## **SIEMENS**

## **Data sheet**

## 6AV7260-1EM60-0BC6

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; 19" Touch (1366x 768); with front USB Core I3-4330TE (2C/4T, 2.4 GHz, 4 MB cache, VT-X); PROFIBUS/MPI CP 5622-compatible); 2 MB buffered SRAM Solid-state drive 240 GB 16 GB DDR3 1600 DIMM; ECC; 2x PCI without expansion (HW) Windows 7 Ultimate 64 bit SP1, MUI (de, en, fr, es, it) SIMATIC IPC DiagMonitor and Image&Partition Creator enclosed 24 V DC industrial Power supply

General information	
Product type designation	IPC677D
Display	
Design of display	19" TFT touch
Screen diagonal	19 in
Resolution (pixels)	
<ul> <li>Horizontal image resolution</li> </ul>	1 366 pixel
Vertical image resolution	768 pixel
Backlighting	
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	50 000 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	
Rated value 50 Hz	Yes
Rated value 60 Hz	Yes
Mains buffering	
Mains/voltage failure stored energy time	10 ms
Power loss	
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

	16 Gbyte
Capacity of main memory, max.  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	2 mayto, 120 kg out be doted in the build time, optional
Slots	
• free slots	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer
Number of PCI slots	2
Number of PCI slots	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	
Graphics interface	1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)
Industrial Ethernet	
Industrial Ethernet interface	onboard, 2x 10 / 100 / 1 000 Mbit, RJ45
— 100 Mbps	Yes
— 1000 Mbps	Yes
Interrupts/diagnostics/status information	
Bus diagnostics	Yes
Integrated Functions	
Monitoring functions	
Temperature monitoring	Yes
Watchdog	Yes
Status LEDs	Yes
● Fan	Yes
<ul> <li>Monitoring function via network</li> </ul>	Optional
EMC	
Interference income the control of t	
Interference immunity against discharge of static electricity	
Interference immunity against discharge of static	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC
Interference immunity against discharge of static electricity	61000-4-2
Interference immunity against discharge of static electricity  Interference immunity against high-frequency electromagnetic fields.	61000-4-2 s
Interference immunity against discharge of static electricity	61000-4-2
Interference immunity against discharge of static electricity  Interference immunity against high-frequency electromagnetic fields.	61000-4-2 s 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,
Interference immunity against discharge of static electricity  Interference immunity against high-frequency electromagnetic fields     Interference immunity against high frequency radiation	61000-4-2 s  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields     Interference immunity against high frequency radiation  Interference immunity to cable-borne interference     Interference immunity on supply cables	61000-4-2 s 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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m	61000-4-2 s 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
Interference immunity against discharge of static electricity  Interference immunity against high-frequency electromagnetic fields     Interference immunity against high frequency radiation  Interference immunity to cable-borne interference     Interference immunity on supply cables	61000-4-2 s 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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  Interference immunity on supply cables  Interference immunity on signal cables >30m	61000-4-2 s 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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields 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	61000-4-2 s 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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  S  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  s  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  s  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  S  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  S  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  s  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields 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)	61000-4-2  S  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
Interference immunity against discharge of static electricity  Interference immunity against high-frequency electromagnetic fields 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)	61000-4-2  S  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
Interference immunity against discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  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 discharge of static electricity  Interference immunity against high-frequency electromagnetic fields  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	61000-4-2  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
<ul> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against high-frequency electromagnetic fields</li> <li>Interference immunity against high frequency radiation</li> <li>Interference immunity to cable-borne interference</li> <li>Interference immunity on supply cables</li> <li>Interference immunity on signal cables &gt;30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>Interference immunity against voltage surge</li> <li>asymmetric interference</li> <li>symmetric interference</li> <li>Interference immunity to magnetic fields</li> <li>Interference immunity to magnetic fields at 50 Hz</li> <li>Emission of conducted and non-conducted interference</li> <li>Interference emission via line/AC current cables</li> <li>Degree and class of protection</li> <li>IP (at the front)</li> <li>IP (rear)</li> <li>Standards, approvals, certificates</li> <li>CE mark</li> <li>UL approval</li> </ul>	61000-4-2  S  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
<ul> <li>Interference immunity against discharge of static electricity</li> <li>Interference immunity against high-frequency electromagnetic fields</li> <li>Interference immunity against high frequency radiation</li> <li>Interference immunity on signal high frequency radiation</li> <li>Interference immunity on supply cables</li> <li>Interference immunity on signal cables &gt;30m</li> <li>Interference immunity on signal cables &lt; 30m</li> <li>Interference immunity against voltage surge</li> <li>asymmetric interference</li> <li>symmetric interference</li> <li>Interference immunity to magnetic fields</li> <li>Interference immunity to magnetic fields at 50 Hz</li> <li>Emission of conducted and non-conducted interference</li> <li>Interference emission via line/AC current cables</li> <li>Degree and class of protection</li> <li>IP (at the front)</li> <li>IP (rear)</li> <li>Standards, approvals, certificates</li> <li>CE mark</li> <li>UL approval</li> <li>UL 508</li> </ul>	61000-4-2  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 Yes

