



SIMATIC HMI TP700 Comfort, Comfort Panel, touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable from WinCC Comfort V11

| General information | |
|---|------------------------|
| Product type designation | TP700 Comfort |
| Display | |
| Design of display | TFT |
| Screen diagonal | 7 in |
| Display width | 152.4 mm |
| Display height | 91.4 mm |
| Number of colors | 16 777 216 |
| Resolution (pixels) | |
| • Horizontal image resolution | 800 pixel |
| • Vertical image resolution | 480 pixel |
| Backlighting | |
| • MTBF backlighting (at 25 °C) | 80 000 h |
| • Backlight dimmable | Yes; 0-100 % |
| Control elements | |
| Keyboard fonts | |
| • Function keys | |
| — Number of function keys | 0 |
| — Number of function keys with LEDs | 0 |
| • Keys with LED | No |
| • System keys | No |
| • Numeric keyboard | Yes; Onscreen keyboard |
| • alphanumeric keyboard | Yes; Onscreen keyboard |
| Touch operation | |
| • Design as touch screen | Yes; Analog-resistive |
| Expansions for operator control of the process | |
| • DP direct LEDs (LEDs as S7 output I/O) | |
| — F1...Fx | 0 |
| • Direct keys (keys as S7 input I/O) | |
| — F1...Fx | 0 |
| • Direct keys (touch buttons as S7 input I/O) | 32 |
| Installation type/mounting | |
| Mounting position | vertical |
| Wall mounting/direct mounting | No |
| Mounting in portrait format possible | Yes |
| Mounting in landscape format possible | Yes |
| maximum permissible angle of inclination without external ventilation | 35° |
| Supply voltage | |
| Type of supply voltage | DC |

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| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 19.2 V |
| permissible range, upper limit (DC) | 28.8 V |
| Input current | |
| Current consumption (rated value) | 0.5 A |
| Starting current inrush I st | 0.5 A ² ·s |
| Power | |
| Active power input, typ. | 12 W |
| Processor | |
| Processor type | X86 |
| Memory | |
| Flash | Yes |
| RAM | Yes |
| Memory available for user data | 12 Mbyte |
| Type of output | |
| Info LED | No |
| Power LED | No |
| Error LED | No |
| Acoustics | |
| • Buzzer | No |
| • Speaker | Yes |
| Time of day | |
| Clock | |
| • Hardware clock (real-time) | Yes |
| • Software clock | Yes |
| • retentive | Yes; Back-up duration typically 6 weeks |
| • synchronizable | Yes |
| Interfaces | |
| Number of industrial Ethernet interfaces | 1; 2 ports (switch) |
| Number of RS 485 interfaces | 1; RS 422 / 485 combined |
| Number of RS 422 interfaces | 0; together with RS 485 |
| Number of RS 232 interfaces | 0 |
| Number of USB interfaces | 2; USB 2.0 |
| • USB Mini B | 1; 5-pole |
| Number of 20 mA interfaces (TTY) | 0 |
| Number of parallel interfaces | 0 |
| Number of other interfaces | 0 |
| Number of SD card slots | 2 |
| With software interfaces | No |
| Industrial Ethernet | |
| • Industrial Ethernet status LED | 2 |
| • Number of ports of the integrated switch | 2 |
| Protocols | |
| PROFINET | Yes |
| Supports protocol for PROFINET IO | Yes |
| IRT | Yes; As of WinCC V12 |
| PROFIBUS | Yes |
| EtherNet/IP | Yes |
| MPI | Yes |
| Protocols (Ethernet) | |
| • TCP/IP | Yes |
| • DHCP | Yes |
| • SNMP | Yes |
| • DCP | Yes |
| • LLDP | Yes |
| WEB characteristics | |
| • HTTP | Yes |
| • HTTPS | Yes |
| • HTML | Yes |
| • XML | Yes |

