SIEMENS

Data sheet

6AV7241-1BA32-2DC0

SIMATIC IPC 477E 15" touch (1280 x 800); with front USB; 4 USB (back), Ethernet (10/100/1000); Celeron G3902E; 3x Gbit Ethernet (IE/PN); 4 GB 2x RS 232/RS 485; without PCIe; Win Embedded Standard 7 SP1, English, 64-bit; CFast 4 GB, without operating system; 256 GB Eco SSD; WinCC RT Advanced V15, 128PT; WinCC Recipes + Logging; 24 V DC industrial power supply

	power suppry
Display	
Design of display	15" TFT touch
Screen diagonal	15.6 in
Resolution (pixels)	
 Horizontal image resolution 	1 280 pixel
 Vertical image resolution 	800 pixel
Backlighting	
 MTBF backlighting (at 25 °C) 	50 000 h
Control elements	
Input device	
Mouse, at front	Front USB 2.0 (500mA)
Keyboard fonts	
 Function keys 	No
 alphanumeric keyboard 	No
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
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	
 Mains/voltage failure stored energy time 	20 ms
Power loss	
In full configuration	24 V DC: max. 65 W, PCIe APCB additionally 5 W
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	

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Pate true data area (inc. lines, counters, tagis), max. 12 ktype; 12 k Kb can be stored in the butter time; optional Pate variable data area (inc. lines, counters, tagis), max. 12 ktype; 12 k Kb can be stored in the butter time; optional Store 1 kurber of PCI stols 1. Optional • Number of PCI stols 1. Optional 1. Cleat Interfaces 3. St. Hennet (R.446) 3. St. Hennet (R.446) USB port 4. KUSB 3.0 3. St. Hennet (R.446) Connection for keyboard/mouse USB / VSB 3. St. Hennet (R.446) • Carphics Interface Without 7. XC OM (RS 2327 422 7 485), selectable in the BIOS Vise interface Without 7. XC OM (RS 2327 422 7 485), selectable in the BIOS • Carphics Interface 3. Ethernet (R.446) • Carphics Interface 3. Ethernet (R.446) • Indistrial Ethernet Herface 3. Ethernet (R.446) • Indigetable Ethernet Interface 3. Ethernet (R.446) • Indigetable Ethernet Interface 3. Ethernet (R.446) • Indigetable Ethernet Interface 9. Kea • Indigetable Ethernet Interface 9. Kea • Interfaces 9. Kea • Interfacence Immunity and the thernet of theret (R.446) <th></th> <th></th>		
Side in the PCIe (slot with card retainer), 1x slot for CFAST card 1. Optional 1. Optional 1. Crast	Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
• (es stos) 1. FPCIs (elot with card relainer), 1x stot for CFAST card • Number of Compact fash stos 1. CFast Interfaces 4. X USB 3. USB pot 4. X USB 3. Connection for keyboard/mouse USB / USB erral Interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS Video Interface 2x DisplayPort • Industrial Enemet Interface 3x Ethernet (R-455) • Interfaces Yes • Interfacence Immunity against thig	Hardware configuration	
Aumber of PCI siols 1: CFast 1: CFas	Slots	
• Aumber of compact flash slots1; CFastInterfaces3; 3k Ethemet (RL45)USB port4k USB 3,0Connection for keyboard/mouseUSB / USBserial InterfaceWithout / 2x COM (RS 232 / 422 / 485), selectable in the BIOSVideo Interfaces2x DisplayPortIndustrial Ethemet Interface3x Ethemet (RL45)• Industrial Ethemet Interface3x Ethemet (RL45)• InterfaceYes• InterfaceYesInterfaceYesInterfaceYesInterfaceNo• Renerature monitoringYes• Nontoring functionsYes• Interference immunity against discharge of static electricity16 K Contend discharge acto to EC 6 1000-4-2; 18 K vi air discharge acto to EC 6 1000-4-2; 18 K vi air discharge acto to EC 6 1000-4-3; 3Vm, 2• Interference immunity against high frequency endicity10 Vm, 80 2000 MHz 80 % Atta act to EC 6 1000-4-3; 3Vm, 2• Interference immunity against high frequency endicity10 Vm, 80 2000 MHz 80 % Atta act to EC 6 1000-4-3; 3Vm, 2• Interference immunity against high frequency endicity10 Vm, 80 2000 MHz 80 % Atta act to EC 6 1000-4-3; surge asymmetric to EC 6 1000-4-4; surge asymmetric to EC 6 1000-4-5; surge asymmetric to EC 6 1000-4-5; sur	free slots	1x PCIe (slot with card retainer), 1x slot for CFAST card