FCC EMC CE, EN 61000-6-4;2007, EN 61000-6-2;2005  Ambient conditions  Ambient temperature during operation  • min. • max. 45 °C  Ambient temperature during storage/transportation  • min. • max. 60 °C  Relative humidity • Relative humidity  • Relative humidity  • Relative humidity  Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)  Vibrations  • Vibration resistance during operation acc. to IEC 60068-2-6 2-6  Shock testing • Shock load during operation  Tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Shock load during operation  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10  Operating systems  pre-installed operating system  without operating system  ves  pre-installed operating system  • Windows 7  Visitimate 32 bit or 64 bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, width  Mounting cutout, width  Mounting cutout, width  Mounting cutout, height  Overall depth	
Ambient temperature during operation  • min. • max. 45 °C  Ambient temperature during storage/transportation  • min. • max. 45 °C  Ambient temperature during storage/transportation  • min. • max. 60 °C  Relative humidity • Relative humidity  • Relative humidity  • Relative humidity  • Vibrations • Vibration resistance during operation acc. to IEC 60068-2-6 2-6  Shock testing • Shock load during operation • Shock load during operation  • Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Windows 7  • Windows 7 Yes; Ultimate 32 bit or 64 bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Software  SIMATIC Software  SiMATIC Software  Windout operating front Height of housing front 483 mm  Height of housing front Mounting cutout, width Mounting cutout, width Mounting cutout, width Mounting cutout, width Mounting cutout, height	
<ul> <li>min.</li> <li>max.</li> <li>45 °C</li> <li>Ambient temperature during storage/transportation</li> <li>min.</li> <li>-20 °C</li> <li>max.</li> <li>60 °C</li> <li>Relative humidity</li> <li>Relative humidity</li> <li>Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)</li> <li>Vibrations</li> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> <li>Shock testing</li> <li>Shock load during operation</li> <li>Tested to DIN IEC 60068-2-9: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)</li> <li>Shock load during operation</li> <li>Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10</li> <li>Operating systems</li> <li>pre-installed operating system</li> <li>Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (1) Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (2) Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (2) Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (2) Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (2) Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (2) Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit MIN (3) MIN (3) MIN (4) MIN</li></ul>	
<ul> <li>min.</li> <li>max.</li> <li>45 °C</li> <li>Ambient temperature during storage/transportation</li> <li>min.</li> <li>-20 °C</li> <li>max.</li> <li>60 °C</li> <li>Relative humidity</li> <li>Relative humidity</li> <li>Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)</li> <li>Vibrations</li> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> <li>Shock testing</li> <li>Shock load during operation</li> <li>Tested to DIN IEC 60068-2-9: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)</li> <li>Shock load during operation</li> <li>Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10</li> <li>Operating systems</li> <li>pre-installed operating system</li> <li>Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit</li> <li>Softwaro</li> <li>SIMATIC Software</li> <li>Optional package with SIMATIC WinCC or WinAC RTX Dimensions</li> <li>Width of the housing front</li> <li>483 mm</li> <li>Height of housing front</li> <li>483 mm</li> <li>Mounting cutout, width</li> <li>Mounting cutout, width</li> <li>Mounting cutout, height</li> <li>319 mm</li> </ul>	
Ambient temperature during storage/transportation  • min. • max. 60 °C  Relative humidity • Relative humidity  • Relative humidity  • Vibration resistance during operation acc. to IEC 60068-2-6 2-6 Shock testing • Shock load during operation  • Shock load during operation  Tested to DIN IEC 60068-2-9: 50 m/s² (5 g), 30 ms, 10  Operating systems  pre-installed operating system  without operating system  • Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit  • Windows 7 • Windows 10 Enterprise  • Windows 10 Enterprise  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front 483 mm  Height of housing front 485 mm  Mounting cutout, width 465 mm  Mounting cutout, height	
<ul> <li>min.</li> <li>max.</li> <li>max.</li> <li>60 °C</li> <li>Relative humidity</li> <li>Relative humidity</li> <li>Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)</li> <li>Vibrations</li> <li>Vibration resistance during operation acc. to IEC 60068-2-6</li> <li>Shock testing</li> <li>Shock load during operation</li> <li>Tested to DIN IEC 60068-2-9: 50 m/s² (5 g), 30 ms, 10</li> <li>Operating systems</li> <li>pre-installed operating system</li> <li>Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit</li> <li>Windows 7</li> <li>Yes</li> <li>pre-installed operating system</li> <li>Windows 7</li> <li>Yes; Ultimate 32 bit or 64 bit</li> <li>Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit</li> <li>Software</li> <li>Software</li> <li>Optional package with SIMATIC WinCC or WinAC RTX</li> <li>Dimensions</li> <li>Width of the housing front</li> <li>483 mm</li> <li>Height of housing front</li> <li>Mounting cutout, width</li> <li>Mounting cutout, height</li> <li>319 mm</li> </ul>	
max.  Relative humidity      Relative humidity      Relative humidity      Relative humidity      Relative humidity      Relative humidity      Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)  Vibrations      Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Shock testing      Shock load during operation      Tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10 Operating systems  pre-installed operating system  Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Ember bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 60 without operating system  Windows 7 Yes; Ultimate 32 bit or 64 bit  Windows 10 Enterprise  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  According to IEC 60068-2-78, IEC 60068-2-30: condensation)  Tested according to IEC 60068-2-6: 10 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 58 Hz to 58 Hz to 50 Hz to 50 Hz to 58 Hz	
