SIEMENS

Data sheet

6AV7241-5BC42-0FA0

SIMATIC IPC 477E 15" touch (1280 x 800); with front USB; 4 USB (back), Ethernet (10/100/1000); Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); 16 GB; 2x RS232/RS485; 1x PCIe (x4); Win Embedded Standard 7 SP1, English, 64-bit; Without replaceable mass storage; 240 GB solid-state drive SATA Without SIMATIC software; 24 V DC industrial power supply

| Display | Without SIMATIC software; 24 V DC industrial power supply |
|--|--|
| | 15" TFT touch |
| Design of display | |
| Screen diagonal Resolution (pixels) | 15.6 in |
| N / | 1 280 pixel |
| Horizontal image resolution | |
| Vertical image resolution | 800 pixel |
| Backlighting MTBF backlighting (at 25 °C) | 50 000 h |
| Control elements | 50 000 m |
| | |
| Input device | |
| Mouse, at front | Front USB 2.0 (500mA) |
| Keyboard fonts | No |
| Function keys | No |
| alphanumeric keyboard | No |
| Touch operation | Very engles, resistive |
| 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 | <u>.</u> |
| 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 | |
| | |

| Technick Galar Box (Box Intel) Controls (Bg), No.: 2010 Can be stored in the Carlor Mile, Spoolae Hardware configuration Stots • Kumber of PCI stots • Kumber of PCI stots • Kumber of PCI stots • Kumber of PCI stots • Kumber of Compact Bash stots 1; Crast Hardware configuration • Kumber of Compact Bash stots 1; Crast Hardware configuration • Kumber of Dongsat Bash stots 1; Crast Hardware configuration • Kumber of Dongsat Bash stots 1; Crast Hardware configuration • Kumber of Industrial Ethernet Interfaces • Cognics interface • Cognics interface • Cognics interface • Cognics interface • Cognics interface • Interface Bernet Interface • Tool Maps • Interface • Interface Ithernet Interface • Cognics interface • | Retentive data area (incl. timers, counters, flags), max. | 512 kbyte; 128 KB can be stored in the buffer time; optional |
|---|--|---|
| State • Fee slots • Number of PCI slots • Number of PCI slots • Logitonal • Number of industrial Ethernet Interfaces • S.3. Ethernet (RU45) USB pot • Logitonal • Logitonal • Logitonal • Logitonal • Carpite Interfaces • S.3. Ethernet (RU45) USB pot • Carpites Interfaces • USB pot • Carpites Interfaces • Carpites Interfaces • Industrial Ethernet • Industring function via network • Industr | | ST2 KByte, 120 KB can be stored in the buller time, optional |
| | | |
| Aumber of PCI isids Aumber of compact fisch slobs 1: CF3st Aumber of compact fisch slobs 1: CF3st Aumber of industrial Ehernet interfaces 3: 3X. Ehernet (RJ45) USB port 4: USB port | | 1x PCIe (slot with card retainer) 1x slot for CEAST card |
| • Number of compact flash slots 1; CFast Interfaces 3; 3k Ehrenet (RJ45) USB port 4k USB 3; 0 Connection for keyboard/mouse USB / USB serial Interfaces Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS Video Interfaces 2x DisplayPort • Argphics Interface 2x DisplayPort • Industrial Enernet 2x Ethernet (RJ45) • Interfaces 2x Ethernet (RJ45) • Valchdog Yes • Nontoring function via network Opional Etof No • Interference Immunity against discharge of static electricity 16 (6 1000-4-2; 18 kV air discharge acc. to IEC 6 1000-4-2; 18 kV air discharge acc. to IEC 6 1000-4-4; 18 kV acc. to IEC 6 1000-4-4; 19 kV acc. to IEC 6 1000-4-4; 19 kV acc. to IEC 6 1000-4-4; 10 kV acc. to IEC 6 1000-4-4; 10 kV acc. to IE | | . , |
| Interferes 3.x Ethemet (RU46) Number of Industrial Ethemet interfaces 3.x Ethemet (RU46) USB port 4.x USB 3.0 Connection for keyboard/mouse USB / VSB erral interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS Video interfaces 2.x DisplayPort Industrial Ethemet interface 3.x Ethemet (RU45) - 1000 Mbps Yes - 1000 Mbps Yes Interpretationsetics/status information Interpretationsetics/status information Bixa diagnostics Yes • Temperature monitoring Yes • Monitoring functions Yes Interference immunity against discharge of static electricity 45 M contact discharge acc. to IEC 61000-4-2; ±6 kV at discharge acc. to IEC 61000-4-2; ±6 kV at discharge acc. to IEC 61000-4-2; ±6 kV at discharge acc. to IEC 61000-4-4; ±6 kV acc. to IEC 61000-4-4; to IEC 61000-4-4; to IEC 61000-4-4; to IEC 61000-4-4; | | |
