



Figure similar

SIPLUS S7-400 CPU 414-3 PN/DP based on 6ES7414-3EM07-0AB0 with conformal coating, -25...+70 °C, central processing unit with: work memory 4 MB, (2 MB code, 2 MB data), interfaces 1st interface MPI/DP 12 Mbps, (X1), 2nd interface ETHERNET/PROFINET (X5) 3rd interface IF 964-DP plug-in (IF1)

| General information                         |                                            |
|---------------------------------------------|--------------------------------------------|
| Product type designation                    | CPU 414-3 PN/DP                            |
| HW functional status                        | 01                                         |
| Firmware version                            | V7.0                                       |
| based on                                    | <a href="#">6ES7414-3EM07-0AB0</a>         |
| Product function                            |                                            |
| • Isochronous mode                          | Yes; Via PROFIBUS DP or PROFINET interface |
| Engineering with                            |                                            |
| • Programming package                       | STEP 7 V5.5 or higher with HSP 262         |
| CiR - Configuration in RUN                  |                                            |
| CiR synchronization time, basic load        | 100 ms                                     |
| CiR synchronization time, time per I/O byte | 15 µs                                      |
| Supply voltage                              |                                            |
| Rated value (DC)                            | Power supply via system power supply       |
| Input current                               |                                            |
| from backplane bus 5 V DC, typ.             | 1.3 A                                      |
| from backplane bus 5 V DC, max.             | 1.6 A                                      |
| from backplane bus 24 V DC, max.            | 300 mA; 150 mA per DP interface            |
| from interface 5 V DC, max.                 | 90 mA; At each DP interface                |
| Power loss                                  |                                            |
| Power loss, typ.                            | 6.5 W                                      |
| Memory                                      |                                            |
| Type of memory                              | RAM                                        |
| Work memory                                 |                                            |
| • integrated                                | 4 Mbyte                                    |
| • integrated (for program)                  | 2 Mbyte                                    |
| • integrated (for data)                     | 2 Mbyte                                    |
| • expandable                                | No                                         |
| Load memory                                 |                                            |
| • expandable FEPR0M                         | Yes; with Memory Card (FLASH)              |
| • expandable FEPR0M, max.                   | 64 Mbyte                                   |
| • integrated RAM, max.                      | 512 kbyte                                  |
| • expandable RAM                            | Yes; with Memory Card (RAM)                |
| • expandable RAM, max.                      | 64 Mbyte                                   |
| Backup                                      |                                            |
| • present                                   | Yes                                        |
| • with battery                              | Yes; all data                              |
| • without battery                           | No                                         |
| Battery                                     |                                            |

|                                             |                                                                                                 |
|---------------------------------------------|-------------------------------------------------------------------------------------------------|
| Backup battery                              |                                                                                                 |
| • Backup current, typ.                      | 180 µA; up to 40 °C                                                                             |
| • Backup current, max.                      | 850 µA                                                                                          |
| • Backup time, max.                         | Dealt with in the module data manual with the secondary conditions and the factors of influence |
| • Feeding of external backup voltage to CPU | 5 V DC to 15 V DC                                                                               |
| CPU processing times                        |                                                                                                 |
| for bit operations, typ.                    | 18.75 ns                                                                                        |
| for word operations, typ.                   | 18.75 ns                                                                                        |
| for fixed point arithmetic, typ.            | 18.75 ns                                                                                        |
| for floating point arithmetic, typ.         | 37.5 ns                                                                                         |
| CPU-blocks                                  |                                                                                                 |
| DB                                          |                                                                                                 |
| • Number, max.                              | 6 000; Number range: 1 to 16000                                                                 |
| • Size, max.                                | 64 kbyte                                                                                        |
| FB                                          |                                                                                                 |
| • Number, max.                              | 3 000; Number range: 0 to 7999                                                                  |
| • Size, max.                                | 64 kbyte                                                                                        |
| FC                                          |                                                                                                 |
| • Number, max.                              | 3 000; Number range: 0 to 7999                                                                  |
| • Size, max.                                | 64 kbyte                                                                                        |
| OB                                          |                                                                                                 |
| • Number, max.                              | see instruction list                                                                            |
| • Size, max.                                | 64 kbyte                                                                                        |
| • Number of free cycle OBs                  | 1; OB 1                                                                                         |
| • Number of time alarm OBs                  | 4; OB 10-13                                                                                     |
| • Number of delay alarm OBs                 | 4; OB 20-23                                                                                     |
| • Number of cyclic interrupt OBs            | 4; OB 32, 33, 34, 35 (shortest cycle that can be set = 500 µs)                                  |
| • Number of process alarm OBs               | 4; OB 40-43                                                                                     |
| • Number of DPV1 alarm OBs                  | 3; OB 55-57                                                                                     |
| • Number of isochronous mode OBs            | 3; OB 61-63                                                                                     |
| • Number of multicomputing OBs              | 1; OB 60                                                                                        |
| • Number of background OBs                  | 1; OB 90                                                                                        |
| • Number of startup OBs                     | 3; OB 100-102                                                                                   |
| • Number of asynchronous error OBs          | 9; OB 80-88                                                                                     |
| • Number of synchronous error OBs           | 2; OB 121, 122                                                                                  |
| Nesting depth                               |                                                                                                 |
| • per priority class                        | 24                                                                                              |
| • additional within an error OB             | 1                                                                                               |
| Counters, timers and their retentivity      |                                                                                                 |
| S7 counter                                  |                                                                                                 |
| • Number                                    | 2 048                                                                                           |
| Retentivity                                 |                                                                                                 |
| — adjustable                                | Yes                                                                                             |
| — preset                                    | Z 0 to Z 7                                                                                      |
| Counting range                              |                                                                                                 |
| — lower limit                               | 0                                                                                               |
| — upper limit                               | 999                                                                                             |
| IEC counter                                 |                                                                                                 |
| • present                                   | Yes                                                                                             |
| • Type                                      | SFB                                                                                             |
| • Number                                    | Unlimited (limited only by RAM capacity)                                                        |
| S7 times                                    |                                                                                                 |
| • Number                                    | 2 048                                                                                           |
| Retentivity                                 |                                                                                                 |
| — adjustable                                | Yes                                                                                             |
| — preset                                    | No times retentive                                                                              |
| Time range                                  |                                                                                                 |
| — lower limit                               | 10 ms                                                                                           |
| — upper limit                               | 9 990 s                                                                                         |
| IEC timer                                   |                                                                                                 |

