

SIMATIC HMI TP1500 Comfort, Comfort Panel, Touch operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, WEC 2013, configurable from WinCC Comfort V14 SP1 with HSP



General information

| | |
|--------------------------|----------------|
| Product type designation | TP1500 Comfort |
|--------------------------|----------------|

Display

| | |
|-------------------|------------|
| Design of display | TFT |
| Screen diagonal | 15.4 in |
| Display width | 331.2 mm |
| Display height | 207 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 |

| | |
|---|------------------------|
| — 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 |
| Expansions for operator control of the process | |
| • 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) | 1.7 A |
| Starting current inrush I ² t | 0.5 A ² ·s |
| Power | |
| Active power input, typ. | 41 W |
| Processor | |
| Processor type | X86 |
| Memory | |
| Flash | Yes |
| RAM | Yes |
| Memory available for user data | 24 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 | 2; 2 ports (switch) + independent port |
| 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 |
| 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 | 3 |
| • Number of ports of the integrated switch | 2 |

Protocols

| | |
|-----------------------------------|-----|
| PROFINET | Yes |
| Supports protocol for PROFINET IO | Yes |
| IRT | Yes |
| 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 |

Redundancy mode

| | |
|-------|-----|
| • MRP | Yes |
|-------|-----|

| Further protocols | |
|--|---|
| • CAN | No |
| • EtherNet/IP | Yes |
| • MODBUS | Yes |
| Interrupts/diagnostics/status information | |
| Diagnostic messages | |
| • 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 |
| EAC (formerly Gost-R) | Yes |
| Use in hazardous areas | |
| • ATEX Zone 2 | No |
| • ATEX Zone 22 | No |
| • IECEx Zone 2 | No |
| • IECEx Zone 22 | No |
| • cULus Class I Zone 1 | No |
| • cULus Class I Zone 2, Division 2 | Yes; For inscription on device rating plate |
| • cULus Class II Division 2 | No; Available soon |
| • FM Class I Division 2 | Yes; For inscription on device rating plate |
| • FM Class II Division 2 | No; Available soon |
| Marine approval | |
| • Germanischer Lloyd (GL) | No |
| • American Bureau of Shipping (ABS) | No |
| • Bureau Veritas (BV) | No |
| • Det Norske Veritas (DNV) | No |
| • Korean Register of Shipping (KRS) | No |
| • Lloyds Register of Shipping (LRS) | No |

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| • Nippon Kaiji Kyokai (Class NK) | No |
| • Polski Rejestr Statkow (PRS) | No |
| • Chinese Classification Society (CCS) | 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, min. | 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, min. | 40 °C |

Ambient temperature during storage/transportation

| | |
|--------|--------|
| • min. | -20 °C |
| • max. | 60 °C |

Relative humidity

| | |
|-------------------|-----------------------|
| • Operation, max. | 90 %; no condensation |
|-------------------|-----------------------|

Operating systems

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|-------------|----|
| proprietary | No |
|-------------|----|

pre-installed operating system

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|--------------|------------------------------------|
| • Windows CE | Yes; Windows Embedded Compact 2013 |
|--------------|------------------------------------|

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; V14 SP1 HSP and higher |
| • WinCC Advanced (TIA Portal) | Yes; V14 SP1 HSP and higher |
| • WinCC Professional (TIA Portal) | Yes; V14 SP1 HSP and higher |

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 | |
| • 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 |
| Help system | |
| • Number of characters per info text | 320 |
| Message system | |
| • Number of alarm classes | 32 |
| • Bit messages | |
| — Number of bit messages | 6 000 |
| • 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 | |
| — Number of entries | 1 024 |
| — Circulating buffer | Yes |

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|--|---------|
| — retentive | Yes |
| — maintenance-free | Yes |
| Recipe management | |
| • Number of recipes | 500 |
| • Data records per recipe | 1 000 |
| • Entries per data record | 2 000 |
| • Size of internal recipe memory | 4 Mbyte |
| • Recipe memory expandable | Yes |
| Variables | |
| • Number of variables per device | 4 096 |
| • Number of variables per screen | 400 |
| • Limit values | Yes |
| • Multiplexing | Yes |
| • Structures | Yes |
| • Arrays | Yes |
| Images | |
| • Number of configurable images | 750 |
| • 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 | 600 |
| • 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 | 40 |
| • 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 | 50 000 |
| • Message archive | Yes |
| • Process value archive | Yes |
| • Archiving methods | |
| — Sequential archive | Yes |
| — Short-term archive | Yes |
| • Memory location | |
| — Memory card | Yes |
| — USB memory | Yes |
| — Ethernet | Yes |
| • Data storage format | |
| — 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 |

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| • Report (shift log) | Yes |
| • Hardcopy | Yes |
| • Electronic print to file | Yes; PDF, HTML |
| Character sets | |
| • Keyboard fonts | |
| — 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 as from WinCC V15 or higher |
| • 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 | |
| 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 |

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|--|------------------|
| 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

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|----------------------------|-----|
| Enclosure material (front) | |
| • Plastic | No |
| • Aluminum | Yes |
| • Stainless steel | No |

Dimensions

| | |
|----------------------------|--------|
| Width of the housing front | 415 mm |
| Height of housing front | 310 mm |
| Mounting cutout, width | 396 mm |
| Mounting cutout, height | 291 mm |
| Overall depth | 75 mm |

Weights

| | |
|--------------------------|------------|
| Weight without packaging | 4.4 kg |
| last modified: | 02/06/2020 |