Interfaces Six Ethemet (RJ45) Number of Industrial Ethemet interfaces VisB port 4x USB sol USB / VSB Connection for keyboard/mouse USB / VSB erial interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS VisBo interfaces 2x DisplayPort Industrial Ethement 3x Ethemet (RJ45) - 1000 Mbps Yes - 1000 Mbps Yes - 1000 Mbps Yes Integrated Functions Monitoring functions Nonitoring function via network Optional EXE Ves Interference immunity against discharge of static electricity 45 kV contact discharge acc. to IEC 6 1000-4-2; te kV air discharge acc. to IEC 6 1000-4-2; te kV air discharge acc. to IEC 6 1000-4-2; te kV air discharge acc. to IEC 6 1000-4-2; te kV air discharge acc. to IEC 6 1000-4-2; te kV air discharge acc. to IEC 6 1000-4-2; te kV air discharge acc. to IEC 6 1000-4-3; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV air discharge acc. to IEC 6 1000-4-4; te kV acc. to IEC 6 1000-4-4; t	 Number of PCI slots 	1; Optional
Number of industrial Ethernet Interfaces 3: 3k Ethernet (RJ45) USB port 4k USB 3.0 Connection for keyboard/mouse USB / USB erial interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS Video interfaces 2x DisplayPort Industrial Ethernet a - food Mps Yes - 100 Mps Yes - 100 Mps Yes Interruptication for factors Yes Interruptication for factors Yes No Yes Interfaces immunity against discharge of static electricity + factors and table against discharge of static electricity • Interference immunity against discharge of static electricity + factore electron against discharge of static electricity • Interference immunity against bigh frequency alectromagnetic fields 10 Vm, 80, 2000 MHz, 80 % AM acc. to IEC 6100-4-3; 3 Vm, 2, 2, 27 GHz; 10 V, 10 KHz 80 MHz acc. to IEC 6100-4-4; surge agammetric electricity • Interference immunity against bigh frequency 10 Vm, 80, 2000 MHz, 80 % AM acc. to IEC 6100-4-4; surge agammetric • Interference immunity on signal cables > 30m + 1K Vacc. to IEC 6100-4-4; surge agammetric • Interference immunity on signal cables > 30m + 1K Vac	Number of compact flash slots	1; CFast
USB port 4x USB 3.0 Connection for keyboard/mouse USB / USB serial interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS Video interfaces 2x DisplayPort Industrial Elternet 3x Ethernet (RJ45) - industrial Elternet interface Yes - interpretature monitoring Yes • Watchodog Yes • Ean Optional Etterference immunity against discharge of static electricity 4k Vooritact discharge acc. to IEC 61000-4.2; ±8 kV air discharge acc. to IEC 61000-4.4; ±8 kV air discharge acc. to	Interfaces	-
Connection for keyboard/mouse USB / USB serial interfaces Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS • Graphics interfaces 2x DisplayPort • Industrial Ethernet 3x Ethernet (RJ45) • Industrial Ethernet interface 3x Ethernet (RJ45) • 1000 Mbps Yes • Intergration Yes Intergration Yes Nonitoring functions Yes • No Optional EM Optional EM Optional EM Intergration wonthoring • Farm No • Intergrations mounity against discharge of static electricity +45 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 Vm, 2, 2 CH2, 10 V, 10 kHz, 80 MHz acc. to IEC 61000-4-3; Nm, 2, 2 CH2, 10 V, 10 kHz, 80 MHz acc. to IEC 61000-4-3; Nm, 2, 2 CH2, 10 V, 10 kHz, 80 MHz acc. to IEC 61000-4-4; Nm, 2, 2 CH2, 10 V, 10 kHz,, 80 MHz acc. to IEC 61000-4-4; Nm, 2, 2 CH2, 10 V, 10 kHz,, 80 MHz acc. to IEC 61000-4-5; Surge symmetric • Interference immunity against high frequency interference +2 kW acc. to IEC 61000 4-4; Surge symmetric • Interference immunity to rapidly cables >30m +1 kW acc. to IEC 61000 4-4; Surge symmetric	Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
serial interfaceWithout / 2x COM (RS 232 / 422 / 485), selectable in the BIOSVideo interface2x DisplayPortIndustrial Ethernet2x DisplayPortIndustrial Ethernet3x Ethernet (RJ45)- 100 MbpsYes- 100 MbpsYesIntegrated Ethernet Interface3x Ethernet (RJ45)Integrated Ethernet InterfaceYesIntegrated Ethernet InterfaceYesInterference Immunity against discharge of staticif KV contact discharge acc. to IEC 61000-4-2; #8 kV air discharge acc.Interference Immunity against discharge of staticif KV contact discharge acc. to IEC 61000-4-3; 3V m, 2Interference Immunity against discharge of staticif KV acc. to IEC 61000-4-4; MV m, 2Interference Immunity against discharge of staticif KV acc. to IEC 61000-4-4; Surge asymmetricInterference Immunity on signal cables >30mif KV acc. to IEC 61000-4-4; Surge asymmetricInterference Immunity on signal cables >30mif KV acc. to IEC 61000-4-4; Surge asymmetricInterference Immunity on signal cables >30mif KV acc. to IEC 61000-4-4; Surge asymmetricInterference Immunity on signal cables >30mif KV acc. to IEC 61000-4-4; Surge asymmetricInterference Immunity on s	USB port	4x USB 3.0
Video Interfaces 2x DisplayPort Industrial Ethernet 3x Ethernet (RJ45) Industrial Ethernet 3x Ethernet (RJ45)	Connection for keyboard/mouse	USB / USB
