                                                       | <b>Manual "Communication for SIMATIC S7-300/-400"</b><br>German <b>6ES7 398-8EA00-8AA0</b><br>English <b>6ES7 398-8EA00-8BA0</b><br>French <b>6ES7 398-8EA00-8CA0</b><br>Spanish <b>6ES7 398-8EA00-8DA0</b><br>Italian <b>6ES7 398-8EA00-8EA0</b>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>CPU 317-2 DP</b><br>512 KB work memory, 24 V DC power supply, MPI, PROFIBUS DP master/slave interface, MMC required                                                                                                | <b>6ES7 317-2AJ10-0AB0</b>                                                                                                                                                       | <b>SIMATIC S7 training case</b> <b>6ES7 910-3AA00-0XA0</b><br>With mounting components for mounting S7-200 and S7-300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>CPU 317-2 PN/DP</b><br>1 MB work memory, 24 V DC power supply, combined MPI/PROFIBUS DP master/slave interface, Ethernet/PROFINET interface with 2-port switch; MMC required                                       | <b>6ES7 317-2EK14-0AB0</b>                                                                                                                                                       | <b>PC adapter USB</b> <b>6ES7 972-0CB20-0XA0</b><br>For connecting a PC to SIMATIC S7-200/300/400 via USB; with USB cable (5 m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>CPU 319-3 PN/DP</b><br>1.4 MB work memory, 24 V DC power supply, combined MPI/PROFIBUS DP master/slave interface, PROFIBUS DP master/slave interface, Ethernet/PROFINET interface with 2-port switch; MMC required | <b>6ES7 318-3EL01-0AB0</b>                                                                                                                                                       | <b>PROFIBUS bus components</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SIMATIC Micro Memory Card</b><br>64 KB<br>128 KB<br>512 KB<br>2 MB<br>4 MB<br>8 MB                                                                                                                                 | <b>6ES7 953-8LF20-0AA0</b><br><b>6ES7 953-8LG20-0AA0</b><br><b>6ES7 953-8LJ20-0AA0</b><br><b>6ES7 953-8LL20-0AA0</b><br><b>6ES7 953-8LM20-0AA0</b><br><b>6ES7 953-8LP20-0AA0</b> | <b>RS 485 PROFIBUS DP bus connector</b><br>• With 90° cable outlet, max. transmission rate 12 Mbit/s<br>- Without PG interface <b>6ES7 972-0BA12-0XA0</b><br>- With PG interface <b>6ES7 972-0BB12-0XA0</b><br>• With 90° cable outlet for FastConnect connection system, max. transmission rate 12 Mbit/s<br>- Without PG interface, 1 unit <b>6ES7 972-0BA52-0XA0</b><br>- Without PG interface, 100 units <b>6ES7 972-0BA52-0XB0</b><br>- With PG interface, 1 unit <b>6ES7 972-0BB52-0XA0</b><br>- With PG interface, 100 units <b>6ES7 972-0BB52-0XB0</b><br>• With axial cable outlet for SIMATIC OP, for connecting to PPI, MPI, PROFIBUS <b>6GK1 500-0EA02</b> |
| <b>MPI cable</b><br>For connecting SIMATIC S7 and the PG through MPI; 5 m in length                                                                                                                                   | <b>6ES7 901-0BF00-0AA0</b>                                                                                                                                                       | <b>PROFIBUS Fast Connect bus cable</b> <b>6XV1 830-0EH10</b><br>Standard type with special design for quick mounting, 2-core, shielded, sold by the meter, max. delivery unit 1000 m, minimum ordering quantity 20 m                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Slot number plates</b>                                                                                                                                                                                             | <b>6ES7 912-0AA00-0AA0</b>                                                                                                                                                       | <b>RS 485 repeater for PROFIBUS</b> <b>6ES7 972-0AA02-0XA0</b><br>Transmission rate up to 12 Mbit/s; 24 V DC; IP20 enclosure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>S7-300 manual</b><br>Design, CPU data, module data, instruction list<br>German<br>English                                                                                                                          | <b>6ES7 398-8FA10-8AA0</b><br><b>6ES7 398-8FA10-8BA0</b>                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

D: Subject to export regulations AL: N and ECCN: 5D992

I: Subject to export regulations AL: N and ECCN: EAR99H

J: Subject to export regulations AL: N and ECCN: EAR99S

# SIMATIC S7-300

## Central processing units

### SIPLUS Standard CPUs

#### Overview SIPLUS CPU 315-2 DP



- The CPU with medium to large program memory and quantity structures for optional use of SIMATIC engineering tools
- High processing performance in binary and floating-point arithmetic
- PROFIBUS DP master/slave interface
- For comprehensive I/O configuration
- For setting up distributed I/O structures

SIMATIC Micro Memory Card required for operation of the CPU.

