## SIEMENS

## Data sheet

## 6AV7241-5LB07-0JA0

SIMATIC IPC 477E 22" Multitouch (1920 x 1080); 4 USB (back), Ethernet (10/100/1000); Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); 8 GB; without RS 232/RS485; without PCIe; Windows 10 IoT Enterprise 2016 LTSB (64-bit) for Celeron, i3 and i5; Without replaceable mass storage; 320 GB HDD SATA; Without SIMATIC software; 24 V DC industrial power supply

	SIMATIC software; 24 V DC industrial power supply
General information	
Product type designation	IPC477E
Display	
Design of display	22" TFT multi-touch
Screen diagonal	21.5 in
Resolution (pixels)	
Horizontal image resolution	1 920 pixel
Vertical image resolution	1 080 pixel
Backlighting	
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	30 000 h
Control elements	
Input device	
Mouse, at front	No
Keyboard fonts	
Function keys	No
alphanumeric keyboard	No
Touch operation	
Design as multi-touch screen	Yes; Projective-capacitive
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
central design	Yes
distributed design	No
Mounting in portrait format possible	Yes
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC
Line frequency	
Rated value 50 Hz	Yes
Rated value 60 Hz	Yes
Mains buffering	103
Mains building     Mains/voltage failure stored energy time	20 ms
Power loss	20113
In full configuration	24 V DC: max. 88 W, 110 230 V AC
•	24 v DO. IIIdx. 00 vv, 110 230 v AC
Processor Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)
Chipset	Intel C236 / Intel H110
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 128 / 240 / 480 GB
Memory	
Type of memory	DDR4-2400 SO-DIMM
Main memory	4 / 8 / 16 GB, ECC optional
Capacity of main memory, max.	16 Gbyte
Data areas and their retentivity	
	512 khyte: 128 KB can be stored in the huffer time: entional
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional

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CE markYesCSA approvalYesUL approvalYes• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch	Hardware configuration	
Number of Ci skin1. OptimalNumber of compact filen skin1. Circat:Number of naturial Enternat intrafeces3. Sk Elternet (R45)USB port4. USB sk 3.0Connection for keybaardmouleUSB sk JSBSafal likefacesWithout 2. CoM (RS 2027 / 422 / 485), selectable in the BIOSViete interfaces2. DisplayfortIndenfacesWithout 2. CoM (RS 2027 / 422 / 485), selectable in the BIOSViete interfaces2. Displayfort- 0100 MppsYes- 1010	Slots	
• I. CF ast           Number of includuia Ehernet interfaces         3. dx Ehernet (RJ45)           USB port         4. USB 3.0           Connection for keybard/mouse         USB.VISB           serial interface         USB.VISB           Video interface         2.0 kplay/hort           Indiational Ehernet interface         3.0 kEhernet (RJ45)           - 100 Mpga         Yes           - 10		
Instruct of industrial Ethermet interfaces         3. Sk Ethermet (RL45)           USB roof         44. USB 3.0           Connection for keyboard/mouse         USB / USB           Serial interface         Without / 24 COM (RS 232 / 422 / 485), selectable in the BIOS           Video interfaces         24. Display/fort           - Graphics interface         24. Display/fort           - Industrial Ethernet         -           - Industrial Ethernet         -           - Industrial Ethernet         Yes           Indo Mops         Yes           Indo Mops         Yes           Indo Mops         Yes           Indo Mops         Yes           Toom Mops         Yes		
Number of industival Ethernet interfaces         3; 3 % Ethernet (RJ45)           USB port         4x USB 3.0           USB port         4x USB 3.0           Serial interface         Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS           Vices interface         2x DisplayPort           • Graphics interface         3x Ethernet (RJ45)           • Industrial Ethernet interface         3x Ethernet (RJ45)           • Industrial Ethernet information         3x Ethernet (RJ45)           • Industrial Ethernet information         Yes           Usb adaptostics bitable information         Usb adaptostics           Usb adaptostics         Yes           • Farm persitiva monitoring         Yes           • Watchdog         Yes           • Interference immunity against discharge of static electricity         ef KV contact discharge act. to IEC 61000-4.2; ±8 KV air discharge acc. to IEC 61000-4.2; ±8 KV air discharge acc. to IEC 61000-4.3; 3 Vim, 2, 2.7           Interference immunity against high-frequency radiation         ef KV contact discharge acc. to IEC 61000-4.3; a Vim, 2, 2.7           Interference immunity against high-frequency radiation         ef KV contact discharge acc. to IEC 61000-4.3; a Vim, 2, 2.7           Interference immunity against high-frequency radiation         ef KV contact discharge acc. to IEC 61000-4.4; surge asymmetric           Interference immunity against hig		1; CFast
