## **SIEMENS**

## **Data sheet**

## 6AV7260-1DA20-0BX3

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) 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) AC 110/230V industrial power supply unit with NAMUR; Power supply cable USA

General information	Tower supply cause sort
	IDC677D
Product type designation	IPC677D
Display	AOUTET I. I.
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	
<ul> <li>Mouse, at front</li> </ul>	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
	Yes
Rated value 60 Hz	tes
Mains buffering	40
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
Capacity of main memory, max.	16 Gbyte

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
nterfaces	
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	- Access
Graphics interface	1x DisplayPort and 1x DVI-I; 1x VGA via adapter cable (optional)
Industrial Ethernet	in Display, or and in Diff, in voice a dauptor sause (optional)
Industrial Ethernet interface	onboard, 2x 10 / 100 / 1 000 Mbit, RJ45
— 100 Mbps	Yes
— 100 Mbps	Yes
nterrupts/diagnostics/status information	160
Bus diagnostics	Yes
	Tes
ntegrated Functions	
Monitoring functions	· ·
Temperature monitoring	Yes
Watchdog	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 electricity</li> </ul>	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
•	
Interference immunity against high-frequency electromagnetic fiel	
•	
Interference immunity against high-frequency electromagnetic field	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 high-frequency electromagnetic fiel  • Interference immunity against high frequency radiation	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 high-frequency electromagnetic fiel  • Interference immunity against high frequency radiation  Interference immunity to cable-borne 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
Interference immunity against high-frequency electromagnetic fiel  • Interference immunity against high frequency radiation  Interference immunity to cable-borne interference  • Interference immunity on supply 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 asymmetric
Interference immunity against high-frequency electromagnetic fiel  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 fiel  • 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 fiel  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 fiel  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 fiel  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 fiel  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 fiel  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 fiel  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 fiel  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	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 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 fiel  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 fiel  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 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 fiel  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 fiel  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 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
Interference immunity against high-frequency electromagnetic fiel  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, 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 fiel  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 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 61000-4-8  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 fiel  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	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 Yes
Interference immunity against high-frequency electromagnetic fiel  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)	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 Yes
Interference immunity against high-frequency electromagnetic fiel  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	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 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	
Vibration resistance during operation acc. to IEC 60068- 2-6	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
<ul> <li>Windows 10 Enterprise</li> </ul>	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	483 mm
Height of housing front	337 mm
Mounting cutout, width	465 mm
Mounting cutout, height	319 mm
Overall depth	112 mm
<ul> <li>additional mounting depth (optical drive)</li> </ul>	26 mm
Weights	
Weight, approx.	14 kg

last modified: 1/31/2021 **[**3