• Graphics interface2x DisplayPortIndustrial Element	serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Industrial EthernetSx Ethernet (RJ45)- 100 MbpsYes- 100 MbpsYesBus diagnosticsYesBus diagnosticsYesIntergrated FunctionsYesMonitoring functionsYes• Temperature monitoringYes• Temperature monitoring function via networkOptional• Monitoring function via networkOptional• Interference immunity against discharge of static electricity±6 kV contact discharge act, to IEC 61000-4-2; ±8 kV air discharge acc, to IEC 61000-4-3; 37 km, 2• Interference immunity against high-frequency±6 kV contact discharge acc, to IEC 61000-4-3; 37 km, 2• Interference immunity against high-frequency±2 kV acc, to IEC 61000-4-4; burst; 41 kV acc, to IEC 61000-4-5; surge asymmetric• Interference immunity on signal cables >30m±2 kV acc, to IEC 61000-4-4; burst; 14 kV acc, to IEC 61000-4-5; surge asymmetric• Interference immunity on signal cables >30m±2 kV acc, to IEC 61000-4-4; burst; 14 kV acc, to IEC 61000-4-5; surge asymmetric• Interference immunity on signal cables >30m±2 k	Video interfaces	
• industrial Ethernet interface3x Ethernet (RJ45)- 100 MbpsYesToto MbpsYesBus dispositsYesInterrupts/diagnostics/status informationInterrupts/diagnostics/status informationBus dispositsYesInterrupts/diagnostics/status informationYesWontoing functionsYes• Temperature monitoringYes• Temperature monitoring inductionsYes• NoOptional• Monitoring function via networkOptional• Monitoring function via networkYes• Interference immunity against discharge of staticet KV contact discharge acc. to IEC 61000-4.2; ±8 kV air discharge acc.• Interference immunity against discharge of staticet KV contact discharge acc. to IEC 61000-4.2; ±8 kV air discharge acc.• Interference immunity against high-frequency10 V/m; 80 2000 MHz; 80 % AM acc. to IEC 61000-4.3; 3 V/m; 2• Interference immunity against high frequency10 V/m; 80 2000 MHz; 80 % AM acc. to IEC 61000-4.4; surge asymmetric• Interference immunity on supply cables±2 KV acc. to IEC 61000-4.4; surge asymmetric• Interference immunity on signal cables >30m±2 KV acc. to IEC 61000-4.4; surge, length > 30 m• 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 61000-4.4; surge, length > 30 m• Interference eminuty on signal cables >30m±2 KV acc. to IEC 61000-4.4; surge asymmetric• Interference eminuty on signal cables >30m±2 KV acc. to IEC 61000-4.5; surge asymmetric <td>Graphics interface</td> <td>2x DisplayPort</td>	Graphics interface	2x DisplayPort
	Industrial Ethernet	
	 Industrial Ethernet interface 	3x Ethernet (RJ45)
Interrupts/diagnostics/status information Bus diagnostics Yes Integrated Functions Yes • Temperature monitoring Yes • Watchdog Yes • Monitoring functions Yes • Monitoring function via network Optional • Monitoring function via network Optional • Interference immunity against discharge of static electricity • Interference immunity against high-frequency electromagnetic fields • Interference immunity against high-frequency electromagnetic fields • 10 V/m, 80 2000 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 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-3; 3 V/m, 2 2.7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-3; 3 V/m, 2 2.7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-4; surge asymmetric • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-4; surge, length > 3 m • Interference immunity on signal cables >30m ±1 kV acc. to IEC 61000-4-4; surge, length > 3 m • Interference ±2 kV acc. to IEC 61000-4-4; surge asymmetric • Interference immunity on signal cables sto Hz 10 A/m; to IEC 61000-4-4; surge asymmetric • Interference immunity on signal cables sto Hz	— 100 Mbps	Yes
Bus diagnostics Yes Integratod Functions * Monitoring functions * • Temperature monitoring Yes • Watchdog Yes • Fan No • Monitoring function via network Optional EMO * Interference immunity against discharge of static electricity * • Interference immunity against discharge of static electricity * • Interference immunity against high-frequency electromagnetic fields * • Interference immunity ocable-borne interference * • Interference immunity os cable-borne interference * • Interference immunity on signal cables >30m * • Interference immunity on signal cables = 30m <td>— 1000 Mbps</td> <td>Yes</td>	— 1000 Mbps	Yes