UBB prd44 UBB 3.0Connection for keyboardmouseUBS / UBSConnection for keyboardmouseUBS / UBSConnection for keyboardmouseUBS / UBSCarghics interfaces2 × Display/Part- Graphics interfaces3 × Ehernet (RJ45)- 100 MopsYes- 100 MopsYes- 100 MopsYes- 100 MopsYes- 100 MopsYes- 100 MopsYesKerruft-Billing products/Bibling informationVesKerruft-Billing products/Bibling informationYes- 100 MopsYesKerruft-Billing products/Bibling functionsYes- Tomperature monitoringYes- NoOpticalWatchdogYes- Inference Immunity against discharge of state electricity800 Moles- Inference Immunity against discharge of state100 Moles 2.00 Mile. B0 Malarse ons to IEC 61000-4.2, 18 KV air discharge ace. to IEC 61000-4.3, 18 W, 200 Nile. 200 Mile. B0 Malarse to IEC 61000-4.3, 18 W, 200 Nile. B0 Malarse to IEC 61000-4.3, 18 W, 200 Nile. 200 Mile. B0 Malarse to IEC 61000-4.3, 19 W, 200 Nile. B0 Malarse to IEC 61000-4.3, 19 W, 200 Nile. B0 Malarse to IEC 61000-4.3, 19 W, 200 Nile. 200 Mile. B0 Malarse to IEC 61000-4.3, 19 W, 200 Nile. 200 Mile. B0 Malarse to IEC 61000-4.3, 19 W, 200 Nile. 200 Mile. B0 Malarse to IEC 61000-4.3, 19 W, 200 Nile. 200 Mile. 20		
Connection for keyboard/mouseUSB / USBserial interfaceWithout / 2x COM (RS 232 / 422 / 485), selectable in the BIOSVideo interface2x DisplayPort- Graphics interface3x Ethernet (RJ45)- Industrial Ethernet interface3x Ethernet (RJ45)- 100 MbpsYes- 100 Motoria function via networkOptional- 100 Motoria function via network0- 100 Motoria function via network0- 100 Mithz acc in IEC 6 1000-4-2; ±8 KV air discharge acc. In IEC 6 1000-4-2; ±8 KV air discharge acc. In IEC 6 1000-4-2; ±8 KV air discharge acc. In IEC 6 1000-4-3; ±9 KV air discharge acc. In IEC 6 1000-4-3; ±9 KV air discharge acc. In IEC 6 1000-4-3; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±8 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±9 KV air discharge acc. In IEC 6 1000-4-4; ±1 KV air discharge acc. In IEC 6 1000-4-4; ±1 KV air discharge acc. In IEC 6 1000-4-4; ±1 KV air discharge acc. In IEC 6 10	Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
serial interface         Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS           Video interfaces         Scapine's interface           Graphics interface         Zx DisplayPort           industrial Etherine Interface         3x Ethernet (RJ45)           - 100 Mbps         Yes           - 100 Mbps         Yes           interrupts/diagnostics/status information         Ves           Exe diagnostics         Yes           interrupts/diagnostics/status information         Ves           Temperature monitoring         Yes           * Vacitolog         Yes           * Vacitolog         Yes           * Watcholog         Yes           * Interference Immunity against discharge of static electricity         if 6 kV contact discharge acc. to IEC 61000-4-2; x8 kV art discharge acc. to IEC 61000-4-2; x8 kV art discharge acc. to IEC 61000-4-1; x8 kV art discharge acc. to IEC 61000-4-2; x8 kV art discharge acc. to IEC 61000-4-4; purgt. 21 kV acc. to IEC 61000-4-2; x8 kV acc. to IEC 61000-4-4; purgt. 21 kV acc. to IEC 61000-4-4	USB port	4x USB 3.0
Wideo interfaces         Ac Display Fort           • Capital is interface         2x Display Fort           • Industrial Ethernet Interface         3x Ethernet (RJ45)           • - 1000 Mbps         Yes           • - 1000 Mbps         Yes           • Industrial Ethernet Interface         3x Ethernet (RJ45)           • - 1000 Mbps         Yes           • Interfaceds         Yes           • Interfaceds         Yes           • Fam         No           • Watchdog         Yes           • Watchdog         Yes           • Non Distrial function via network         Optional           • Matchdog function via network         Optional           • Interference Immunity against discharge of static electricity         # St V contact discharge ac. to IEC 61000-4.2; ±8 kV air discharge ac. to IEC 61000-4.4; ±8 kV ai	Connection for keyboard/mouse	USB / USB
• Oraginics interface2 K DisplayPortIndustrial EfferenceX- Ethernet (RJ4S)- 100 MpbpYes- 100 MpbpYesIndustrial EfferenceYesInterplay Effectivity InformationYesEast agnosities status InformationYesInterplay Effectivity InformationYesInterplay Effectivity InformationYesInterplay Effectivity InformationYesInterplay Effectivity InformationYesInterplay Effectivity InformationYesInterplay Effectivity Information (Sectivity Information (Sectivi	serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Industrial Elhernet       SX Elhernet (RJAG)         - 100 Mbps       Yes         - 100 Mbps       Yes         Exercipatiol (anguarditic valuation in the interference in munity against discharge of static electricity       Yes         Nontoning function via network       Optional         Monitoring function via network       Optional         Interference immunity against high-frequency electromagnetic fields       10 Vm, B0 2000 MHz, B0 % AM acc. to IEC 61000-4.2; #8 KV air discharge acc. to IEC 61000-4.5; #8 KV acc. to IEC 61000-4.4; List Retwords         Inteference i	Video interfaces	