| Number of industrial Ethernet Interfaces 3: 3k Ethernet (RU45) 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 Ethernet (RU45) - 100 Mbps Yes - 100 Mbps Yes Interpreteriation for factors Yes Integrated Functions Yes Nonitoring functions Yes Interpreteriation for factors Yes Watchdog Yes Interpreterime monitoring Yes Valchdog Yes Interpreterime monitoring function via network Optional EMC Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity tel KV contact discharge acc. to IEC 61000-4-2; #8 KV air discharge acc. to IEC 61000-4-3; 3 Vm, 2, 27 GHz; 10 V, 10 Hz 80 MHz acc. to IEC 61000-4-3; a Vm, 2, 27 GHz; 10 V, 10 Hz 80 MHz acc. to IEC 61000-4-3; a Vm, 2, 27 GHz; 10 V, 10 Hz 80 MHz acc. to IEC 61000-4-4; auge asymmetric Interference immunity against high frequency 10 Vm; 80 2000 MHz; acc V iEC 61000- | · · | |
| USB prit 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 3x Ethernet (R45) • Graphics interface 3x Ethernet (R45) • Industrial Ethernet Interface 3x Ethernet (R45) • Integrated Functions Yes Monitoring functions Yes • Temperature monitoring Yes • Valcitodg Yes • Temperature monitoring Yes • Temperature monitoring Yes • Interference immunity against discharge of static electricity 10 Km 80 200 MHz, 80 % AM acc. to IEC 61000-4-2; 48 KV ari discharge acc. Interference immunity against high frequency 10 Vim, 80 200 MHz, 80 % AM acc. to IEC 61000-4-5; surge symmetric • Interference immunity on signal cables >30m 11 KV acc. to IEC 61000-4-4; surge symmetric • Interference immunity on signal cables >30m 12 KV acc. to IEC 61000-4-5, surge symmetric • Interference immunity against high frequency 22 KV acc. to | | 3: 3x Ethornot (P I/6) |
| Connection for keyboard/mouse USB / USB serial interfaces Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS • Graphics interfaces 2x DisplayPort • Industrial Ethernete 3x Ethernet (RJ45) • Industrial Ethernete interface 3x Ethernet (RJ45) • Industrial Ethernet interface 3x Ethernet (RJ45) • Industrial Ethernete 3x Ethernet (RJ45) • Interpretative monitoring Yes • Watchdog Yes • Formperature monitoring Yes • Form Pretative monitoring function via network Optional EMO Interference immunity against discharge of static electricity • Interference immunity against discharge of static electronagnetic fields =6 kV contact discharge acc. to IEC 61000-4-2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; #2; #8 kV air discharge acc. to IEC 61000-4-4; | | |
| erral Interface Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS Video Interface 2x DisplayPort Industrial Ethernet - Interrupta/Edignostics/status Information Yes Bus diagnostics Yes Interrupta/Edignostics/status Information - Bus diagnostics Yes • Temperature monitoring Yes • Watchodog Yes • No Optional EMC - Interference immunity against discharge of static electricity = • Interference immunity against discharge of static electricity = • Interference immunity against high-frequency electronagenetic fields = • Interference immunity against acables >30m = • Interference immunity against acables >30m = 2.4 Vac. to IEC 61000-4.5, surge asymmetric • Interference immunity against acables >30m = 10 Vm, 80 | · · · · · | |
| Video interfaces 2x DisplayPort Industrial Enterned 3x Ethemet (R,45) Industrial Etherned 3x Ethemet (R,45) Interrupts/displostics/status information 3x Ethemet (R,45) Bus diagnostics Yes Interpretability functions Yes Monitoring functions Yes Integrature monitoring Yes Valchdog Yes Interpretative monitoring Yes Valchdog Yes Interpretative monitoring Yes Valchdog Yes Interpretative monitoring Yes Interpretative monitoring Yes 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 2 a00 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 2; 7 dHz; 10 V, 10 MHz, 30 MHz acc. to IEC 61000-4-4; surgle symmetric Interference immunity on supply cables #2 KV acc. to IEC 61000-4-4; surgle symmetric Interference immunity on supply cables #2 KV acc. to IEC 61000-4-5; surgle symmetric Interference immunity on supply cables #2 KV acc. to IEC 61000-4-4; surgle symmetric Interfe | | |