Integrated Functions Monitoring functions • Temperature monitoring Yes • Watchdog Yes • Watchdog Yes • Monitoring function via network Optional EMMC Interference immunity against discharge of static electricity • Interference immunity against high-frequency electromagnetic fields ±6 kV contact discharge acc. to IEC 61000-4.2; ±8 kV air discharge acc. Interference immunity against high-frequency electromagnetic fields 10 V/m. 80 2 000 MHz, 80 % AM acc. to IEC 61000-4.3; 3 V/m, 2 2.7 CHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4.4; surge asymmetric • Interference immunity against high frequency radiation 10 V/m. 80 2 000 MHz, 80 % AM acc. to IEC 61000-4.4; surge asymmetric • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4.4; surge i.ength > 30 m • 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 at 50 Hz 10 0 A/m; to IEC 61000-4.4; burst; le	Interrupts/diagnostics/status information	
Monitoring functions Yes • Temperature monitoring Yes • Watchdog Yes • Fan No • Monitoring function via network Optional EMC Interference immunity against discharge of static electricity • Interference immunity against discharge of static electricity ±5 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-3; 3 V/m, 2 2: 7 GHz; 10 V, 10 kHz 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2: 7 GHz; 10 V, 10 kHz 80 % AM acc. to IEC 61000-4-5; surge asymmetric interference • Interference immunity us against high-frequency radiation 10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-5; surge asymmetric • Interference immunity to supply cables ±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 to magnetic fields 100 A/m; to IEC 61000-4-5; surge asymmetric • Interference immunity to magnetic fields at 50 Hz 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	Bus diagnostics	Yes
Monitoring functions Yes • Temperature monitoring Yes • Watchdog Yes • Fan No • Monitoring function via network Optional EMC Interference immunity against discharge of static electricity • Interference immunity against discharge of static electricity ±5 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-3; 3 V/m, 2 2: 7 GHz; 10 V, 10 kHz 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2: 7 GHz; 10 V, 10 kHz 80 % AM acc. to IEC 61000-4-5; surge asymmetric interference • Interference immunity us against high-frequency radiation 10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-5; surge asymmetric • Interference immunity to supply cables ±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 to magnetic fields 100 A/m; to IEC 61000-4-5; surge asymmetric • Interference immunity to magnetic fields at 50 Hz 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	Integrated Functions	
• Temperature monitoringYes• WatchdogYes• WatchdogYes• Monitoring function via networkOptionalEMC• Interference immunity against discharge of static electricity± 6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc.• Interference immunity against high-frequency electromagnetic± 6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc.• Interference immunity against high-frequency electromagnetic10 Vm, 802 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 Vm, 22• Interference immunity against high frequency10 Vm, 802 000 MHz, 80 % AM acc. to IEC 61000-4-5; surge asymmetric• 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± 1 kV acc. to IEC 61000-4-4; burst; length > 30 m• 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 to magnetic fields to U k2100 A/m; to IEC 61000-4-5; surge asymmetric• Interference immunity to magnetic fields to U k2100 A/m; to IEC 61000-4-6; LSPR 22 Class B, FCC Class A• Interference immunity to magnetic fields to U k2100 A/m; to IEC 61000-4-8;• Interference immunity to magnetic fields to U k2100 A/m; to IEC 61000-4-8;• Interference immunity to magnetic fields to U k2100 A/m; to IEC 61000-4-8;		
• WatchdogYes• FanNo• Monitoring function via networkOptionalEMCInterference immunity against discharge of static electricity±0 Krontact discharge acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-2• Interference immunity against high-frequency electromagnet: radiation±0 Krontact discharge acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-2• Interference immunity against high-frequency radiation10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2 C GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6• Interference immunity to cable-borne interference10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-6• Interference immunity on supply cables±2 KV acc. to IEC 61000-4-4; burst; ±1 KV acc. to IEC 61000-4-5, surge asymmetric symmetric; ±2 KV acc. to IEC 61000-4-5, surge asymmetric• Interference immunity on signal cables < 30m	5	Yes