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| • CSS | Yes |
| • Active X | Yes |
| • JavaScript | Yes |
| • Java VM | No |
| Redundancy mode | |
| Media redundancy | |
| — MRP | Yes; As of WinCC V12 |
| Further protocols | |
| • CAN | No |
| • MODBUS | Yes |
| Interrupts/diagnostics/status information | |
| Diagnoses | |
| • Diagnostic information readable | Yes; S7 controller |
| EMC | |
| Emission of radio interference acc. to EN 55 011 | |
| • Limit class A, for use in industrial areas | Yes |
| • Limit class B, for use in residential areas | No |
| Degree and class of protection | |
| IP (at the front) | IP65 |
| IP (rear) | IP20 |
| NEMA (front) | |
| • Enclosure Type 4 at the front | Yes |
| • Enclosure Type 4x at the front | Yes |
| Standards, approvals, certificates | |
| CE mark | Yes |
| cULus | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| Use in hazardous areas | |
| • ATEX Zone 2 | Yes |
| • ATEX Zone 22 | Yes |
| • IECEx Zone 2 | Yes |
| • IECEx Zone 22 | Yes |
| • cULus Class I Zone 1 | No |
| • cULus Class I Zone 2, Division 2 | Yes |
| • FM Class I Division 2 | Yes |
| Marine approval | |
| • Germanischer Lloyd (GL) | Yes |
| • American Bureau of Shipping (ABS) | Yes |
| • Bureau Veritas (BV) | Yes |
| • Det Norske Veritas (DNV) | Yes |
| • Lloyds Register of Shipping (LRS) | Yes |
| • Nippon Kaiji Kyokai (Class NK) | Yes |
| • Polski Rejestr Statkow (PRS) | No |
| Ambient conditions | |
| Suited for indoor use | Yes |
| Suited for outdoor use | No |
| Ambient temperature during operation | |
| Operation (vertical installation) | |
| — For vertical installation, min. | 0 °C |
| — For vertical installation, max. | 50 °C; (55 °C, see entry ID: 64847814) |
| Operation (max. tilt angle) | |
| — At maximum tilt angle, min. | 0 °C |
| — At maximum tilt angle, max. | 40 °C |
| Operation (vertical installation, portrait format) | |
| — For vertical installation, min. | 0 °C |
| — For vertical installation, max. | 40 °C |
| Operation (max. tilt angle, portrait format) | |
| — At maximum tilt angle, min. | 0 °C |
| — At maximum tilt angle, max. | 35 °C |

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| Ambient temperature during storage/transportation | |
| • min. | -20 °C |
| • max. | 60 °C |
| Relative humidity | |
| • Operation, max. | 90 %; no condensation |
| Operating systems | |
| proprietary | No |
| pre-installed operating system | |
| • Windows CE | Yes |
| configuration / header | |
| Message indicator | Yes |
| Alarm system (incl. buffer and acknowledgment) | Yes |
| Process value display (output) | Yes |
| Process value default (input) possible | Yes |
| Recipe management | Yes |
| Configuration software | |
| • STEP 7 Basic (TIA Portal) | No |
| • STEP 7 Professional (TIA Portal) | No |
| • WinCC flexible Compact | No |
| • WinCC flexible Standard | No |
| • WinCC flexible Advanced | No |
| • WinCC Basic (TIA Portal) | No |
| • WinCC Comfort (TIA Portal) | Yes; from V11 |
| • WinCC Advanced (TIA Portal) | Yes; from V11 |
| • WinCC Professional (TIA Portal) | Yes; from V11 |
| Languages | |
| Online languages | |
| • Number of online/runtime languages | 32 |
| Project languages | |
| • Languages per project | 32 |
| Functionality under WinCC (TIA Portal) | |
| Libraries | Yes |
| Applications/options | |
| • Web browser | Yes |
| • Pocket Word | Yes |
| • Pocket Excel | Yes |
| • PDF Viewer | Yes |
| • Media Player | Yes |
| • SIMATIC WinCC Sm@rtServer | Yes |
| • SIMATIC WinCC Audit | Yes |
| Number of Visual Basic Scripts | Yes |
| Task planner | |
| • time-controlled | Yes |
| • task-controlled | Yes |
| Message system | |
| • Number of alarm classes | 32 |
| • Bit messages | Yes |
| — Number of bit messages | 4 000 |
| • Analog messages | Yes |
| — Number of analog messages | 200 |
| • S7 alarm number procedure | Yes |
| • System messages HMI | Yes |
| • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...) | Yes |
| • Number of characters per message | 80 |
| • Number of process values per message | 8 |
| • Acknowledgment groups | Yes |
| • Message indicator | Yes |
| Recipe management | |
| • Number of recipes | 300 |
| • Data records per recipe | 500 |