| • Graphics interface 2x DisplayPort Industrial Ethernet Interface 3x Ethernet (R,45) • -100 Mbps Yes • -100 Mbps Yes • Industrial Ethernet Interface 3x Ethernet (R,45) • -100 Mbps Yes Interrupts/diagnostics/status information Bus diagnostics Bus diagnostics Yes • Temperature monitoring Yes • Temperature monitoring functions Ves • Temperature monitoring functions Optional Externational Status Optional Externational Status Optional Externational Status 16 KV contact discharge act, to IEC 61000-4-2; 18 KV air discharge acc, to IEC 61000-4-2; 18 KV air discharge acc, to IEC 61000-4-3; 3 V/m, 2, 27 K2; 10 V. 10 KHz 80 MHz acc, to IEC 61000-4-3; 3 V/m, 2, 22 KV acc, to IEC 61000-4-4; 18 KV acc, to IEC 61000-4-4; 18 KV acc, to IEC 61000-4-4; 18 KV acc, to IEC 61000-4-5; surge asymmetric • Interference immunity against discharge of static discharge acc, to IEC 61000-4-5; surge asymmetric • Interference immunity against discharge of static discharge acc, to IEC 61000-4-4; ta KV acc, to IEC 61000-4-4; ta KV acc, to IEC 61000-4-4; ta KV acc, to IEC 61000-4-5; surge asymmetric • Interference immunity against discharge of static discharge acc, to IEC 61000-4-4; burst; entity of static acc acc acc acc acc acc acc acc acc a | | |
| Industrial Ethernet Sx Ethernet (RJ45) - 100 Mbps Yes - 100 Mbps Yes Bus diagnostics/status information Interruptive/diagnostics/status information Bus diagnostics/status information Yes Monitoring functions Yes Monitoring functions in a network Optional EMC Interpretature monitoring signification via network Optional Interpretation via network Optional 15 KV contact discharge acc. to IEC 61000-4-2; ±8 KV air discharge acc. to IEC 61000-4-3; 3 Vm, 2 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 Vm, 2 Interference immunity against high-frequency ±0 KV contact discharge acc. to IEC 61000-4-3; 3 Vm, 2 Interference immunity on signal cables soom ±2 KV acc. to IEC 61000-4-4; surg. esymmetric ±2 KV 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; ±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 | | 2x DisplayPort |
| Industrial Ethemet Interface As Ethemet (RJ45) Yes Ye | | |
| - 100 Mbps Yes - 1000 Mbps Yes Interruptid/apposites/status information Integrated Functions Build apposites Yes Integrated Functions Yes Ontioning functions Yes • Fam No • Fam No • Monitoring function via network Optional • Interference immunity against discharge of static electricity + fd KV contact discharge act, to IEC 61000-4-2; ±8 KV air discharge acc, to IEC 61000-4-3; ±1 KV acc, to IEC 61000-4-4; ±0 KV, to IEC 61000-4-4; ±0 | | 3x Ethernet (RJ45) |
| − 1000 Mpps Yes Interrupt/diagnostic/status information Ves Integrated Functions Ves Monitoring functions Yes • Temperature monitoring Yes • Watchdog Yes • Fan 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; Interference immunity against high-frequency electromagnetic fields ±6 kV contact discharge acc. to IEC 61000-4-3; 3 Vm, 2 • Interference immunity against high frequency electromagnetic fields ±10 kVm, 80 2000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 Vm, 2 • Interference immunity on supply cables ±2 kV acc. to IEC 61000-4-1, kurst; ±1 kV acc. to IEC 61000-4-5, surge asymmetric • Interference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-1, kurst; ±1 kV acc. to IEC 61000-4-1, kurst; tength > 3 m • Interference immunity on signal cables <30m | — 100 Mbps | |
| Bus diagnostics Yes Integrated Functions * Monitoring functions * • 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 of EC 61000-4-2 * Interference immunity against high-frequency electromagnetic fields * • Interference immunity osabiles-borne interference * • 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 on signal cables * 30m <td>•</td> <td>Yes</td> | • | Yes |
| Bus diagnostics Yes Integrated Functions * Monitoring functions * • 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 of EC 61000-4-2 * Interference immunity against high-frequency electromagnetic fields * • Interference immunity osabiles-borne interference * • 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 on signal cables * 30m <td>Interrupts/diagnostics/status information</td> <td></td> | Interrupts/diagnostics/status information | |
| Integrated Functions Monitoring functions • Temperature monitoring Yes • Watchdog Yes • Fan No • Monitoring function via network Optional EMC Intefference 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. 