Monitoring function via network Optional Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against high-frequency electromagnetic. Interference immunity on apply cables Interference immunity on supply cables Interference immunity on signal cables >30m Interference immunity on agnetic fields Interference immunity to magnetic fields Interference emission via line/AC current cables Interference Interference Interference Interference Interference Interference		Yes
EMC Interference immunity against discharge of static electricity ±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-3; 3 V/m, 2 to IEC 61000-4-4; acc. to IEC 61000-4-4; burst; ±1 kV acc. to IEC 61000-4-4; burst; elength < 3 m; ±2 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 61000-4-4; burst; length < 3 m; ±2 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 61000-4-4; 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	• Fan	No
Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against high-frequency electromagnetic fields Interference immunity against high frequency radiation Interference immunity on supply cables Interference immunity on supply cables Interference immunity on signal cables >30m Interference immunity on signal cables >30m Interference immunity on signal cables <30m Interference immunity on signal cables so Dtz Interference immunity on signal cables <30m Interference immunity on signal cables <30m Interference immunity on signal cables <30m Interference immunity on	 Monitoring function via network 	Optional
Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against high-frequency electromagnetic fields Interference immunity against high frequency radiation Interference immunity on supply cables Interference immunity on supply cables Interference immunity on signal cables >30m Interference immunity on signal cables >30m Interference immunity on signal cables <30m Interference immunity on signal cables so Dtz Interference immunity on signal cables <30m Interference immunity on signal cables <30m Interference immunity on signal cables <30m Interference immunity on	EMC	· ·
• Interference immunity against discharge of static to IEC 61000-4.2 ±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 radiation 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 61000-4.3; 3 V/m, 2 2, 7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4.3; 3 V/m, 2 2, 7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4.3; a V/m, 2 2, 7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4.3; a V/m, 2 2, 8 W acc. to IEC 61000-4.4; burst; ±1 KV acc. to IEC 61000-4.5; surge asymmetric ±2 kV acc. to IEC 61000-4.4; burst; length > 3 m • Interference immunity on signal cables > 30m ±2 kV acc. to IEC 61000-4.4; burst; length > 3 m • Interference immunity against voltage surge ±2 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 to magnetic fields ±2 kV acc. to IEC 61000-4.5; surge asymmetric ±1 kV acc. to IEC 61000-4.5; surge asymmetric • symmetric interference ±2 kV acc. to IEC 61000-4.5; surge asymmetric • symmetric interference ±2 kV acc. to IEC 61000-4.5; surge asymmetric • Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4.4; • 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 IP20 IP (atthe front) IP65		
electricity to EC 61000-4-2 Interference immunity against high-frequency electromagnetic fields 10/10%, 80 2 000 MHz, 80 % AM acc. to EC 61000-4-3; 3 V/m, 2 2.7 GHz; 10 V, 10 kHz 80 MHz acc. to EC 61000-4-6 Interference immunity to cable-borne interference ± 2 kV acc. to EC 61000-4-4, burst; ±1 kV acc. to EC 61000-4-5, surge asymmetric: ±2 kV acc. to EC 61000-4-5, surge asymmetric • Interference immunity on signal cables >30m ± 2 kV acc. to EC 61000-4-5, surge asymmetric • Interference immunity on signal cables >30m ± 2 kV acc. to EC 61000-4-5, surge asymmetric • Interference immunity on signal cables >30m ± 2 kV acc. to EC 61000-4-5, surge asymmetric • Interference immunity on signal cables <30m		±6 kV contact discharge acc. to IEC 61000-4-2: ±8 kV air discharge acc.