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• present</li> <li>• Type</li> <li>• Number</li> </ul>                                                                                                                                                                          | Yes<br>SFB<br>Unlimited (limited only by RAM capacity)                                                                                                                                                                                 |
| <b>Data areas and their retentivity</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                                                        |
| Retentive data area (incl. timers, counters, flags), max.                                                                                                                                                                                                              | Total working and load memory (with backup battery)                                                                                                                                                                                    |
| <b>Flag</b>                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Size, max.</li> <li>• Retentivity available</li> <li>• Retentivity preset</li> <li>• Number of clock memories</li> </ul>                                                                                                      | 8 kbyte; Size of bit memory address area<br>Yes<br>MB 0 to MB 15<br>8; in 1 memory byte                                                                                                                                                |
| <b>Local data</b>                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• adjustable, max.</li> <li>• preset</li> </ul>                                                                                                                                                                                 | 16 kbyte<br>8 kbyte                                                                                                                                                                                                                    |
| <b>Address area</b>                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                        |
| <b>I/O address area</b>                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Inputs</li> <li>• Outputs</li> </ul>                                                                                                                                                                                          | 8 kbyte<br>8 kbyte                                                                                                                                                                                                                     |
| <b>Process image</b>                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Inputs, adjustable</li> <li>• Outputs, adjustable</li> <li>• Inputs, default</li> <li>• Outputs, default</li> <li>• consistent data, max.</li> <li>• Access to consistent data in process image</li> </ul>                    | 8 kbyte<br>8 kbyte<br>256 byte<br>256 byte<br>244 byte<br>Yes                                                                                                                                                                          |
| <b>Subprocess images</b>                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Number of subprocess images, max.</li> </ul>                                                                                                                                                                                  | 15                                                                                                                                                                                                                                     |
| <b>Digital channels</b>                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Inputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> <li>• Outputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> </ul>                  | 65 536<br>65 536<br>65 536<br>65 536                                                                                                                                                                                                   |
| <b>Analog channels</b>                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Inputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> <li>• Outputs               <ul style="list-style-type: none"> <li>— of which central</li> </ul> </li> </ul>                  | 4 096<br>4 096<br>4 096<br>4 096                                                                                                                                                                                                       |
| <b>Hardware configuration</b>                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                        |
| Number of expansion units, max.                                                                                                                                                                                                                                        | 21                                                                                                                                                                                                                                     |
| connectable OPs                                                                                                                                                                                                                                                        | 63                                                                                                                                                                                                                                     |
| Multicomputing                                                                                                                                                                                                                                                         | Yes; 4 CPUs max. (with UR1 or UR2)                                                                                                                                                                                                     |
| <b>Interface modules</b>                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• Number of connectable IMs (total), max.</li> <li>• Number of connectable IM 460s, max.</li> <li>• Number of connectable IM 463s, max.</li> </ul>                                                                              | 6<br>6<br>4; IM 463-2                                                                                                                                                                                                                  |
| <b>Number of DP masters</b>                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• integrated</li> <li>• via CP</li> <li>• via IM 467</li> <li>• Mixed mode IM + CP permitted</li> <li>• via interface module</li> <li>• Number of pluggable S5 modules (via adapter capsule in central device), max.</li> </ul> | 1<br>10; CP 443-5 Extended<br>4<br>No; IM 467 cannot be used jointly with CP 443-5 Ext. or CP 443-1 in PROFINET IO mode<br>1; IF 964-DP<br>6                                                                                           |
| <b>Number of IO Controllers</b>                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• integrated</li> <li>• via CP</li> </ul>                                                                                                                                                                                       | 1<br>4; Max. 4 in the central controller; no mixed operation of different CP 443-1 types in PROFINET IO mode                                                                                                                           |
| <b>Number of operable FMs and CPs (recommended)</b>                                                                                                                                                                                                                    |                                                                                                                                                                                                                                        |
| <ul style="list-style-type: none"> <li>• FM</li> <li>• CP, PtP</li> <li>• PROFIBUS and Ethernet CPs</li> </ul>                                                                                                                                                         | Limited by number of slots and number of connections<br>CP 440: Limited by number of slots; CP 441: Limited by number of slots and number of connections<br>14; In total max. 10 CPs as DP master and PROFINET controller, of which up |