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 Interference immunity on signal cables >30m ±2 KV acc. to IEC 61000-4-4, burst; ±1 KV acc. to IEC 61000-4-5, surge asymmetric 1 Interference immunity on signal cables >30m ±1 KV acc. to IEC 61000-4-4, burst; ±1 KV acc. to IEC 61000-4-5, surge asymmetric • Interference immunity on signal cables >30m ±1 KV acc. to IEC 61000-4-4, burst; ±1 KV acc. to IEC 61000-4-5, surge asymmetric • Interference ±2 KV acc. to IEC 61000-4-5, surge asymmetric • Interference ±1 KV acc. to IEC 61000-4-5, surge asymmetric • asymmetric interference ±1 KV acc. to IEC 61000-4-5, surge asymmetric • Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4-5, surge asymmetric • Interference immunity to magnetic fields at 50 Hz | | 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. as 0 MHz acc. to IEC 61000-4-3; 3 V/m, 2 2.7 GHz; 10 V 10 kHz. as 0 MHz acc. to IEC 61000-4-5; surge asymmetric to IEC 61000-4-5; surge asymmetric; ±2 kV acc. to IEC 61000-4-5; surge asymmetric; 24 kV acc. to IEC 61000-4-5; surge asymmetric; 14 kV acc. to IEC 61000-4-4; burst; tength > 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 • asymmetric 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 61000-4-5; surge asymmetric • Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4-8 Emission of conducted and non-con | | |
| • Temperature monitoring Yes • Watchdog Yes • Fan No • Monitoring function via network Optional EMC ************************************ | | |
| • Watchdog Yes • Fan No • Monitoring function via network Optional 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; a V/m, 2 200 MHz, 80 % AM acc. to IEC 61000-4-3; a V/m, 2 27 GHz; 10 V, 10 KHz 80 MHz acc. to IEC 61000-4-5; surge asymmetric at a fact acc acc. to IEC 61000-4-6; surge asymmetric act act acc to IEC 61000-4-5; surge asymmetric act act acc to IEC 61000-4-5; surge asymmetric act act acc to IEC 61000-4-5; surge asymmetric act act acc to IEC 61000-4-4; burst; ±1 KV acc. to IEC 61000-4-5; surge asymmetric act act acc to IEC 61000-4-4; burst; tength > 3 m Interference immunity on signal cables <30m | 5 | Yes |
| Fan Monitoring function via network Optional Monitoring function via network Monitoring function Monitoring functin tereference Monitoring function Monitoring function | | |
| Monitoring function via network Optional Monitoring function via network Interference immunity against discharge of static electricity Interference immunity against discharge of static electricity Interference immunity against high-frequency electromagnetic Interference immunity on supply cables Interference immunity on supply cables Interference immunity on supply cables Interference immunity on signal cables >30m Interference | 5 | |
| 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 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 Interference immunity to cable-borne interference 10 V/m, 80 2 000 MHz, 80 % AM acc. to IEC 61000-4-5; surge asymmetric Interference immunity on signal cables >30m ±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 | | |
| 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 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 on signal cables <30m Interference immunity on signal cables <30m Interference immunity on signal cables <30m Interference immunity against voltage surge asymmetric interference t kV acc. to IEC 61000-4-5, surge asymmetric t 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 t kV acc. to IEC 61000-4-5, surge asymmetric t 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 100 A/m; 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 Interfere | 5 | |
| Interference immunity against discharge of static electricity Experimental sectors and the sector of the | | |
| electricity to EEC 61000-4-2 Interference immunity against high-frequency 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 61000-4-6 Interference immunity to cable-borne interference ±2 kV acc. to IEC 61000-4-4; burst; ±1 kV acc. to IEC 61000-4-5; surge asymmetric: ±2 kV 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 61000-4-4; burst; length > 30 m • 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; surge asymmetric • Interference immunity on signal cables >30m ± 2 kV acc. to IEC 61000-4-4; surge asymmetric • Interference immunity on signal cables >30m ± 1 kV acc. to IEC 61000-4-5, surge asymmetric • Interference immunity on signal cables <30m | , , , , | o |
| 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 ±1 hterference immunity on signal cables >30m ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-5, surge asymmetric ±2 kV acc. to IEC 61000-4-4; burst; tength < 3 m | 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 • symmetric interference • symmetric interference • asymmetric interference • symmetric interference • symmetric interference • Interference immunity to magnetic fields • Interference immunity to magnetic fields at 50 Hz • Interference immunity to magnetic fields at 50 Hz • Interference emission via line/AC current cables 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 • UL 508 Yes • UL 508 Yes CULus Yes | , , , , , | |