industrial Ehemet interface34 Ehemet (RJ45)-100 MpBYes-100 MpBYesinterruptional control of the part o	Graphics interface	2x DisplayPort
- 100 MbpsYes- 100 MbpsYes- 100 MbpsYesBus depositesYesIntegrated Functions///////////////////////////////	Industrial Ethernet	
−1000 Mbps         Yes           Iterruptidapnotics/italian information         Yes           Iterruptidapnotics/italian information         Yes           Monitoring functions         Yes           Iterruptidapnotics/italian information         Yes           Valathdog         Yes           Valathdog         Yes           Valathdog         Yes           Valathdog         Yes           Valathdog         Optional           Valathdog         Yes           Valathdog         Optional           Valathdog         Yes	<ul> <li>Industrial Ethernet interface</li> </ul>	3x Ethernet (RJ45)
Interference immunity against high frequency radiation         ± kV acc. b IEC 61000-4-2; ± kV ac: b IEC 61000-4-3; Vm; 2 2.7;           Interference immunity against high frequency radiation         ± f kV contact discharge ac: b IEC 61000-4-2; ± kV air discharge ac: b IEC 61000-4-2; ± kV ac: b IEC 61000-4-2; ± kV ac: b IEC 61000-4-3; Vm; 2 2.7;           Interference immunity against high frequency radiation         ± f kV contact discharge ac: b IEC 61000-4-3; Vm; 2 2.7;           Interference immunity against high frequency radiation         ± kV ac: b IEC 61000-4-4; b urg; ± kV ac: b IEC 61000-4-5; surge agrimetin:           Interference immunity on signal cables >30m         ± kV ac: b IEC 61000-4-4; surge agrimetin:           Interference immunity on signal cables >30m         ± kV ac: b IEC 61000-4-5; surge agrimetin:           Interference immunity against high frequency radiation         ± kV ac: b IEC 61000-4-5; surge agrimetin:           Interference immunity against disk = 30m         ± kV ac: b IEC 61000-4-5; surge agrimetin:           Interference immunity against bigh frequency radiation         ± kV ac: b IEC 61000-4-5; surge agrimetin:           Interference immunity against bigh frequency radiation         ± kV ac: b IEC 61000-4-5; surge agrimetin:           Interference immunity ag	— 100 Mbps	Yes
Bus diagnostics         Yes           theprated Functions	— 1000 Mbps	Yes
Magnetic Functions                Temperature monitoring	nterrupts/diagnostics/status information	
Monitoring functions       Yes         • Valahodog       Yes         • Fan       No         • Interference immunity against discharge of static electricity       • Interference immunity against discharge of static electricity         • Interference immunity against high-frequency electromagnetic fields       • 10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-3; 3 V/m, 2 2.7         Interference immunity against high frequency radiation       10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7         Interference immunity to cable-borne interference       10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-4; surge asymmetric         • Interference immunity on signal cables >30m       11 KV acc. to IEC 61000-4-4; surge asymmetric         • Interference immunity on signal cables >30m       11 KV acc. to IEC 61000-4-4; surge asymmetric         • Interference immunity on signal cables >30m       11 KV acc. to IEC 61000-4-4; surge asymmetric         • Interference immunity on signal cables >30m       11 KV acc. to IEC 61000-4-4; surge asymmetric         • Interference immunity on signal cables >30m       11 KV acc. to IEC 61000-4-5; surge asymmetric         • Interference immunity on magnetic fields       100 Am; to IEC 61000-4-5; surge asymmetric         • Interference immunity on magnetic fiel	Bus diagnostics	Yes
• Temperature monitoringYes• WatchdogYes• NoOptional• Monitoring function via networkOptionalMOInterference immunity against discharge of static electricityaf KV contact discharge acc. to IEC 61000-4.2; ±8 KV air discharge acc. to IEC 61000-4.2; ±8 KV air discharge acc. to IEC 61000-4.2; ±8 KV air discharge acc. to IEC 61000-4.3; 3 Vm, 2 2.7 GHz Terference immunity against high-frequency electromagnetic fieldsInterference immunity against high-frequency electromagnetic fieldsaf 2 KV acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHz To V, 10 KHz 80 MHz acc. to IEC 61000-4.3; a Vm, 2 2.7 GHZ To V, 10 KHZ 80 MHZ acc. to IEC 61000-4.3; a VM, 2 2.7 GHZ To V, 10 KHZ 80 MHZ acc. to IEC 61000-4.3; a VHz acc. to IEC 61000-4.3; a VK acc. to IEC 61000-4.3; a VK acc. to IEC 61000-4.3; a VK acc. to I	ntegrated Functions	