to 10 IMs or CPs as DP master and up to 4 CPs as PROFINET controller

|                                                         |                                                                                                                   |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Slots</b>                                            |                                                                                                                   |
| • required slots                                        | 2                                                                                                                 |
| <b>Time of day</b>                                      |                                                                                                                   |
| <b>Clock</b>                                            |                                                                                                                   |
| • Hardware clock (real-time)                            | Yes                                                                                                               |
| • retentive and synchronizable                          | Yes                                                                                                               |
| • Resolution                                            | 1 ms                                                                                                              |
| • Deviation per day (buffered), max.                    | 1.7 s; Power off                                                                                                  |
| • Deviation per day (unbuffered), max.                  | 8.6 s; For power On                                                                                               |
| <b>Operating hours counter</b>                          |                                                                                                                   |
| • Number                                                | 16                                                                                                                |
| • Number/Number range                                   | 0 to 15                                                                                                           |
| • Range of values                                       | SFCs 2, 3 and 4: 0 to 32767 hours SFC 101: 0 to 2 <sup>31</sup> - 1 hours                                         |
| • Granularity                                           | 1 h                                                                                                               |
| • retentive                                             | Yes                                                                                                               |
| <b>Clock synchronization</b>                            |                                                                                                                   |
| • supported                                             | Yes                                                                                                               |
| • to MPI, master                                        | Yes                                                                                                               |
| • on MPI, device                                        | Yes                                                                                                               |
| • to DP, master                                         | Yes                                                                                                               |
| • on DP, device                                         | Yes                                                                                                               |
| • in AS, master                                         | Yes                                                                                                               |
| • in AS, device                                         | Yes                                                                                                               |
| • on Ethernet via NTP                                   | Yes; As client                                                                                                    |
| • to IF 964 DP                                          | Yes                                                                                                               |
| <b>Time difference in system when synchronizing via</b> |                                                                                                                   |
| • Ethernet, max.                                        | 10 ms                                                                                                             |
| • MPI, max.                                             | 200 ms                                                                                                            |
| <b>Interfaces</b>                                       |                                                                                                                   |
| Interfaces/bus type                                     | 1 x MPI/PROFIBUS DP, 1 x PROFINET (2 ports), 1 x PROFIBUS DP (optionally pluggable)                               |
| Number of RS 485 interfaces                             | 1; Combined MPI / PROFIBUS DP                                                                                     |
| Number of other interfaces                              | 1; PROFIBUS DP with IF 964-DP (plug-in option; MLFB: 6ES7964-2AA04-0AB0)                                          |
| <b>1. Interface</b>                                     |                                                                                                                   |
| Interface type                                          | MPI/PROFIBUS DP                                                                                                   |
| Isolated                                                | Yes                                                                                                               |
| <b>Interface types</b>                                  |                                                                                                                   |
| • RS 485                                                | Yes                                                                                                               |
| • Output current of the interface, max.                 | 150 mA                                                                                                            |
| <b>Protocols</b>                                        |                                                                                                                   |
| • MPI                                                   | Yes                                                                                                               |
| • PROFIBUS DP master                                    | Yes                                                                                                               |
| • PROFIBUS DP device                                    | Yes                                                                                                               |
| <b>MPI</b>                                              |                                                                                                                   |
| • Number of connections                                 | 32; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1 |
| • Transmission rate, max.                               | 12 Mbit/s                                                                                                         |
| <b>Services</b>                                         |                                                                                                                   |
| — PG/OP communication                                   | Yes                                                                                                               |
| — Routing                                               | Yes                                                                                                               |
| — Global data communication                             | Yes                                                                                                               |
| — S7 basic communication                                | Yes                                                                                                               |
| — S7 communication                                      | Yes                                                                                                               |
| — S7 communication, as client                           | Yes                                                                                                               |
| — S7 communication, as server                           | Yes                                                                                                               |
| <b>PROFIBUS DP master</b>                               |                                                                                                                   |
| • Number of connections, max.                           | 16; If a diagnostics repeater is used on the line, the number of connection resources on the line is reduced by 1 |
| • Transmission rate, max.                               | 12 Mbit/s                                                                                                         |
| • max. number of DP devices                             | 32                                                                                                                |

|                                                       |                                                                                                                               |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Services                                              |                                                                                                                               |
| — PG/OP communication                                 | Yes                                                                                                                           |
| — Routing                                             | Yes; S7 routing                                                                                                               |
| — Global data communication                           | No                                                                                                                            |
| — S7 basic communication                              | Yes                                                                                                                           |
| — S7 communication                                    | Yes                                                                                                                           |
| — S7 communication, as client                         | Yes                                                                                                                           |
| — S7 communication, as server                         | Yes                                                                                                                           |
| — Equidistance                                        | Yes                                                                                                                           |
| — Isochronous mode                                    | Yes                                                                                                                           |
| — SYNC/FREEZE                                         | Yes                                                                                                                           |
| — activation/deactivation of DP devices               | Yes                                                                                                                           |
| — Direct data exchange (slave-to-slave communication) | Yes                                                                                                                           |
| — DPV1                                                | Yes                                                                                                                           |
| Address area                                          |                                                                                                                               |
| — Inputs, max.                                        | 2 kbyte                                                                                                                       |
| — Outputs, max.                                       | 2 kbyte                                                                                                                       |
| User data per DP device                               |                                                                                                                               |
| — user data per DP device, max.                       | 244 byte                                                                                                                      |
| — Inputs, max.                                        | 244 byte                                                                                                                      |
| — Outputs, max.                                       | 244 byte                                                                                                                      |
| — Slots, max.                                         | 244                                                                                                                           |
| — per slot, max.                                      | 128 byte                                                                                                                      |
| 1st interface / PROFIBUS DP device / header           |                                                                                                                               |
| • Number of connections                               | 16                                                                                                                            |
| • GSD file                                            | <a href="http://support.automation.siemens.com/WW/view/en/113652">http://support.automation.siemens.com/WW/view/en/113652</a> |
| • Transmission rate, max.                             | 12 Mbit/s                                                                                                                     |
| • automatic baud rate search                          | No                                                                                                                            |
| • Address area, max.                                  | 32; Virtual slots                                                                                                             |
| • User data per address area, max.                    | 32 byte                                                                                                                       |
| — of which consistent, max.                           | 32 byte                                                                                                                       |
| Services                                              |                                                                                                                               |
| — PG/OP communication                                 | Yes; with interface active                                                                                                    |
| — Routing                                             | Yes; with interface active                                                                                                    |
| — Global data communication                           | No                                                                                                                            |
| — S7 basic communication                              | No                                                                                                                            |
| — S7 communication                                    | Yes                                                                                                                           |
| — S7 communication, as client                         | Yes                                                                                                                           |
| — S7 communication, as server                         | Yes                                                                                                                           |
| — Direct data exchange (slave-to-slave communication) | No                                                                                                                            |
| — DPV1                                                | No                                                                                                                            |
| Transfer memory                                       |                                                                                                                               |
| — Inputs                                              | 244 byte                                                                                                                      |
| — Outputs                                             | 244 byte                                                                                                                      |
| 2. Interface                                          |                                                                                                                               |
| Interface type                                        | PROFINET                                                                                                                      |
| Isolated                                              | Yes                                                                                                                           |
| automatic detection of transmission rate              | Yes; Autosensing                                                                                                              |
| Autonegotiation                                       | Yes                                                                                                                           |
| Autocrossing                                          | Yes                                                                                                                           |
| Change of IP address at runtime, supported            | Yes; Assignment by higher-level IO-Controller or by the user program with SFB104 "IP_CONF"                                    |
| Interface types                                       |                                                                                                                               |
| • RJ 45 (Ethernet)                                    | Yes                                                                                                                           |
| • Number of ports                                     | 2                                                                                                                             |
| • integrated switch                                   | Yes                                                                                                                           |
| Protocols                                             |                                                                                                                               |
| • PROFINET IO Controller                              | Yes                                                                                                                           |
| • PROFINET IO Device                                  | Yes                                                                                                                           |
| • PROFINET CBA                                        | Yes                                                                                                                           |