Relative humidity  Relative humidity  Relative humidity  Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)  Vibrations  Vibration resistance during operation acc. to IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Shock testing  Shock load during operation  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10 Operating systems  pre-installed operating system  Pre-installed operating system  Vindows 7 Ultimate, 32-bit/64-bit, MUI; Windows Embers bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 60 without operating system  Windows 7  Yes; Ultimate 32 bit or 64 bit  Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)  tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz to 59 H	
Relative humidity  Tested according to IEC 60068-2-78, IEC 60068-2-30: condensation)  Vibrations  Vibration resistance during operation acc. to IEC 60068-2-6  2-6  Shock testing  Shock load during operation  Tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI; Windows 7  Windows 7  Yes; Ultimate 32 bit or 64 bit  Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Wind	
Vibrations  • Vibration resistance during operation acc. to IEC 60068- 2-6 tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Shock testing • Shock load during operation  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 11  Operating systems  pre-installed operating system  without operating system  • Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI; Windows 7  • Windows 7  • Windows 7  • Windows 10 Enterprise  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  1 tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz	
Vibration resistance during operation acc. to IEC 60068- 2-6 tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz 500 Hz 9.8 m/s² (1 g)  Shock testing  Shock load during operation  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10 Operating systems  pre-installed operating system  Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 60 Without operating system  Windows 7  Yes; Ultimate 32 bit or 64 bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB,	: 5% to 80% at 25 °C (no
2-6 500 Hz 9.8 m/s² (1 g)  Shock testing  Shock load during operation Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10  Operating systems  pre-installed operating system Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 60 without operating system  Yes  pre-installed operating system  Windows 7 Yes; Ultimate 32 bit or 64 bit  Windows 10 Enterprise Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB,	
Shock load during operation  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10 Operating systems  pre-installed operating system  Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 60 Without operating system  Windows 7  Windows 7  Windows 10 Enterprise  Software  SIMATIC Software  SIMATIC Software  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 10 ms,	Iz: 0.075 mm; 58 Hz to
Operating systems         pre-installed operating system       Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit         without operating system       Yes         • Windows 7       Yes; Ultimate 32 bit or 64 bit         • Windows 10 Enterprise       Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit         Software         SIMATIC Software       Optional package with SIMATIC WinCC or WinAC RTX         Dimensions       483 mm         Height of housing front       483 mm         Height of housing front       337 mm         Mounting cutout, width       465 mm         Mounting cutout, height       319 mm	
pre-installed operating system  Windows 7 Ultimate, 32-bit/64-bit, MUI; Windows Emberbit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 65 Without operating system  Windows 7  Windows 7  Windows 10 Enterprise  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit 2015  Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit 2015  Yes; Ultimate 32 bit or 64 bit 2015  Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit 2015  Yes; Windows 10 Enterpri	100 shocks
bit, MUI; Windows 10 Enterprise 2015 or 2016 LTSB, 64 without operating system  Pre-installed operating system  Windows 7  Windows 10 Enterprise  Yes; Ultimate 32 bit or 64 bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height  319 mm	
pre-installed operating system  Windows 7 Windows 10 Enterprise  Software  SIMATIC Software  Dimensions  Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height  Yes; Ultimate 32 bit or 64 bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Ultimate 32 bit or 64 bit Yes; Ultimate 32 bit or 64	
● Windows 7  ● Windows 10 Enterprise  Software  SIMATIC Software  Simatic Software  Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height  Yes; Ultimate 32 bit or 64 bit Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit Yes; Windows 10 Enterprise 20	
● Windows 10 Enterprise  Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  Yes; Windows 10 Enterprise 2015 or 2016 LTSB, 64-bit 2015 or 201	
Software  SIMATIC Software  Optional package with SIMATIC WinCC or WinAC RTX  Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  319 mm	
SIMATIC Software  Dimensions  Width of the housing front  Height of housing front  Mounting cutout, width  Mounting cutout, height  Optional package with SIMATIC WinCC or WinAC RTX  483 mm  337 mm  465 mm  Mounting cutout, height  319 mm	oit, MUI
DimensionsWidth of the housing front483 mmHeight of housing front337 mmMounting cutout, width465 mmMounting cutout, height319 mm	
Width of the housing front 483 mm  Height of housing front 337 mm  Mounting cutout, width 465 mm  Mounting cutout, height 319 mm	X
Height of housing front 337 mm  Mounting cutout, width 465 mm  Mounting cutout, height 319 mm	
Mounting cutout, width 465 mm  Mounting cutout, height 319 mm	
Mounting cutout, height 319 mm	
Overall depth 112 mm	
11211111	
• additional mounting depth (optical drive) 26 mm	
Weights	
Weight, approx. 14 kg	

last modified: 1/31/2021 🖸