• Watchdog         Yes           • Fan         No           • Monitoring function via network         Optional           • Monitoring function via network         Optional           • Interference immunity against discharge of static electroits         46 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-3; 3 V/m, 2 2.7           • Interference immunity against high frequency radiation         10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7           • Interference immunity against high frequency radiation         10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7           • Interference immunity on supply cables         12 kV acc. to IEC 61000-4-4; Surge asymmetric           • Interference immunity on signal cables > 30m         12 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables > 30m         14 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity against voltage surge         14 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity against voltage surge         10 V/m, k0 10E 61000-4-5, surge asymmetric           • Interference immunity against voltage surge         14 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity to magnetic fields         10 V/m; k0 10E 61000-4-5, surge asymmetric           • Interference immunity to magnetic fields	Monitoring functions	
• WatchdogYes• FanNo• Monitoring function via networkOptional• Monitoring function via networkoptional• Monitoring function via networkaf kV contact discharge acc. to IEC 61000-4:2; ± kV air discharge acc. to IEC 61000-4:2; ± kV air discharge acc. to IEC 61000-4:2;• Interference immunity against discharge of staticaf kV contact discharge acc. to IEC 61000-4:2; ± kV air discharge acc. to IEC 61000-4:3; V/m, 2 2:7• Interference immunity against high frequency radiation10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4:3; V/m, 2 2:7• Interference immunity on supply cables± 2 kV acc. to IEC 61000-4:4; surge asymmetric• Interference immunity on supply cables12 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity on signal cables > 30m± 1 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity on signal cables > 30m± 1 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity on signal cables > 30m± 1 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity on signal cables > 30m± 1 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity on agnetic fields± 2 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity to magnetic fields± 1 kV acc. to IEC 61000-4:5, surge asymmetric• Interference immunity to magnetic fields± 1 kV acc. to IEC 61000-4:5• Interference immunity to magnetic fields± 1 kV acc. to IEC 61000-4:5• Interference immunity to magnetic fields± 1 kV acc. to IEC 61000-4:5• Interference immunity to magnetic fields± 1 kV acc. to IEC 61000-4	5	Yes
• Fam         No           • Monitoring function via network         Optional           No         • Monitoring function via network         Optional           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; ±8 kV air discharge acc. to IEC 61000-4-3; 3 V/m, 2 2.7           Interference immunity against high-frequency electromagnetic fields         -           • Interference immunity on signal cables >30m         ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables >30m         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity against indiks to DHz         100 A/m; to IEC 61000-4-5, surge asymmetric           • Interference emission via line/AC current cables		
• Monitoring function via network         Optional           MC         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; #8 KV air discharge acc. to IEC 61000-4-2; #8 KV air discharge acc. to IEC 61000-4-3; #8 KV air discharge acc. to IEC 61000-4-2; #8 KV air discharge acc. to IEC 61000-4-3; #8 KV air discharge acc. to IEC 61000-4-3; #8 KV air discharge acc. to IEC 61000-4-3; #8 KV air discharge acc. to IEC 61000-4-4; #8 KV air discharge acc. to IEC 61000-4-4; #8 KV air discharge acc. to IEC 61000-4-5; #8 KV acc. to IEC 61000-4-6; #8 KV acc. to IEC 61000-4-8; #8 KV acc. to IEC 61000-4-8; #8 KV acc. to IEC 61000-4-8; #8 KV acc. to IEC 61000-4; #8 KV acc. to IEC 61000-4; #8 KV acc. to IEC 610	-	
Interference immunity against discharge of static electricity       +# KV contact discharge acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-2;         Interference immunity against high-frequency radiation       10 Vm, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-5         Interference immunity osaginst high frequency radiation       10 Vm, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-5         Interference immunity osaginst bigh frequency radiation       10 VM, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-5         Interference immunity on signal cables >30m       ±2 KV acc. to IEC 61000-4-5, surge asymmetric         Interference immunity on signal cables >30m       ±1 KV acc. to IEC 61000-4-4; burst; elegth > 30 m         Interference immunity on signal cables <30m		