|                                                                               |                                                                                                                                                                                               |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • PROFIBUS DP master                                                          | No                                                                                                                                                                                            |
| • PROFIBUS DP device                                                          | No                                                                                                                                                                                            |
| • Open IE communication                                                       | Yes                                                                                                                                                                                           |
| • Web server                                                                  | Yes                                                                                                                                                                                           |
| • Point-to-point connection                                                   | No                                                                                                                                                                                            |
| • Media redundancy                                                            | Yes                                                                                                                                                                                           |
| <b>PROFINET IO Controller</b>                                                 |                                                                                                                                                                                               |
| • Transmission rate, max.                                                     | 100 Mbit/s                                                                                                                                                                                    |
| <b>Services</b>                                                               |                                                                                                                                                                                               |
| — PG/OP communication                                                         | Yes                                                                                                                                                                                           |
| — S7 communication                                                            | Yes                                                                                                                                                                                           |
| — Isochronous mode                                                            | Yes; Only with IRT and the High Performance option                                                                                                                                            |
| — Shared device                                                               | Yes                                                                                                                                                                                           |
| — Prioritized startup                                                         | Yes                                                                                                                                                                                           |
| — Number of IO devices with prioritized startup, max.                         | 32                                                                                                                                                                                            |
| — Number of connectable IO Devices, max.                                      | 256                                                                                                                                                                                           |
| — Of which IO devices with IRT, max.                                          | 64                                                                                                                                                                                            |
| — of which in line, max.                                                      | 64                                                                                                                                                                                            |
| — Number of IO Devices with IRT and the option "high flexibility"             | 256                                                                                                                                                                                           |
| — of which in line, max.                                                      | 61                                                                                                                                                                                            |
| — Number of connectable IO Devices for RT, max.                               | 256                                                                                                                                                                                           |
| — of which in line, max.                                                      | 256                                                                                                                                                                                           |
| — Activation/deactivation of IO Devices                                       | Yes                                                                                                                                                                                           |
| — Number of IO Devices that can be simultaneously activated/deactivated, max. | 8                                                                                                                                                                                             |
| — IO Devices changing during operation (partner ports), supported             | Yes                                                                                                                                                                                           |
| — Number of IO Devices per tool, max.                                         | 8; 8 parallel calls of the SFC 12 "D_ACT_DP" possible per line. Max. 32 IO Devices changing during operation (partner ports) are supported                                                    |
| — Device replacement without swap medium                                      | Yes                                                                                                                                                                                           |
| — Send cycles                                                                 | 250 µs, 500 µs, 1 ms, 2 ms, 4 ms additionally with IRT with high performance: 250 µs to 4 ms in 125 µs frame                                                                                  |
| — Updating time                                                               | 250 µs to 512 ms; minimum value depends on preset communication share for PROFINET IO, on the number of IO Devices and on the amount of configured user data, see PROFINET system description |
| <b>Address area</b>                                                           |                                                                                                                                                                                               |
| — Inputs, max.                                                                | 8 kbyte                                                                                                                                                                                       |
| — Outputs, max.                                                               | 8 kbyte                                                                                                                                                                                       |
| — User data consistency, max.                                                 | 1 024 byte                                                                                                                                                                                    |
| <b>PROFINET IO Device</b>                                                     |                                                                                                                                                                                               |
| <b>Services</b>                                                               |                                                                                                                                                                                               |
| — PG/OP communication                                                         | Yes                                                                                                                                                                                           |
| — S7 communication                                                            | Yes                                                                                                                                                                                           |
| — Isochronous mode                                                            | No                                                                                                                                                                                            |
| — IRT                                                                         | Yes                                                                                                                                                                                           |
| — Prioritized startup                                                         | Yes                                                                                                                                                                                           |
| — Shared device                                                               | Yes                                                                                                                                                                                           |
| — Number of IO Controllers with shared device, max.                           | 2                                                                                                                                                                                             |
| <b>Transfer memory</b>                                                        |                                                                                                                                                                                               |
| — Inputs, max.                                                                | 1 440 byte; Per IO Controller with shared device                                                                                                                                              |
| — Outputs, max.                                                               | 1 440 byte; Per IO Controller with shared device                                                                                                                                              |
| <b>Submodules</b>                                                             |                                                                                                                                                                                               |
| — Number, max.                                                                | 64                                                                                                                                                                                            |
| — User data per submodule, max.                                               | 1 024 byte                                                                                                                                                                                    |
| <b>PROFINET CBA</b>                                                           |                                                                                                                                                                                               |
| • acyclic transmission                                                        | Yes                                                                                                                                                                                           |
| • cyclic transmission                                                         | Yes                                                                                                                                                                                           |
| <b>Open IE communication</b>                                                  |                                                                                                                                                                                               |
| • Number of connections, max.                                                 | 62                                                                                                                                                                                            |
| • Local port numbers used at the system end                                   | 0, 20, 21, 25, 80, 102, 135, 161, 34962, 34963, 34964, 65532, 65533, 65534, 65535                                                                                                             |
| • Keep-alive function, supported                                              | Yes                                                                                                                                                                                           |

