

*** SPARE PART*** SIMATIC S7-300, CPU 315 CPU WITH INTEGRATED 24 V DC POWER SUPPLY, 48 KBYTE WORKING MEMORY

Product type designation

Supply voltage

| | |
|-------------------------------------|--------|
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 20.4 V |
| permissible range, upper limit (DC) | 28.8 V |

Input current

| | |
|------------------------|----------|
| Rated value at 24 V DC | 1 000 mA |
| Inrush current, max. | 8 A |

Power losses

| | |
|------------------|-----|
| Power loss, max. | 8 W |
|------------------|-----|

Memory

| | |
|--------------------------|---|
| Work memory | |
| • Integrated | 48 kbyte; 48 KB / 16K instructions RAM (integrated) |
| Load memory | |
| • expandable FEPRM | Yes; Flash-EPRM |
| • expandable FEPRM, max. | 4 Mbyte |
| • integrated RAM, max. | 80 kbyte |
| Backup | |
| • present | Yes |
| • with battery | Yes; all blocks |
| • without battery | Yes; 4 KB: bit memory, counter, times and data |

CPU processing times

| | |
|-------------------------------------|-------------|
| for bit operations, typ. | 0.3 μ s |
| for bit operations, max. | 0.6 μ s |
| for word operations, typ. | 1 μ s |
| for fixed point arithmetic, typ. | 2 μ s |
| for floating point arithmetic, typ. | 50 μ s |
| for timer/counter operations, typ. | 12 μ s |

CPU-blocks

| | |
|----------------|----------|
| DB | |
| • Number, max. | 255 |
| • Size, max. | 16 kbyte |
| FB | |

| | |
|---|----------------------|
| • Number, max. | 192 |
| • Size, max. | 16 kbyte |
| FC | |
| • Number, max. | 192 |
| • Size, max. | 16 kbyte |
| OB | |
| • Description | see instruction list |
| • Size, max. | 16 kbyte |
| • Number of free cycle OBs | 1; OB 1 |
| • Number of time alarm OBs | 1; OB 10 |
| • Number of time interrupt OBs | 1; OB 35 |
| • Number of process alarm OBs | 1; OB 40 |
| • Number of startup OBs | 1; OB 100 |
| Nesting depth | |
| • per priority class | 8 |
| Counters, timers and their retentivity | |
| S7 counter | |
| • Number | 64 |
| of which retentive with battery | |
| — can be set | Yes |
| — lower limit | 0 |
| — upper limit | 63 |
| of which retentive without battery | |
| — can be set | Yes |
| — lower limit | 0 |
| — upper limit | 63 |
| Counting range | |
| — lower limit | 1 |
| — upper limit | 999 |
| S7 times | |
| • Number | 128 |
| of which retentive with battery | |
| — can be set | Yes |
| — lower limit | 0 |
| — upper limit | 127 |
| of which retentive without battery | |
| — can be set | Yes |
| — lower limit | 0 |
| — upper limit | 127 |
| Time range | |
| — lower limit | 10 ms |

— upper limit

9 990 s

Data areas and their retentivity

| Flag | |
|--------------------------------------|---|
| • Number, max. | 256 byte |
| • Retentivity available | Yes; MB 0 to MB 255 |
| • of which retentive with battery | 0 to 2 047 (M 0.0 to M 255.7, adjustable) |
| • of which retentive without battery | 0 to 2 047 (M 0.0 to M 255.7, adjustable) |

Address area

| I/O address area | |
|------------------|----------|
| • Inputs | 256 byte |
| • Outputs | 256 byte |

| Process image | |
|---------------|----------|
| • Inputs | 128 byte |
| • Outputs | 128 byte |

| Digital channels | |
|-----------------------------|-------|
| • Inputs | 1 024 |
| — Inputs, of which central | 1 024 |
| • Outputs | 1 024 |
| — Outputs, of which central | 1 024 |

| Analog channels | |
|-----------------------------|-----|
| • Inputs | 256 |
| — Inputs, of which central | 256 |
| • Outputs | 256 |
| — Outputs, of which central | 128 |

| Addressing volume | |
|-------------------|----------|
| • Inputs | 122 byte |
| • Outputs | 122 byte |

Hardware configuration

| | |
|--|---|
| Number of modules per DP slave interface, max. | 32 |
| Expansion devices, max. | 3 |
| Connectable programming devices/PCs | PGs/PCs with STEP 7 connectable via MPI interface |

| Number of DP masters | |
|----------------------|-------------|
| • Integrated | 0 |
| • Via CP | 1; CP 342-5 |

| Number of operable FMs and CPs (recommended) | |
|--|---|
| • FM | 8 |
| • CP, point-to-point | 4 |
| • CP, LAN | 2 |

| Rack | |
|--------------------------|----|
| • Modules per rack, max. | 32 |