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           Interference immunity against high-frequency rediction electricity         10 V/m. 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6           Interference immunity to cable-borne interference         10 V/m. 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-6           Interference immunity to cable-borne interference         22 kV acc. to IEC 61000-4-6           Interference immunity on signal cables >30m         #2 kV acc. to IEC 61000-4-5, surge asymmetric interference immunity on signal cables >30m           Interference immunity on signal cables >30m         #1 kV acc. to IEC 61000-4-5, surge asymmetric is symmetric interference           Interference immunity to magnetic fields         10 A/m; to IEC 61000-4-5, surge asymmetric is symmetric interference           Interference immunity to magnetic fields         100 A/m; to IEC 61000-4-5, surge asymmetric is symmetric interference           Interference immunity to magnetic fields         100 A/m; to IEC 61000-4-5, surge asymmetric is symmetric interference           Interference immunity to magnetic fields         100 A/m; to IEC 61000-4-5, surge asymmetric is symmetric interference           Interference immunity to magnetic fields         100 A/m; to IEC 61000-4-5, surge asymmetric is symmetric interference           Interference immunity to magnetic fields         100 A/m; to IEC 61000-4-6, CISPR 22 Class B, FCC Class	-	
• Interference immunity against discharge of static electricity#6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-42Interference immunity against high-frequency electromagnetic fields• Interference immunity to cable-borne interference• Interference immunity to cable-borne interference• Interference immunity on supply cables22 kV acc. to IEC 61000-4-5, surge asymmetric• Interference immunity on signal cables >30m22 kV acc. to IEC 61000-4-5, surge, length > 30 m• Interference immunity on signal cables >30m24 kV acc. to IEC 61000-4-5, surge, length > 30 m• Interference immunity on signal cables >30m24 kV acc. to IEC 61000-4-5, surge, length > 30 m• Interference immunity on signal cables >30m24 kV acc. to IEC 61000-4-5, surge asymmetric• Interference immunity on signal cables >30m24 kV acc. to IEC 61000-4-5, surge asymmetric• symmetric interference24 kV acc. to IEC 61000-4-5, surge asymmetric• symmetric interference24 kV acc. to IEC 61000-4-5, surge asymmetric• Interference immunity to magnetic fields100 A/m; to IEC 61000-4-5, surge asymmetric• Interference emismon via Inte/Ac current cablesEN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A• Interference emismon via Inte/Ac current cablesFe 61000-4-2• Interference emismon via Inte/Ac current cablesFe 61000-6-4, CISPR 22 Class B, FCC Class A• Interference emismon via Inte/Ac current cablesFe 61000-6-4, CISPR 22 Class B, FCC Class A• Interference emismon via Inte/Ac current cablesYes• Interference emismon via Inte/Ac current c		
electricity         61000-4-2           Interference immunity against high-frequency radiation         61000-4.2           interference immunity to cable-borne interference         64bz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4.3; 3 V/m, 2 2.7           interference immunity to cable-borne interference         24 kV acc. to IEC 61000-4.4; burst; 41 kV acc. to IEC 61000-4.5; surge asymmetric           interference immunity on signal cables >30m         42 kV acc. to IEC 61000-4.5; surge asymmetric           interference immunity on signal cables >30m         41 kV acc. to IEC 61000-4.5; surge asymmetric           interference immunity on signal cables >30m         41 kV acc. to IEC 61000-4.5; surge asymmetric           interference immunity on signal cables >30m         41 kV acc. to IEC 61000-4.5; surge asymmetric           interference immunity on signal cables >30m         41 kV acc. to IEC 61000-4.5; surge asymmetric           interference immunity to magnetic fields         30 Am; to IEC 61000-4.5; surge asymmetric           interference immunity to magnetic fields at 50 Hz         100 Am; to IEC 61000-4.5; surge asymmetric           interference immunity to magnetic fields at 50 Hz         100 Am; to IEC 61000-4.5; surge asymmetric           interference immunity to magnetic fields at 50 Hz         100 Am; to IEC 61000-4.5; surge asymmetric           interference immunity to magnetic fields at 50 Hz         100 Am; to IEC 61000-4.4; EV           Interference immunity to magnetic fields		+6 kV contact discharge acc. to IEC 61000-4-2: +8 kV air discharge acc. to IEC