| 3. Interface                                                                                                  |                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Interface type                                                                                                | Pluggable interface module (IF)                                                                                               |
| Plug-in interface modules                                                                                     | IF 964-DP (MLFB: 6ES7964-2AA04-0AB0)                                                                                          |
| Isolated                                                                                                      | Yes                                                                                                                           |
| automatic detection of transmission rate                                                                      | No                                                                                                                            |
| Interface types                                                                                               |                                                                                                                               |
| • RS 485                                                                                                      | Yes                                                                                                                           |
| • Output current of the interface, max.                                                                       | 150 mA                                                                                                                        |
| Protocols                                                                                                     |                                                                                                                               |
| • MPI                                                                                                         | No                                                                                                                            |
| • PROFIBUS DP master                                                                                          | Yes                                                                                                                           |
| • PROFIBUS DP device                                                                                          | Yes                                                                                                                           |
| PROFIBUS DP master                                                                                            |                                                                                                                               |
| • Number of connections, max.                                                                                 | 16                                                                                                                            |
| • Transmission rate, max.                                                                                     | 12 Mbit/s                                                                                                                     |
| • max. number of DP devices                                                                                   | 96                                                                                                                            |
| Services                                                                                                      |                                                                                                                               |
| — PG/OP communication                                                                                         | Yes                                                                                                                           |
| — Routing                                                                                                     | Yes; S7 routing                                                                                                               |
| — Global data communication                                                                                   | No                                                                                                                            |
| — S7 basic communication                                                                                      | Yes                                                                                                                           |
| — S7 communication                                                                                            | Yes                                                                                                                           |
| — S7 communication, as client                                                                                 | Yes                                                                                                                           |
| — S7 communication, as server                                                                                 | Yes                                                                                                                           |
| — Equidistance                                                                                                | Yes                                                                                                                           |
| — Isochronous mode                                                                                            | Yes                                                                                                                           |
| — SYNC/FREEZE                                                                                                 | Yes                                                                                                                           |
| — activation/deactivation of DP devices                                                                       | Yes                                                                                                                           |
| — Direct data exchange (slave-to-slave communication)                                                         | Yes                                                                                                                           |
| — DPV0                                                                                                        | Yes                                                                                                                           |
| — DPV1                                                                                                        | Yes                                                                                                                           |
| Address area                                                                                                  |                                                                                                                               |
| — Inputs, max.                                                                                                | 6 kbyte                                                                                                                       |
| — Outputs, max.                                                                                               | 6 kbyte                                                                                                                       |
| User data per DP device                                                                                       |                                                                                                                               |
| — user data per DP device, max.                                                                               | 244 byte                                                                                                                      |
| — Inputs, max.                                                                                                | 244 byte                                                                                                                      |
| — Outputs, max.                                                                                               | 244 byte                                                                                                                      |
| — Slots, max.                                                                                                 | 244                                                                                                                           |
| — per slot, max.                                                                                              | 128 byte                                                                                                                      |
| 3rd interface / PROFIBUS DP device / header                                                                   |                                                                                                                               |
| • number of possible connections / at the 3rd interface / as DP slave                                         | 16                                                                                                                            |
| • GSD file                                                                                                    | <a href="http://support.automation.siemens.com/WW/view/en/113652">http://support.automation.siemens.com/WW/view/en/113652</a> |
| • transfer rate / at the 3rd interface / as DP slave / maximum                                                | 12 Mbit/s                                                                                                                     |
| • automatic baud rate search                                                                                  | No                                                                                                                            |
| • Address area, max.                                                                                          | 32; Virtual slots                                                                                                             |
| • data volume / at the 3rd interface / as DP slave / as user data per address range / maximum                 | 32 byte                                                                                                                       |
| — data volume / at the 3rd interface / as DP slave / as consistent reference data per address range / maximum | 32 byte                                                                                                                       |
| Services                                                                                                      |                                                                                                                               |
| — PG/OP communication                                                                                         | Yes                                                                                                                           |
| — Routing                                                                                                     | Yes; with interface active                                                                                                    |
| — Global data communication                                                                                   | No                                                                                                                            |
| — S7 basic communication                                                                                      | No                                                                                                                            |
| — S7 communication                                                                                            | Yes                                                                                                                           |
| — S7 communication, as client                                                                                 | Yes                                                                                                                           |
| — S7 communication, as server                                                                                 | Yes                                                                                                                           |