#### Note:

SIPLUS extreme products are based on Siemens Industry standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

5

| SIPLUS CPU 315-2 DP                                                                                                         |                                                                                                                                                                                       |                     |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Order number                                                                                                                | 6AG1 315-2AH14-2AY0                                                                                                                                                                   | 6AG1 315-2AH14-7AB0 |
| Order No. based on                                                                                                          | 6ES7 315-2AH14-0AB0                                                                                                                                                                   | 6ES7 315-2AH14-0AB0 |
| Ambient temperature range                                                                                                   | -25 ... +60 °C                                                                                                                                                                        | -25 ... +70 °C      |
| Conformal coating                                                                                                           | Coating of the printed circuit boards and the electronic components                                                                                                                   |                     |
| Technical data                                                                                                              | The technical data of the standard product applies except for the ambient conditions                                                                                                  |                     |
| Compliant with the standards for electronic equipment used on railway rolling stock (EN 50155, temperature T1, category 1). | Yes                                                                                                                                                                                   | No                  |
| <b>Ambient conditions</b>                                                                                                   |                                                                                                                                                                                       |                     |
| Relative humidity                                                                                                           | 5 ... 100 %<br>Condensation permissible                                                                                                                                               |                     |
| Biologically active substances                                                                                              | Conformity with EN 60721-3-3, Class 3B2 mold and fungal spores (except fauna)                                                                                                         |                     |
| Chemically active substances                                                                                                | Conformity with EN 60721-3-3, Class 3C4 incl. salt mist and ISA-S71.04 severity level G1; G2; G3; GX <sup>1)2)</sup>                                                                  |                     |
| Mechanically active substances                                                                                              | Conformity with EN 60721-3-3, Class 3S4 including conductive sand, dust <sup>2)</sup>                                                                                                 |                     |
| Air pressure (depending on the highest positive temperature range specified)                                                | 1080 ... 795 hPa (-1000 ... +2000 m)<br>see ambient temperature range<br>795 ... 658 hPa (+2000 ... +3500 m)<br>derating 10 K<br>658 ... 540 hPa (+3500 ... +5000 m)<br>derating 20 K |                     |

<sup>1)</sup> ISA-S71.04 severity level GX: Long-term load: SO<sub>2</sub> < 4.8 ppm; H<sub>2</sub>S < 9.9 ppm; Cl < 0.2 ppm; HCl < 0.66 ppm; HF < 0.12 ppm; NH < 49 ppm; O<sub>3</sub> < 0.1 ppm; NO<sub>x</sub> < 5.2 ppm  
Limit value (max. 30 min/d): SO<sub>2</sub> < 17.8 ppm; H<sub>2</sub>S < 49.7 ppm; Cl < 1.0 ppm; HCl < 3.3 ppm; HF < 2.4 ppm; NH < 247 ppm; O<sub>3</sub> < 1.0 ppm; NO<sub>x</sub> < 10.4 ppm

<sup>2)</sup> The supplied plug covers must remain in place over the unused interface when operated in atmospheres containing corrosive gases!

The technical documentation on SIPLUS can be found here:

[www.siemens.com/siplus-extreme](http://www.siemens.com/siplus-extreme)

| Ordering data                                                                                                                                                                                                             | Order No.                                                    | Order No.                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------|
| <b>SIPLUS CPU 315-2 DP</b><br>(extended temperature range and medial exposure)<br>Work memory 256 KB, power supply 24 V DC, MPI, PROFIBUS DP master/slave interface, MMC required<br>Additional conformance with EN 50155 | <b>6AG1 315-2AH14-7AB0</b><br><br><b>6AG1 315-2AH14-2AY0</b> | <b>Accessories</b><br><br>See SIMATIC CPU 315-2 DP, page 5/30 |

H: Subject to export regulations AL: 91999 and ECCN: EAR99H