• Interference immunity against high frequency radiation       10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7         Interference immunity to cable-borne interference       42 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric         • Interference immunity on signal cables >30m       ±2 kV acc. to IEC 61000-4-5, surge symmetric         • Interference immunity on signal cables >30m       ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m         • Interference immunity on signal cables <30m		
GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6         Interference immunity on supply cables       22 kV acc. to IEC 61000-4-5, surge asymmetric         interference immunity on supply cables       22 kV acc. to IEC 61000-4-5, surge asymmetric         interference immunity on signal cables >30m       42 kV acc. to IEC 61000-4-5, surge, length > 30 m         interference immunity on signal cables <30m	Interference immunity against high-frequency electromagnetic fiel	ds
GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6         Interference immunity to supply cables       22 kV acc. to IEC 61000-4-5, surge asymmetric         • Interference immunity on supply cables       22 kV acc. to IEC 61000-4-5, surge, asymmetric         • Interference immunity on signal cables >30m       42 kV acc. to IEC 61000-4-5, surge, length > 30 m         • Interference immunity on signal cables <30m	<ul> <li>Interference immunity against high frequency radiation</li> </ul>	10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2.7
• Interference immunity on supply cables       ±2 kV acc. to IEC 61000-4.4, burst; ±1 kV acc. to IEC 61000-4.5, surge asymmetric         • Interference immunity on signal cables >30m       ±2 kV acc. to IEC 61000-4.5, surge asymmetric         • Interference immunity on signal cables <30m		GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6
symmetric: ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity on signal cables < 30m	Interference immunity to cable-borne interference	
• Interference immunity on signal cables > 30m       ± 2 kV acc. to IEC 61000-4-5, surge, length > 3 m         • Interference immunity on signal cables < 30m	<ul> <li>Interference immunity on supply cables</li> </ul>	
• Interference immunity on signal cables < 30m		
burst; length > 3 m           Interference immunity against voltage surge           • asymmetric interference         ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • symmetric interference         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           • Interference immunity to magnetic fields         100 A/m; to IEC 61000-4-5, surge symmetric           • Interference immunity to magnetic fields at 50 Hz         100 A/m; to IEC 61000-4-8           Emission of conducted and non-conducted interference         •           • Interference emission via line/AC current cables         EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A           Degree and class of protection         •           IP (at the front)         IP65           IP (at the front)         IP65           IP (ards, approvals, certificates         Yes           CSA approval         Yes           UL approval         Yes           • UL 508         Yes           cULus         Yes           RCM (formerly C-TICK)         Yes           KC approval         Yes           EAC (formerly Gost-R)         Yes           FCC         Yes           EAC (formerly Gost-R)         Yes           EAC (formerly Gost-R)         Yes           EAC (formerly Gost-R)         Yes <td></td> <td>· ·</td>		· ·
Interference immunity against voltage surge         ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • symmetric interference         ±1 kV acc. to IEC 61000-4-5, surge asymmetric           Interference immunity to magnetic fields         ±1 kV acc. to IEC 61000-4-8           Emission of conducted and non-conducted interference         100 A/m; to IEC 61000-4-8           Interference emission via line/AC current cables         EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A           Degree and class of protection         IP 65           IP (rear)         IP 65           IP (rear)         IP 20           Standards, approvals, certificates         Yes           CE mark         Yes           UL approval         Yes           eUL 508         Yes           cULus         Yes           RCM (formerly C-TICK)         Yes           KC approval         Yes           EAC (formerly Gost-R)         Yes           EAC (formerly Gost-R)         Yes           EAC (formerly Gost-R)         Yes           EAC (torus erage         Yes           EAC (	<ul> <li>Interference immunity on signal cables &lt; 30m</li> </ul>	