|                                                        |                                                                          |
|--------------------------------------------------------|--------------------------------------------------------------------------|
| — Direct data exchange (slave-to-slave communication)  | No                                                                       |
| — DPV1                                                 | No                                                                       |
| <b>Transfer memory</b>                                 |                                                                          |
| — Inputs                                               | 244 byte                                                                 |
| — Outputs                                              | 244 byte                                                                 |
| <b>Protocols</b>                                       |                                                                          |
| <b>Redundancy mode</b>                                 |                                                                          |
| <b>Media redundancy</b>                                |                                                                          |
| — Switchover time on line break, typ.                  | 200 ms                                                                   |
| — Number of stations in the ring, max.                 | 50                                                                       |
| <b>SIMATIC communication</b>                           |                                                                          |
| • S7 routing                                           | Yes                                                                      |
| <b>Open IE communication</b>                           |                                                                          |
| • TCP/IP                                               | Yes; via integrated PROFINET interface and loadable FBs                  |
| — Number of connections, max.                          | 62                                                                       |
| — Data length, max.                                    | 32 kbyte                                                                 |
| — several passive connections per port, supported      | Yes                                                                      |
| • ISO-on-TCP (RFC1006)                                 | Yes; Via integrated PROFINET interface or CP 443-1 Adv. and loadable FBs |
| — Number of connections, max.                          | 62                                                                       |
| — Data length, max.                                    | 32 kbyte; 1 452 bytes via CP 443-1 Adv.                                  |
| • UDP                                                  | Yes; via integrated PROFINET interface and loadable FBs                  |
| — Number of connections, max.                          | 62                                                                       |
| — Data length, max.                                    | 1 472 byte                                                               |
| <b>Web server</b>                                      |                                                                          |
| • supported                                            | Yes                                                                      |
| • User-defined websites                                | Yes                                                                      |
| • Number of HTTP clients                               | 5                                                                        |
| <b>Isochronous mode</b>                                |                                                                          |
| Equidistance                                           | Yes                                                                      |
| Number of DP masters with isochronous mode             | 2                                                                        |
| User data per isochronous slave, max.                  | 244 byte                                                                 |
| shortest clock pulse                                   | 1 ms; 0.5 ms without use of SFC 126, 127                                 |
| max. cycle                                             | 32 ms                                                                    |
| <b>communication functions / header</b>                |                                                                          |
| PG/OP communication                                    | Yes                                                                      |
| • Number of connectable OPs without message processing | 63                                                                       |
| • Number of connectable OPs with message processing    | 63; When using Alarm_S/SQ and Alarm_D/DQ                                 |
| Data record routing                                    | Yes                                                                      |
| <b>Global data communication</b>                       |                                                                          |
| • supported                                            | Yes                                                                      |
| • Number of GD loops, max.                             | 8                                                                        |
| • Number of GD packets, transmitter, max.              | 8                                                                        |
| • Number of GD packets, receiver, max.                 | 16                                                                       |
| • Size of GD packets, max.                             | 54 byte                                                                  |
| • Size of GD packet (of which consistent), max.        | 1 variable                                                               |
| <b>S7 basic communication</b>                          |                                                                          |
| • supported                                            | Yes                                                                      |
| • User data per job, max.                              | 76 byte                                                                  |
| • User data per job (of which consistent), max.        | 1 variable                                                               |
| <b>S7 communication</b>                                |                                                                          |
| • supported                                            | Yes                                                                      |
| • as server                                            | Yes                                                                      |
| • as client                                            | Yes                                                                      |
| • User data per job, max.                              | 64 kbyte                                                                 |
| • User data per job (of which consistent), max.        | 462 byte; 1 variable                                                     |
| <b>S5 compatible communication</b>                     |                                                                          |
| • supported                                            | Yes; Via FC AG_SEND and AG_RECV, max. via 10 CP 443-1 or 443-5           |
| • User data per job, max.                              | 8 kbyte                                                                  |
| • User data per job (of which consistent), max.        | 240 byte                                                                 |
| • Number of simultaneous AG-SEND/AG-RECV orders per    | 24/24                                                                    |



|                                                                                                                                               |                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| CPU, max.                                                                                                                                     |                                                                                                 |
| Standard communication (FMS)                                                                                                                  |                                                                                                 |
| • supported                                                                                                                                   | Yes; Via CP and loadable FB                                                                     |
| communication functions / PROFINET CBA (with set target communication load) / header                                                          |                                                                                                 |
| • Setpoint for the CPU communication load                                                                                                     | 20 %                                                                                            |
| • Number of remote interconnection partners                                                                                                   | 32                                                                                              |
| • number of master/device functions                                                                                                           | 150                                                                                             |
| • total of all master/device connections                                                                                                      | 4 500                                                                                           |
| • data length of all incoming master/device connections, max.                                                                                 | 45 000 byte                                                                                     |
| • data length of all outgoing master/device connections, max.                                                                                 | 45 000 byte                                                                                     |
| • Number of device-internal and PROFIBUS interconnections                                                                                     | 1 000                                                                                           |
| • Data length of device-internal und PROFIBUS interconnections, max.                                                                          | 16 000 byte                                                                                     |
| • Data length per connection, max.                                                                                                            | 2 000 byte                                                                                      |
| performance data / PROFINET CBA / remote interconnection / with acyclic transfer / header                                                     |                                                                                                 |
| — Sampling interval, min.                                                                                                                     | 200 ms; Depending on preset communication load, number of interconnections and data length used |
| — Number of incoming interconnections                                                                                                         | 250                                                                                             |
| — Number of outgoing interconnections                                                                                                         | 250                                                                                             |
| — Data length of all incoming interconnections, max.                                                                                          | 8 000 byte                                                                                      |
| — Data length of all outgoing interconnections, max.                                                                                          | 8 000 byte                                                                                      |
| — data volume / as user data for remote interconnections / in the case of acyclic transmission / with PROFINET CBA / per connection / maximum | 2 000 byte                                                                                      |
| performance data / PROFINET CBA / remote interconnection / with cyclic transfer / header                                                      |                                                                                                 |
| — Transmission frequency: Transmission interval, min.                                                                                         | 1 ms; Depending on preset communication load, number of interconnections and data length used   |
| — Number of incoming interconnections                                                                                                         | 300                                                                                             |
| — Number of outgoing interconnections                                                                                                         | 300                                                                                             |
| — Data length of all incoming interconnections, max.                                                                                          | 4 800 byte                                                                                      |
| — Data length of all outgoing interconnections, max.                                                                                          | 4 800 byte                                                                                      |
| — data volume / as user data for remote interconnections / with cyclical transfer / with PROFINET CBA / per connection / maximum              | 450 byte                                                                                        |
| performance data / PROFINET CBA / HMI variables via PROFINET / acyclic / header                                                               |                                                                                                 |
| — Number of stations that can log on for HMI variables (PN OPC/iMap)                                                                          | 2x PN OPC/1x iMap                                                                               |
| — HMI variable updating                                                                                                                       | 500 ms                                                                                          |
| — Number of HMI variables                                                                                                                     | 1 000                                                                                           |
| — Data length of all HMI variables, max.                                                                                                      | 32 000 byte                                                                                     |
| performance data / PROFINET CBA / PROFIBUS proxy functionality / header                                                                       |                                                                                                 |
| — supported                                                                                                                                   | Yes; 32 PROFIBUS slaves max. connectable                                                        |
| — Data length per connection, max.                                                                                                            | 240 byte; Slave-dependent                                                                       |
| Number of connections                                                                                                                         |                                                                                                 |
| • overall                                                                                                                                     | 64                                                                                              |
| • usable for PG communication                                                                                                                 | 63                                                                                              |
| — reserved for PG communication                                                                                                               | 1                                                                                               |
| — adjustable for PG communication, max.                                                                                                       | 0                                                                                               |
| • usable for OP communication                                                                                                                 | 63                                                                                              |
| — reserved for OP communication                                                                                                               | 1                                                                                               |
| — adjustable for OP communication, max.                                                                                                       | 0                                                                                               |
| • usable for S7 basic communication                                                                                                           | 62                                                                                              |
| — reserved for S7 basic communication                                                                                                         | 0                                                                                               |
| — adjustable for S7 basic communication, max.                                                                                                 | 0                                                                                               |
| • usable for S7 communication                                                                                                                 | 62                                                                                              |
| — reserved for S7 communication                                                                                                               | 0                                                                                               |
| — adjustable for S7 communication, max.                                                                                                       | 0                                                                                               |
| • usable for routing                                                                                                                          | 31                                                                                              |
| — reserved for routing                                                                                                                        | 0                                                                                               |
| — adjustable for routing, max.                                                                                                                | 0                                                                                               |
| S7 message functions                                                                                                                          |                                                                                                 |