• 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 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6 Interference immunity to cable-borne interference • • Interference immunity on supply cables ±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 on signal cables >30m ±1 kV acc. to IEC 61000-4-5; surge asymmetric • Interference immunity on signal cables <30m	, , , ,	.
radiation 2.7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6 Interference immunity to cable-borne interference ±2 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, length > 30 m • Interference immunity on signal cables <30m	Interference immunity against high-frequency electromagnet	ic fields
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 on signal cables < 30m interference immunity against voltage surge asymmetric interference asymmetric interference tV vacc. to IEC 61000-4-5, surge asymmetric t2 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 61000-4-4; 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 voltage surge asymmetric interference ±2 kV acc. to IEC 61000-4-5; surge asymmetric ±1 kV acc. to IEC 61000-4-4; burst; tength < 3 m; ±2 kV acc. to IEC 61000-4-8 Emission of conducted and non-conducted interference interference eminsuinity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-6-4; CISPR 22 Class B, FCC Class A Degree and class of protection IP (at the front)		
• 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, length > 30 m• Interference immunity on signal cables < 30m		2.7 GHz; 10 V, 10 kHz 80 MHz acc. to IEC 61000-4-6
 Interference immunity on signal cables >30m Interference immunity on signal cables < 30m Interference immunity on signal cables < 30m Interference immunity on signal cables < 30m Interference immunity against voltage surge asymmetric interference symmetric interference tk V 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 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-5, surge asymmetric Interference immunity against voltage surge asymmetric interference ±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 asymmetric ±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 asymmetric ±1 kV acc. to IEC 61000-4-5, surge asymmetric 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 Enterference 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 (rear) IP (rear) IP (at the front) IP (at the front)<	·	
• Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m • Interference immunity on signal cables < 30m	 Interference immunity on supply cables 	
• Interference immunity on signal cables < 30m	 Interference immunity on signal cables >30m 	
61000-4-4; 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 symmetric Interference immunity to magnetic fields 100 A/m; to IEC 61000-4-8 Emission of conducted and non-conducted interference 100 A/m; to IEC 61000-6-4, CISPR 22 Class B, FCC Class A Degree and class of protection IP20 IP (at the front) IP65 IP (rear) IP20 Standards, approvals, certificates Yes CE mark Yes UL approval Yes • UL 508 Yes CULus Yes RCM (formerly C-TICK) Yes RCA (formerly Gost-R) Yes FCC Yes EMC CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A		
• 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 Hz100 A/m; to IEC 61000-4-8• Interference immunity to magnetic fields at 50 Hz100 A/m; to IEC 61000-4-8• Interference emission via line/AC current cablesEN 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• Interference emission via line/AC current cablesIP 65• IP (at the front)IP65• IP (rear)IP20Standards, approvals, certificates• CE markYesCC markYes• UL 508Yes• UL 508Yes• UL 508Yes• CULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A		
• symmetric interference±1 kV acc. to IEC 61000-4-5, surge symmetricInterference immunity to magnetic fields100 A/m; to IEC 61000-4-8• 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 Degree and class of protection IP65IP (rear)IP65Standards, 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 A	Interference immunity against voltage surge	
Interference immunity to magnetic fields • 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 Enderson of conducted and non-conducted interference • Interference emission via line/AC current cables Emission of conducted and non-conducted interference • Interference emission via line/AC current cables Enderson of conducted and non-conducted interference • Interference emission via line/AC current cables Emission of conducted and non-conducted interference • Interference emission via line/AC current cables Enderson of conducted and non-conducted interference IP (at the front) IP (at the front) IP (at the front) IP (rear) IP (at the front)	 asymmetric interference 	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity to magnetic fields at 50 Hz100 A/m; to IEC 61000-4-8Emission of conducted and non-conducted interference • 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, certificatesCE markYesCE markYesUL approvalYesot UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Emission of conducted and non-conducted interference• 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 (at the front)IP65IP (rear)IP20Standards, approvals, certificatesCE 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 A	Interference immunity to magnetic fields	