• asymmetric interference         ±2 kV acc. to IEC 61000-4-5, surge asymmetric           • symmetric interference         ±1 kV acc. to IEC 61000-4-5, surge symmetric           Interference immunity to magnetic fields at 50 Hz         100 A/m; to IEC 61000-4-8           Emission of conducted and non-conducted interference         interference emission via line/AC current cables           Interference emission via line/AC current cables         EM 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A           Opered and class of protection         IP (at the front)           IP (at the front)         IP65           IP (ren')         IP20           Standards, approvals, certificates         Yes           CE mark         Yes           ol Ll opproval         Yes           ol Ll opproval         Yes           ol Ll os         Yes           CK (formerly C-TICK)         Yes           KC approval         Yes           CK (formerly Gost-R)         Yes           FCC         Yes           FCC         Yes           EMC         CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A           UL so accol         Yes           FCC         Yes           FCC         Yes           EMC         CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Clas	Interference immunity against voltage surge	burst, ichgur > 5 m
• symmetric interference         ±1 kV acc. to IEC 61000-4-5, surge symmetric           Interference immunity to magnetic fields at 50 Hz         100 A/m; to IEC 61000-4-8           Emission of conducted and non-conducted interference         EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A           Degree and class of protection         EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A           Degree and class of protection         IP 65           IP (at the front)         IP 65           IP (rear)         IP20           Standards, approvals, certificates         Yes           CE mark         Yes           CJLus         Yes           e UL 508         Yes           cULus         Yes           RCM (formerly C-TICK)         Yes           KC approval         Yes           EAC (formerly Gost-R)         Yes           EAC (tormerly Gost-R)         Yes           EMC         CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A		+2 kV and to EC 61000.4.5 surge asymptotic
Interference immunity to magnetic fields       100 A/m; to IEC 61000-4-8         Emission of conducted and non-conducted interference       Emission of conducted and non-conducted interference         Interference emission via line/AC current cables       EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A         Degree and class of protection       IP65         IP (at the front)       IP65         IP (rear)       IP20         Standards, approvals, certificates       Yes         CE mark       Yes         CSA approval       Yes         UL approval       Yes         • UL 508       Yes         cULus       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes         EAC (formerly Gost-R)       Yes         FCC       Yes         EMC       CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A         Use in hazardous areas       Yes; Optional, only with Multitouch		
• Interference immunity to magnetic fields at 50 Hz100 A/m; to IEC 61000-4-8Emission of conducted and non-conducted interferenceEN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A• Interference emission via line/AC current cablesEN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A• Degree and class of protectionIP65IP (at the front)IP65IP (rear)IP20Standards, approvals, certificatesYesCE markYesCE markYesCSA approvalYesUL approvalYes• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch		±1 kV acc. to IEC 61000-4-5, surge symmetric
Emission of conducted and non-conducted interference         Interference emission via line/AC current cables         EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A         Degree and class of protection         IP (at the front)       IP65         IP (rear)       IP20         Standards, approvals, certificates       Yes         CE mark       Yes         CSA approval       Yes         UL approval       Yes         oUL 508       Yes         cULus       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes         EAC (formerly Gost-R)       Yes         FCC       Yes         EMC       CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A         Use in hazardous areas       Yes; Optional, only with Multitouch		
Interference emission via line/AC current cablesEN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class ADegree and class of protectionIP 65IP (at the front)IP65IP (rear)IP20Standards, approvals, certificatesYesCE markYesCSA approvalYesUL approvalYes• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch		100 A/m; to IEC 61000-4-8
Degree and class of protection         IP 65           IP (at the front)         IP20           IP (rear)         IP20           Standards, approvals, certificates         IP20           CE mark         Yes           CSA approval         Yes           UL approval         Yes           • UL 508         Yes           cULus         Yes           RCM (formerly C-TICK)         Yes           KC approval         Yes           EAC (formerly Gost-R)         Yes           FCC         Yes           EMC         CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A           Use in hazardous areas         Yes; Optional, only with Multitouch		
