SIEMENS

Data sheet

6AV7260-0AK10-0AX6

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 Celeron G1820TE (2C/2T, 2.2 GHz, 2 MB cache) RAID1 2x 320 GB HDD SATA (2.5") in removable frame 2 GB DDR3 1600 DIMM; 2x PCI without expansion (HW) Windows 7 Ultimate 32 bit SP1, MUI (de, en, fr, es, it) without expansion (software) 24 V DC industrial Power supply

	supply
General information	
Product type designation	IPC677D
Display	
Design of display	15" TFT touch
Screen diagonal	15 in
Resolution (pixels)	
 Horizontal image resolution 	1 280 pixel
Vertical image resolution	800 pixel
Backlighting	
 MTBF backlighting (at 25 °C) 	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	
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
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
 Number of PCI slots 	2
 Number of PCI slots 	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	- Area -
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	
 Interference immunity against discharge of static electricity 	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
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Interference immunity against high-frequency electromagnetic fiel	
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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 61000-4-5, surge asymmetric ±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		
 Shock load during operation 	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		
Windows 7	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	
 additional mounting depth (optical drive) 	26 mm	
Weights		
Weight, approx.	12 kg	

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