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| • Entries per data record | 1 000 |
| • Size of internal recipe memory | 2 Mbyte |
| • Recipe memory expandable | Yes |
| Variables | |
| • Number of variables per device | 2 048 |
| • Number of variables per screen | 400 |
| • Limit values | Yes |
| • Multiplexing | Yes |
| • Structures | Yes |
| • Arrays | Yes |
| Images | |
| • Number of configurable images | 500 |
| • Permanent window/default | Yes |
| • Global image | Yes |
| • Pop-up images | Yes |
| • Slide-in images | Yes |
| • Image selection by PLC | Yes |
| • Image number in the PLC | Yes |
| Image objects | |
| • Number of objects per image | 400 |
| • Text fields | Yes |
| • I/O fields | Yes |
| • Graphic I/O fields (graphics list) | Yes |
| • Symbolic I/O fields (text list) | Yes |
| • Date/time fields | Yes |
| • Switches | Yes |
| • Buttons | Yes |
| • Graphic display | Yes |
| • Icons | Yes |
| • Geometric objects | Yes |
| Complex image objects | |
| • Number of complex objects per screen | 20 |
| • Alarm view | Yes |
| • Trend view | Yes |
| • User view | Yes |
| • Status/control | Yes |
| • Sm@rtClient view | Yes |
| • Recipe view | Yes |
| • f(x) trend view | Yes |
| • System diagnostics view | Yes |
| • Media Player | Yes |
| • HTML browser | Yes |
| • PDF display | Yes |
| • IP camera display | Yes |
| • Bar graphs | Yes |
| • Sliders | Yes |
| • Pointer instruments | Yes |
| • Analog/digital clock | Yes |
| Lists | |
| • Number of text lists per project | 500 |
| • Number of entries per text list | 500 |
| • Number of graphics lists per project | 500 |
| • Number of entries per graphics list | 500 |
| Archiving | |
| • Number of archives per device | 50 |
| • Number of entries per archive | 20 000 |
| • Message archive | Yes |
| • Process value archive | Yes |
| • Archiving methods | |
| — Sequential archive | Yes |
| — Short-term archive | Yes |

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| <ul style="list-style-type: none"> ● Memory location <ul style="list-style-type: none"> — Memory card — USB memory — Ethernet ● Data storage format <ul style="list-style-type: none"> — CSV — TXT — RDB | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| Security | |
| <ul style="list-style-type: none"> ● Number of user groups ● Number of user rights ● Number of users ● Password export/import ● SIMATIC Logon | <p>50</p> <p>32</p> <p>50</p> <p>Yes</p> <p>Yes</p> |
| Logging through printer | |
| <ul style="list-style-type: none"> ● Alarms ● Report (shift log) ● Hardcopy ● Electronic print to file | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes; PDF, HTML</p> |
| Character sets | |
| <ul style="list-style-type: none"> ● Keyboard fonts <ul style="list-style-type: none"> — US English | <p>Yes</p> |
| Transfer (upload/download) | |
| <ul style="list-style-type: none"> ● MPI/PROFIBUS DP ● USB ● Ethernet ● using external storage medium | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| Process coupling | |
| <ul style="list-style-type: none"> ● S7-1200 ● S7-1500 ● S7-200 ● S7-300/400 ● LOGO! ● WinAC ● SINUMERIK ● SIMOTION ● Allen Bradley (EtherNet/IP) ● Allen Bradley (DF1) ● Mitsubishi (MC TCP/IP) ● Mitsubishi (FX) ● OMRON (FINS TCP) ● OMRON (LINK/Multilink) ● Modicon (Modbus TCP/IP) ● Modicon (Modbus) ● OPC UA Client ● OPC UA Server | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes; with SINUMERIK option package</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| Service tools/configuration aids | |
| <ul style="list-style-type: none"> ● Backup/Restore manually ● Backup/Restore automatically ● Simulation ● Device switchover | <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> |
| Peripherals/Options | |
| Printer | Yes |
| SIMATIC HMI MM memory card: Multi Media Card | Yes; Up to 128 MB |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes; Up to 2 GB |
| SIMATIC HMI CF memory card Compact Flash Card | No |
| USB memory | Yes |
| SIMATIC IPC USB Flashdrive (USB stick) | Yes; Up to 16 GB |
| SIMATIC HMI USB stick | Yes; Up to 8 GB |
| Network camera | Yes |

Mechanics/material

Enclosure material (front)

- Plastic No
- Aluminum Yes
- Stainless steel No

Dimensions

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|----------------------------|--------|
| Width of the housing front | 214 mm |
| Height of housing front | 158 mm |
| Mounting cutout, width | 198 mm |
| Mounting cutout, height | 142 mm |
| Overall depth | 63 mm |

Weights

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| Weight (without packaging) | 1.4 kg |
| Weight (with packaging) | 1.6 kg |

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