

SIMATIC HMI TP1200 Comfort INOX Stainless steel front, glass pane, capacitive touch, degree of protection front IP69K, 9" widescreen TFT display, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable from WinCC Comfort V15

General information

| | |
|--------------------------|-------------------------|
| Product type designation | TP1200 Comfort INOX PCT |
|--------------------------|-------------------------|

Display

| | |
|-------------------|------------|
| Design of display | TFT |
| Screen diagonal | 12.1 in |
| Display width | 261.1 mm |
| Display height | 163.2 mm |
| Number of colors | 16 777 216 |

Resolution (pixels)

- | | |
|-------------------------------|-------------|
| • Horizontal image resolution | 1 280 Pixel |
| • Vertical image resolution | 800 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 |
| • Keys with LED | No |
| • System keys | No |
| • Numeric keyboard | Yes; Onscreen keyboard |
| • alphanumeric keyboard | Yes; Onscreen keyboard |

Touch operation

- | | |
|--------------------------------|-----|
| • Design as touch screen | Yes |
| • Design as multi-touch screen | No |
| • Monitor keyboard | Yes |

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) | 40 |

| Installation type/mounting | |
|---|---|
| Mounting position | vertical |
| 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 |
| 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) | 0.85 A |
| Starting current inrush I ² t | 0.5 A ² ·s |
| Power | |
| Active power input, typ. | 20 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 | Speaker |
| • 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 USB interfaces | 2; USB 2.0 |

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| • 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 V15 |
| MRP | Yes; As of WinCC V15 |
| PROFIBUS | 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 |
| • CSS | Yes |
| • Active X | Yes |
| • JavaScript | Yes |
| • Java VM | No |
| Further protocols | |
| • CAN | No |
| • EtherNet/IP | Yes |
| • MODBUS | Yes |
| 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) | IP69K |

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|--------------------------------|----------------------------------|
| IP66 at the front | Yes; IP66K |
| NEMA (front) | NEMA 4, NEMA 12 (when installed) |
| Enclosure Type 4 at the front | No |
| Enclosure Type 4x at the front | Yes |
| Enclosure Type 12 at the front | Yes |
| IP (rear) | IP20 |

Standards, approvals, certificates

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|-----------------------|-----|
| CE mark | Yes |
| cULus | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | No |

Use in hazardous areas

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| <ul style="list-style-type: none"> • ATEX Zone 2 • ATEX Zone 22 • IECEx Zone 2 • IECEx Zone 22 • cULus Class I Zone 1 • cULus Class I Zone 2, Division 2 • cULus Class II Division 2 • FM Class I Division 2 • FM Class II Division 2 | <ul style="list-style-type: none"> No No No No No No No No No |
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Ambient conditions

| | |
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| Suited for indoor use | Yes |
| Suited for outdoor use | No |

Ambient temperature during operation

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| <ul style="list-style-type: none"> • Operation (vertical installation) <ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) <ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, min. • Operation (vertical installation, portrait format) <ul style="list-style-type: none"> — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> — At maximum tilt angle, min. — At maximum tilt angle, min. | <ul style="list-style-type: none"> 0 to +50 °C 0 °C 50 °C 0 to +40 °C 0 °C 40 °C 0 to +40 °C 0 °C 40 °C 0 ... 35 °C 0 °C 35 °C |
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Ambient temperature during storage/transportation

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| <ul style="list-style-type: none"> • min. • max. | <ul style="list-style-type: none"> -20 °C 60 °C |
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Altitude during operation relating to sea level

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| • Installation altitude above sea level, max. | 2 000 m |
| Relative humidity | |
| • Operation, max. | 90 %; no condensation |

Operating systems

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| proprietary | No |
| pre-installed operating system | |
| • Windows CE | Yes |

Configuration

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| 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; As of WinCC V15 |
| • WinCC Advanced (TIA Portal) | Yes; As of WinCC V15 |
| • WinCC Professional (TIA Portal) | Yes; As of WinCC V15 |

Languages

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| Online languages | |
| • Number of online/runtime languages | 32 |
| Project languages | |
| • Languages per project | 32 |