|                                                                     |                                                                                                                                                                                                                 |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of login stations for message functions, max.                | 63; Max. 63 with Alarm_S/SQ and Alarm_D/DQ (OPs); max. 8 with Alarm, Alarm_8, Alarm_8P, Notify and Notify_8 (e.g. WinCC)                                                                                        |
| Symbol-related messages                                             | Yes                                                                                                                                                                                                             |
| SCAN procedure                                                      | Yes                                                                                                                                                                                                             |
| Program alarms                                                      | Yes                                                                                                                                                                                                             |
| Process diagnostic messages                                         | Yes                                                                                                                                                                                                             |
| simultaneously active Alarm-S blocks, max.                          | 400; Simultaneously active alarm_S/SQ blocks or alarm_D/DQ blocks                                                                                                                                               |
| Alarm 8-blocks                                                      | Yes                                                                                                                                                                                                             |
| • Number of instances for alarm 8 and S7 communication blocks, max. | 1 200                                                                                                                                                                                                           |
| • preset, max.                                                      | 300                                                                                                                                                                                                             |
| Process control messages                                            | Yes                                                                                                                                                                                                             |
| Number of archives that can log on simultaneously (SFB 37 AR_SEND)  | 16                                                                                                                                                                                                              |
| <b>Number of messages</b>                                           |                                                                                                                                                                                                                 |
| • overall, max.                                                     | 512                                                                                                                                                                                                             |
| • in 100 ms grid, max.                                              | 128                                                                                                                                                                                                             |
| • in 500 ms grid, max.                                              | 256                                                                                                                                                                                                             |
| • in 1000 ms grid, max.                                             | 512                                                                                                                                                                                                             |
| <b>Number of additional values</b>                                  |                                                                                                                                                                                                                 |
| • with 100 ms grid, max.                                            | 1                                                                                                                                                                                                               |
| • with 500, 1000 ms grid, max.                                      | 10                                                                                                                                                                                                              |
| <b>Test commissioning functions</b>                                 |                                                                                                                                                                                                                 |
| Status block                                                        | Yes; Up to 16 simultaneously                                                                                                                                                                                    |
| Single step                                                         | Yes                                                                                                                                                                                                             |
| Number of breakpoints                                               | 16                                                                                                                                                                                                              |
| <b>Status/control</b>                                               |                                                                                                                                                                                                                 |
| • Status/control variable                                           | Yes; Up to 16 variable tables                                                                                                                                                                                   |
| • Variables                                                         | Inputs/outputs, memory bits, DBs, distributed I/Os, timers, counters                                                                                                                                            |
| • Number of variables, max.                                         | 70; Status/control                                                                                                                                                                                              |
| <b>Forcing</b>                                                      |                                                                                                                                                                                                                 |
| • Forcing                                                           | Yes                                                                                                                                                                                                             |
| • Forcing, variables                                                | Inputs/outputs, bit memories, distributed I/Os                                                                                                                                                                  |
| • Number of variables, max.                                         | 256                                                                                                                                                                                                             |
| <b>Diagnostic buffer</b>                                            |                                                                                                                                                                                                                 |
| • present                                                           | Yes                                                                                                                                                                                                             |
| • Number of entries, max.                                           | 3 200                                                                                                                                                                                                           |
| — adjustable                                                        | Yes                                                                                                                                                                                                             |
| — preset                                                            | 120                                                                                                                                                                                                             |
| <b>Service data</b>                                                 |                                                                                                                                                                                                                 |
| • can be read out                                                   | Yes                                                                                                                                                                                                             |
| <b>Standards, approvals, certificates</b>                           |                                                                                                                                                                                                                 |
| CE mark                                                             | Yes                                                                                                                                                                                                             |
| EAC (formerly Gost-R)                                               | Yes                                                                                                                                                                                                             |
| <b>Ambient conditions</b>                                           |                                                                                                                                                                                                                 |
| <b>Ambient temperature during operation</b>                         |                                                                                                                                                                                                                 |
| • min.                                                              | -25 °C; = Tmin                                                                                                                                                                                                  |
| • max.                                                              | 70 °C; = Tmax                                                                                                                                                                                                   |
| <b>Altitude during operation relating to sea level</b>              |                                                                                                                                                                                                                 |
| • Installation altitude above sea level, max.                       | 5 000 m                                                                                                                                                                                                         |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m) |
| <b>Relative humidity</b>                                            |                                                                                                                                                                                                                 |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation                                                                                                               |
| <b>Resistance</b>                                                   |                                                                                                                                                                                                                 |
| <b>Use in stationary industrial systems</b>                         |                                                                                                                                                                                                                 |
| — to biologically active substances according to EN 60721-3-3       | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request                                                                                                              |
| — to chemically active substances according to EN 60721-3-3         | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                                                        |
| — to mechanically active substances according to EN                 | Yes; Class 3S4 incl. sand, dust, *                                                                                                                                                                              |