• Interference emission via line/AC current cablesEN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class ADegree and class of protectionIP65IP (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 A	Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Degree and class of protectionIP (at the front)IP65IP (rear)IP20Standards, approvals, certificatesIP20CE 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 A	Emission of conducted and non-conducted interference	
IP (at the front)IP65IP (rear)IP20Standards, approvals, certificatesCE markCE 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 A	Interference emission via line/AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
IP (rear)IP20Standards, approvals, certificatesIP20CE 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 A	Degree and class of protection	
Standards, approvals, certificatesCE 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 A	IP (at the front)	IP65
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 A	IP (rear)	IP20
CSA approvalYesUL approvalYes• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	Standards, approvals, certificates	
UL approvalYes• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	CE mark	Yes
• UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	CSA approval	Yes
cULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	UL approval	Yes
RCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	• UL 508	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	cULus	Yes
KC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	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		Yes
EMC CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A		Yes
	FCC	Yes
Use in hazardous areas	EMC	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A
	Use in hazardous areas	

ATEX Zone 2	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
 Nippon Kaiji Kyokai (Class NK) 	Yes
Ambient conditions	
Ambient temperature during operation	
 Ambient temperature during operation 	0 °C to 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 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s ² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s ² (hard disk)
Shock testing	
Shock testing Shock load during operation	IEC 60068-2-27; 150 m/s ² , 11 ms (without hard disk); 50 m/s ² , 30 ms (with hard disk)
Shock load during operation	
Shock load during operation Operating systems	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded
Shock load during operation Operating systems pre-installed operating system	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
Shock load during operation Operating systems pre-installed operating system without operating system	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system • Windows 7	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit
Shock load during operation Operating systems pre-installed operating system without operating system ore-installed operating system Windows 7 Windows 10 Enterprise	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system Windows 7 Windows 10 Enterprise Software	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Shock load during operation Operating systems pre-installed operating system without operating system ore-installed operating system Windows 7 Windows 10 Enterprise Software SIMATIC Software	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system Windows 7 Windows 10 Enterprise Software SIMATIC Software Dimensions Width of the housing front Height of housing front	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle
Shock load during operation Operating systems pre-installed operating system without operating system ore-installed operating system	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle 415 mm
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system Windows 7 Windows 10 Enterprise Software SIMATIC Software Dimensions Width of the housing front Height of housing front	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle 415 mm 310 mm
Shock load during operation Operating systems pre-installed operating system without operating system ore-installed operating system	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle 415 mm 310 mm 396 mm
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system • Windows 7 • Windows 10 Enterprise Software SIMATIC Software Dimensions Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height Overall depth • additional mounting depth (optical drive)	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle 415 mm 310 mm 396 mm 291 mm
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system Windows 7 Windows 10 Enterprise Software SIMATIC Software Dimensions Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height Overall depth	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle 415 mm 310 mm 396 mm 291 mm 76 mm
Shock load during operation Operating systems pre-installed operating system without operating system pre-installed operating system • Windows 7 • Windows 10 Enterprise Software SIMATIC Software Dimensions Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height Overall depth • additional mounting depth (optical drive)	(with hard disk) Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10 Yes; Optional Yes; Optional Yes; Ultimate 64 bit Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle 415 mm 310 mm 396 mm 291 mm 76 mm