Functionality under WinCC (TIA Portal)

| | |
|--------------------------------|---|
| Libraries | Yes |
| Applications/options | Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent |
| • Web browser | Yes |
| • Pocket Word | Yes; Viewer |
| • Pocket Excel | Yes; Viewer |
| • PDF Viewer | Yes |
| • Media Player | Yes |
| • SIMATIC WinCC Sm@rtServer | Yes |
| • SIMATIC WinCC Audit | Yes |
| Number of Visual Basic Scripts | Yes |
| Task planner | Yes |

| | |
|--|---|
| • time-controlled | Yes |
| • task-controlled | Yes |
| Help system | |
| • Number of characters per info text | 70 |
| Message system | |
| • Number of alarm classes | 32 |
| • Bit messages | |
| — Number of bit messages | 4 000 |
| • Analog messages | |
| — Number of analog messages | 200 |
| • S7 alarm number procedure | Yes |
| • System messages HMI | Yes |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes |
| • Number of characters per message | 80 |
| • Number of process values per message | 8 |
| • Acknowledgment groups | Yes |
| • Message indicator | Yes |
| • Message buffer | Ring buffer (n x 1024 entries), retentive, maintenance-free |
| — Number of entries | 1 024 |
| — Circulating buffer | Yes |
| — retentive | Yes |
| — maintenance-free | Yes |
| Recipe management | |
| • Number of recipes | 300 |
| • Data records per recipe | 500 |
| • 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 |

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| • 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 |

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|-----------------------------------|--|
| • Message archive | Yes |
| • Process value archive | Yes |
| • Archiving methods | Sequence archive, circular log, alarm log, process value archive |
| — Sequential archive | Yes |
| — Short-term archive | Yes |
| • Memory location | SD/MMC card, Ethernet, USB memory stick |
| — Memory card | Yes |
| — USB memory | Yes |
| — Ethernet | Yes |
| • Data storage format | CSV file, readable, e.g. with MS Excel, MS Access |
| — CSV | Yes |
| — TXT | Yes |
| — RDB | Yes |
| Security | |
| • Number of user groups | 50 |
| • Number of user rights | 32 |
| • Number of users | 50 |
| • Password export/import | Yes |
| • SIMATIC Logon | Yes |
| Logging through printer | |
| • Alarms | Yes |
| • Report (shift log) | Yes |
| • Hardcopy | Yes |
| • Electronic print to file | Yes; PDF, HTML |
| Character sets | |
| • Keyboard fonts | US American (English) |
| — US English | Yes |
| Transfer (upload/download) | |
| • MPI/PROFIBUS DP | Yes |
| • USB | Yes |
| • Ethernet | Yes |
| • using external storage medium | Yes |
| Process coupling | |
| • S7-1200 | Yes |
| • S7-1500 | Yes |
| • S7-200 | Yes |
| • S7-300/400 | Yes |
| • LOGO! | Yes |
| • WinAC | Yes |
| • SINUMERIK | Yes; with SINUMERIK option package |
| • SIMOTION | Yes |

- Allen Bradley (EtherNet/IP) Yes
- Allen Bradley (DF1) Yes
- Mitsubishi (MC TCP/IP) Yes
- Mitsubishi (FX) Yes
- OMRON (FINS TCP) No
- OMRON (LINK/Multilink) Yes
- Modicon (Modbus TCP/IP) Yes
- Modicon (Modbus) Yes
- OPC UA Client Yes
- OPC UA Server Yes

Service tools/configuration aids

- Backup/Restore manually Yes
- Backup/Restore automatically Yes
- Simulation Yes
- Device switchover Yes

Peripherals/Options

Peripherals

- 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

Accessories

Further accessories are available Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)

Mechanics/material

Enclosure material (front)

- Plastic No
- Aluminum No
- Stainless steel Yes
- Glass Yes; Hardened

Dimensions

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|--------|--------|
| Width | 330 mm |
| Height | 241 mm |
| Depth | 73 mm |

| | |
|----------------------------|--------|
| Width of the housing front | 330 mm |
| Height of housing front | 241 mm |
| Mounting cutout, width | 310 mm |
| Mounting cutout, height | 221 mm |
| Overall depth | 65 mm |

Weights

| | |
|--------------------------|--------|
| Weight without packaging | 4.2 kg |
| Weight incl. packaging | 4.9 kg |

last modified: 09/04/2018