## **SIEMENS**

## **Data sheet**

## 6AV7260-0DA20-0BX6

SIMATIC IPC677D (Panel PC), 2x10/100/1000 Mbit/s Ethernet; 4x USB V3.0, 1x serial (COM1); Watchdog, temperature and Fan monitoring; RAID controller onboard; 15" Touch (1280x 800); with front USB Core I3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-X) 500 GB HDD SATA; 4 GB DDR3 1600 DIMM; 2x PCI without expansion (HW) Windows 7 Ultimate 64 bit SP1, MUI (de, en, fr, es, it) without expansion (software) 24 V DC industrial Power supply

| O  | expansion (software) 24 V DC industrial Power supply   |
|--|--|
| General information                              |  |
| Product type designation                         | IPC677D  |
| Display  |  |
| Design of display                                | 15" TFT touch  |
| Screen diagonal                                  | 15 in  |
| Resolution (pixels)                              |  |
| <ul> <li>Horizontal image resolution</li> </ul>  | 1 280 pixel  |
| Vertical image resolution                        | 800 pixel  |
| Backlighting                                     |  |
| <ul> <li>MTBF backlighting (at 25 °C)</li> </ul> | 80 000 h   |
| Control elements                                 |  |
| Input device                                     |  |
| Mouse, at front                                  | Front USB 2.0 (500mA)  |
| Touch operation                                  |  |
| Design as touch screen                           | Yes; analog, resistive   |
| Installation type/mounting                       |  |
| Mounting   | For horizontal and vertical mounting   |
| Design   | Panel PC, built-in unit  |
| central design                                   | Yes  |
| Mounting in portrait format possible             | Yes  |
| maximum permissible installation angle +/-       | 20°  |
| Supply voltage                                   |  |
| Type of supply voltage                           | 100/240 V AC (autorange); 24 V DC  |
| Line frequency                                   | 100/240 V AO (autorange), 24 V DO  |
| Rated value 50 Hz                                | Yes  |
| Rated value 50 Hz      Rated value 60 Hz         | Yes  |
| Mains buffering                                  | 165  |
| Mains/voltage failure stored energy time         | 10 ms  |
| Power loss                                       | 10 IIIS  |
|  | AFF W  |
| In full configuration                            | 155 W  |
| Processor  |  |
| Processor type                                   | Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB Cache); Core i3-4330TE (2C/4T, 2.4 GHz, 4 MB Cache); Xeon E3-1268L v3 (4C/8T, 2.3 (3.3) GHz, 8 MB Cache, AMT)  |
| Chipset  | Intel DH82C226 PCH   |
| Graphic  |  |
| Graphics controller                              | Intel HD graphics controller P4600 GT2 (Xeon, Core i3); Intel HD graphics controller (Celeron)   |
| Drives   |  |
| Optical drives                                   | DVD±R±RW combi-drive, optional   |
| Hard disk  | 3.5" SATA ≥ 500 GB, optional: 3.5" SATA ≥ 1 TB; RAID1 2x 2.5" SATA ≥ 320 GB; solid-state drive (SSD) ≥ 240 GB; all hard disk drives within the enclosure are vibration-damped; RAID1 2x 2.5" SATA ≥ 320 GB byte in removable drive bay |
| SSD  | Yes; ≥ 240 GB optional   |
| Memory   |  |
| Type of memory                                   | DDR3-1600 DIMM   |
| Main memory                                      | 2 / 4 / 8 / 16 GB; ECC optional  |
| Capacity of main memory, max.                    | 16 Gbyte   |
| supatity of main montory, max.                   | 10 00/10   |