|                                                                                                                         |                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 60721-3-3                                                                                                               |                                                                                                                                                                                     |
| Use on ships/at sea                                                                                                     |                                                                                                                                                                                     |
| — to biologically active substances according to EN 60721-3-6                                                           | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request                                                                                                       |
| — to chemically active substances according to EN 60721-3-6                                                             | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                            |
| — to mechanically active substances according to EN 60721-3-6                                                           | Yes; Class 6S3 incl. sand, dust; *                                                                                                                                                  |
| Usage in industrial process technology                                                                                  |                                                                                                                                                                                     |
| — Against chemically active substances acc. to EN 60654-4                                                               | Yes; Class 3 (excluding trichlorethylene)                                                                                                                                           |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04                            | Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) |
| Remark                                                                                                                  |                                                                                                                                                                                     |
| — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04             | * The supplied plug covers must remain in place over the unused interfaces during operation!                                                                                        |
| Conformal coating                                                                                                       |                                                                                                                                                                                     |
| • Coatings for printed circuit board assemblies acc. to EN 61086                                                        | Yes; Class 2 for high reliability                                                                                                                                                   |
| • Protection against fouling acc. to EN 60664-3                                                                         | Yes; Type 1 protection                                                                                                                                                              |
| • Military testing according to MIL-I-46058C, Amendment 7                                                               | Yes; Discoloration of coating possible during service life                                                                                                                          |
| • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | Yes; Conformal coating, Class A                                                                                                                                                     |
| configuration / header                                                                                                  |                                                                                                                                                                                     |
| Configuration software                                                                                                  |                                                                                                                                                                                     |
| • STEP 7                                                                                                                | Yes                                                                                                                                                                                 |
| configuration / programming / header                                                                                    |                                                                                                                                                                                     |
| • Command set                                                                                                           | see instruction list                                                                                                                                                                |
| • Nesting levels                                                                                                        | 7                                                                                                                                                                                   |
| • Access to consistent data in process image                                                                            | Yes                                                                                                                                                                                 |
| • System functions (SFC)                                                                                                | see instruction list                                                                                                                                                                |
| • System function blocks (SFB)                                                                                          | see instruction list                                                                                                                                                                |
| Programming language                                                                                                    |                                                                                                                                                                                     |
| — LAD                                                                                                                   | Yes                                                                                                                                                                                 |
| — FBD                                                                                                                   | Yes                                                                                                                                                                                 |
| — STL                                                                                                                   | Yes                                                                                                                                                                                 |
| — SCL                                                                                                                   | Yes                                                                                                                                                                                 |
| — CFC                                                                                                                   | Yes                                                                                                                                                                                 |
| — GRAPH                                                                                                                 | Yes                                                                                                                                                                                 |
| — HiGraph®                                                                                                              | Yes                                                                                                                                                                                 |
| configuration / programming / number of simultaneously active SFC / header                                              |                                                                                                                                                                                     |
| — DPSYC_FR                                                                                                              | 2; SFC 11; per interface                                                                                                                                                            |
| — D_ACT_DP                                                                                                              | 8; SFC 12; per interface                                                                                                                                                            |
| — RD_REC                                                                                                                | 8; SFC 59; per interface                                                                                                                                                            |
| — WR_REC                                                                                                                | 8; SFC 58; per interface                                                                                                                                                            |
| — WR_PARM                                                                                                               | 8; SFC 55; per interface                                                                                                                                                            |
| — PARM_MOD                                                                                                              | 1; SFC 57; per interface                                                                                                                                                            |
| — WR_DPARM                                                                                                              | 2; SFC 56; per interface                                                                                                                                                            |
| — DPNRM_DG                                                                                                              | 8; SFC 13; per interface                                                                                                                                                            |
| — RDSYSST                                                                                                               | 8; SFC 51                                                                                                                                                                           |
| — DP_TOPOL                                                                                                              | 1; SFC 103; per interface                                                                                                                                                           |
| configuration / programming / number of simultaneously active SFB / header                                              |                                                                                                                                                                                     |
| — RDREC                                                                                                                 | 8; SFB 52; per interface, but not more than 32 across all external interfaces                                                                                                       |
| — WRREC                                                                                                                 | 8; SFB 53; per interface, but not more than 32 across all external interfaces                                                                                                       |
| Know-how protection                                                                                                     |                                                                                                                                                                                     |
| • User program protection/password protection                                                                           | Yes                                                                                                                                                                                 |
| • Block encryption                                                                                                      | Yes; With S7 block Privacy                                                                                                                                                          |
| Dimensions                                                                                                              |                                                                                                                                                                                     |
| Width                                                                                                                   | 50 mm                                                                                                                                                                               |
| Height                                                                                                                  | 290 mm                                                                                                                                                                              |
| Depth                                                                                                                   | 219 mm                                                                                                                                                                              |

| Weights         |       |
|-----------------|-------|
| Weight, approx. | 900 g |

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