IP (at the front)       IP65         IP (rear)       IP20         Standards, approvals, certificates       IP20         CE mark       Yes         CSA approval       Yes         UL approval       Yes         • UL 508       Yes         cULus       Yes         cULus       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes         EAC (formerly Gost-R)       Yes         FCC       Yes         EMC       CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A         Use in hazardous areas       Yes; Optional, only with Multitouch		EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
P (rear)IP20Standards, approvals, certificatesCE markYesCSA approvalVL approvalYesUL approvalYes• UL 508YescULusYescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch		
Standards, approvals, certificates         CE mark       Yes         CSA approval       Yes         UL approval       Yes         • UL 508       Yes         cULus       Yes         RCM (formerly C-TICK)       Yes         KC approval       Yes         FCC       Yes         FCC       Yes         EMC       Ves         EMC       CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A         Use in hazardous areas       Yes; Optional, only with Multitouch	IP (at the front)	
CE markYesCSA approvalYesUL approvalYes• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch		IP20
CSA approvalYesUL approvalYes• UL 508YescULusYescULusYesRCM (formerly C-TICK)YesKC approvalYesFAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-64; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch	Standards, approvals, certificates	
UL approvalYes• UL 508YescULusYescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch	CE mark	Yes
• UL 508YescULusYesRCM (formerly C-TICK)YesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch	CSA approval	Yes
cULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasYes; Optional, only with Multitouch	UL approval	Yes
RCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasVes; Optional, only with Multitouch	• UL 508	Yes
KC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class AUse in hazardous areasVes; Optional, only with Multitouch	cULus	Yes
EAC (formerly Gost-R)     Yes       FCC     Yes       EMC     CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A       Use in hazardous areas     Ves; Optional, only with Multitouch	RCM (formerly C-TICK)	Yes
EAC (formerly Gost-R)     Yes       FCC     Yes       EMC     CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A       Use in hazardous areas     Ves; Optional, only with Multitouch	KC approval	Yes
FCC     Yes       EMC     CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A       Use in hazardous areas     • ATEX Zone 2       • ATEX Zone 2     Yes; Optional, only with Multitouch		Yes
EMC     CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A       Use in hazardous areas     • ATEX Zone 2       • ATEX Zone 2     Yes; Optional, only with Multitouch		Yes
Use in hazardous areas • ATEX Zone 2 Yes; Optional, only with Multitouch		
ATEX Zone 2 Yes; Optional, only with Multitouch		
		Yes: Optional, only with Multitouch
	IECEx Zone 2	Yes; Optional, only with Multitouch

cULus Class I Zone 2. Division 2	Yes; Optional, only with Multitouch
Marine approval	
Germanischer Lloyd (GL)	Yes
American Bureau of Shipping (ABS)	Yes
Bureau Veritas (BV)	Yes
Det Norske Veritas (DNV)	Yes
Korean Register of Shipping (KRS)	Yes
Lloyds Register of Shipping (LRS)	Yes
<ul> <li>Nippon Kaiji Kyokai (Class NK)</li> </ul>	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	45 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	0° 00
Relative humidity	
Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 $^\circ\mathrm{C}$ (no condensation)
Vibrations	
<ul> <li>Vibration resistance during operation acc. to IEC 60068- 2-6</li> </ul>	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s <sup>2</sup> (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s <sup>2</sup> (hard disk)
Shock testing	
<ul> <li>Shock load during operation</li> </ul>	IEC 60068-2-27; 150 m/s <sup>2</sup> , 11 ms (without hard disk); 50 m/s <sup>2</sup> , 30 ms (with hard disk)
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional
pre-installed operating system	
• Windows 7	Yes; Ultimate 64 bit
Windows 10 Enterprise	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle
Dimensions	
Width of the housing front	529 mm
Height of housing front	331 mm
Mounting cutout, width	513 mm
Mounting cutout, height	315 mm
Overall depth	76 mm
Weights	
Weight, approx.	7.9 kg
last modified:	1/22/2021 🖸