| Data areas and their retentivity  |  |
|---|--|
| Retentive data area (incl. timers, counters, flags), max.   | 2 Mbyte; 128 KB can be stored in the buffer time; optional   |
| Hardware configuration  |  |
| Slots   |  |
| • free slots  | 2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer  |
| <ul> <li>Number of PCI slots</li> </ul>   | 2  |
| <ul> <li>Number of PCI slots</li> </ul>   | 2  |
| Interfaces  |  |
| PROFIBUS/MPI  | Optionally onboard, isolated, max. 12 Mbit/s, compatible with CP 5622  |
| Number of industrial Ethernet interfaces  | 2; 2x RJ45 (independent)   |
| Number of PROFINET interfaces   | 3; Optional  |
| USB port  | 4x USB 3.0   |
| Connection for keyboard/mouse   | USB / USB  |
| serial interface  | 1x COM1 (RS 232), optional: 1x COM2 (RS 232)   |
| parallel interface  | optional LPT1  |
| Video interfaces  | - species  |
| Graphics interface  | 1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)   |
| Industrial Ethernet   | in Displays of and in Divis, in von the deaptor seaso (optional)   |
| Industrial Ethernet interface   | Onboard, 2x 10 / 100 / 1000 Mbit, RJ45   |
| — 100 Mbps  | Yes  |
| — 1000 Mbps   | Yes  |
| — 1000 Mbps nterrupts/diagnostics/status information  |  |
|   | Vaa  |
| Bus diagnostics   | Yes  |
| ntegrated Functions   |  |
| Monitoring functions  |  |
| Temperature monitoring  | Yes  |
| <ul> <li>Watchdog</li> </ul>  | Yes  |
| Status LEDs   | Yes  |
| • Fan   | Yes  |
| Monitoring function via network   | Optional   |
| EMC   |  |
| Interference immunity against discharge of static electricity   |  |
| <ul> <li>Interference immunity against discharge of static</li> </ul>   | ±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC   |
| electricity   | 61000-4-2  |
| electricity  Interference immunity against high-frequency electromagnetic field   |  |
| •   |  |
| Interference immunity against high-frequency electromagnetic field  | ds<br>10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3<br>V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz,   |
| Interference immunity against high-frequency electromagnetic field  • Interference immunity against high frequency radiation  | ds<br>10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3<br>V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz,   |
| Interference immunity against high-frequency electromagnetic field  • Interference immunity against high frequency radiation  Interference immunity to cable-borne interference   | ds  10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3  V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge  |
| Interference immunity against high-frequency electromagnetic field  • Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  • Interference immunity on supply cables   | ds  10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4;   |
| Interference immunity against high-frequency electromagnetic field  • Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  • Interference immunity on supply cables  • Interference immunity on signal cables >30m  • Interference immunity on signal cables < 30m  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4;   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference  symmetric interference  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Interference emission via line/AC current cables  Degree and class of protection   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  ±1 kV acc. to IEC 61000-4-5, surge symmetric   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  ±1 kV acc. to IEC 61000-4-5, surge symmetric   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates  CE mark   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference  Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates  CE mark  UL approval   | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A  IP65 IP20  Yes Yes           |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates  CE mark  UL approval  UL 508                                  | 10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A  IP65 IP20  Yes Yes Yes  |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates  CE mark  UL approval  UL 508  cULus                           | ds  10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A  IP65 IP20  Yes Yes Yes Yes |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference  symmetric interference  Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference  Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates  CE mark  UL approval  UL 508  cULus  RCM (formerly C-TICK) | ds  10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A  IP65 IP20  Yes Yes Yes Yes   |
| Interference immunity against high-frequency electromagnetic field  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m  Interference immunity on signal cables < 30m  Interference immunity against voltage surge  asymmetric interference symmetric interference Interference immunity to magnetic fields  Interference immunity to magnetic fields at 50 Hz  Emission of conducted and non-conducted interference Interference emission via line/AC current cables  Degree and class of protection  IP (at the front)  IP (rear)  Standards, approvals, certificates  CE mark  UL approval  UL 508  cULus                           | ds  10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6  ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m  ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±1 kV acc. to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-5, surge symmetric  100 A/m; to IEC 61000-4-8  EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A  IP65 IP20  Yes Yes Yes Yes |

| EMC  | CE, EN 61000-6-4:2007, EN 61000-6-2:2005   |  |
|--|--|--|
| Ambient conditions   |  |  |
| Ambient temperature during operation   |  |  |
| • min.   | 5 °C   |  |
| • max.   | 45 °C  |  |
| Ambient temperature during storage/transportation                                    |  |  |
| • min.   | -20 °C   |  |
| • max.   | 60 °C  |  |
| Relative humidity  |  |  |
| Relative humidity  | Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 $^{\circ}\text{C}$ (no condensation)                                 |  |
| Vibrations   |  |  |
| <ul> <li>Vibration resistance during operation acc. to IEC 60068-<br/>2-6</li> </ul> | tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s $^2$ (1 g)                                      |  |
| Shock testing  |  |  |
| <ul> <li>Shock load during operation</li> </ul>                                      | Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks   |  |
| Operating systems  |  |  |
| pre-installed operating system   | Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embedded Standard 7 P, 32-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI |  |
| without operating system   | Yes  |  |
| pre-installed operating system   |  |  |
| <ul><li>Windows 7</li></ul>  | Yes; Ultimate 32 bit or 64 bit   |  |
| Windows 10 Enterprise  | Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI  |  |
| Software   |  |  |
| SIMATIC Software   | Optional package with SIMATIC WinCC or WinAC RTX   |  |
| Dimensions   |  |  |
| Width of the housing front   | 415 mm   |  |
| Height of housing front  | 310 mm   |  |
| Mounting cutout, width   | 396 mm   |  |
| Mounting cutout, height  | 291 mm   |  |
| Overall depth  | 112 mm   |  |
| <ul> <li>additional mounting depth (optical drive)</li> </ul>                        | 26 mm  |  |
| Weights  |  |  |
| Weight, approx.  | 12 kg  |  |

last modified: 6/25/2021 **[**