| • 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 |
| symmetric: ±2 kV acc. to IEC 61000-4-5, surge asymmetric • Interference immunity on signal cables >30m • Interference immunity on signal cables < 30m | | |
| • Interference immunity on signal cables < 30m | | symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric |
| 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 • Interference emission via line/AC current cables End class of protection IP65 IP (at the front) IP65 IP (rear) IP200 Standards, approvals, certificates CE mark CE mark 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 | | |
| • 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 IP65 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 RCM (formerly Gost-R) Yes EAC (formerly Gost-R) Yes EAC (formerly Gost-R) Yes EMC CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | • Interference immunity on signal cables < 30m | |
| • 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 • 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 IP65 IP (rear) IP20 Standards, approvals, certificates Ves CE mark 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 | 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 Equation of class of protection IP (at the front) IP (rear) Standards, approvals, certificates CE mark CSA approval UL approval Ves cULus RCM (formerly C-TICK) KC approval Yes EAC (formerly Gost-R) FCC Yes EAC (formerly Gost-R) Yes EMC | asymmetric interference | ±2 kV acc. to IEC 61000-4-5, surge asymmetric |
| Interference immunity to magnetic fields at 50 Hz 100 A/m; to IEC 61000-4-8 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) IP (crear) Ves CE mark Yes CSA approval Yes UL approval Yes UL 508 CULus Yes RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) FCC Yes EMC CE, 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, 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 at 50 Hz | 100 A/m; to IEC 61000-4-8 |
| Degree and class of protection IP (at the front) IP65 IP (rear) IP20 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 EAC (formerly Gost-R) Yes FCC Yes EMC CE, 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 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, 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 | Degree and class of protection | |
| 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 EAC (formerly Gost-R) Yes FCC Yes EMC CE, 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 |
| 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 | 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 | | Yes |
| 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 | CSA approval | Yes |
| • UL 508YescULusYesRCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | | Yes |
| RCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | | Yes |
| RCM (formerly C-TICK)YesKC approvalYesEAC (formerly Gost-R)YesFCCYesEMCCE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | | 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 | | Yes |
| EAC (formerly Gost-R) Yes FCC Yes EMC CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | | |
| FCC Yes EMC CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | | |
| EMC CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A | | |
| | | 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 testingShock 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 Optionally with pre-installed SIMATIC WinCC RT Advanced / Software |
| 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 | (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 |
| 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 | (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 pre-installed operating system Windows 7 Windows 10 Enterprise Software SIMATIC Software Dimensions Width of the 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 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 | (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 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; 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; 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 |