

SIMATIC HMI TP1500 Comfort Pro, for support arm (expandable, round pipe), Comfort Panel, touch operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, WEC 2013, configurable as of WinCC Comfort V14 SP1 with HSP



| General information                                                   |                            |
|-----------------------------------------------------------------------|----------------------------|
| Product type designation                                              | TP1500 Comfort PRO         |
| Display                                                               |                            |
| Design of display                                                     | TFT                        |
| Screen diagonal                                                       | 15.6 in                    |
| Display width                                                         | 344.2 mm                   |
| Display height                                                        | 193.5 mm                   |
| Number of colors                                                      | 16 777 216                 |
| Resolution (pixels)                                                   |                            |
| • Horizontal image resolution                                         | 1 366 pixel                |
| • Vertical image resolution                                           | 768 pixel                  |
| Backlighting                                                          |                            |
| • MTBF backlighting (at 25 °C)                                        | 50 000 h                   |
| • Backlight dimmable                                                  | Yes; 0-100 %               |
| Control elements                                                      |                            |
| Keyboard                                                              |                            |
| • 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; Projective-capacitive |
| Expansions for operator control of the process                        |                            |
| • Direct keys (touch buttons as S7 input I/O)                         | 40                         |
| Installation type/mounting                                            |                            |
| Mounting                                                              | Support arm                |
| Mounting position                                                     | vertical                   |
| Mounting in portrait format possible                                  | No                         |
| 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)          | 1.5 A                                   |
| Starting current inrush I <sup>2</sup> t   | 0.5 A²·s                                |
| <b>Power</b>                               |                                         |
| Active power input, typ.                   | 36 W                                    |
| <b>Processor</b>                           |                                         |
| Processor type                             | X86                                     |
| <b>Storage</b>                             |                                         |
| Flash                                      | Yes                                     |
| RAM                                        | Yes                                     |
| Memory available for user data             | 24 Mbyte                                |
| <b>Type of output</b>                      |                                         |
| Info LED                                   | No                                      |
| Power LED                                  | No                                      |
| Error LED                                  | No                                      |
| Acoustics                                  |                                         |
| • Buzzer                                   | No                                      |
| • Speaker                                  | Yes                                     |
| <b>Time of day</b>                         |                                         |
| Clock                                      |                                         |
| • Hardware clock (real-time)               | Yes                                     |
| • Software clock                           | Yes                                     |
| • retentive                                | Yes; Back-up duration typically 6 weeks |
| • synchronizable                           | Yes                                     |
| <b>Interfaces</b>                          |                                         |
| 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 SD card slots                    | 2                                       |
| With software interfaces                   | No                                      |
| <b>Industrial Ethernet</b>                 |                                         |
| • Industrial Ethernet status LED           | 3                                       |
| • Number of ports of the integrated switch | 2                                       |
| <b>Protocols</b>                           |                                         |
| PROFINET                                   | Yes                                     |
| Supports protocol for PROFINET IO          | Yes                                     |
| IRT                                        | Yes                                     |
| PROFIBUS                                   | Yes                                     |
| EtherNet/IP                                | Yes                                     |
| MPI                                        | Yes                                     |
| <b>Protocols (Ethernet)</b>                |                                         |
| • TCP/IP                                   | Yes                                     |
| • DHCP                                     | Yes                                     |
| • SNMP                                     | Yes                                     |
| • DCP                                      | Yes                                     |
| • LLDP                                     | Yes                                     |
| <b>WEB characteristics</b>                 |                                         |
| • HTTP                                     | Yes                                     |
| • HTTPS                                    | Yes                                     |
| • HTML                                     | Yes                                     |
| • XML                                      | Yes                                     |
| • CSS                                      | Yes                                     |
| • Active X                                 | Yes                                     |
| • JavaScript                               | Yes                                     |
| • Java VM                                  | No                                      |
| <b>Redundancy mode</b>                     |                                         |
| Media redundancy                           |                                         |

|                                                   |                                    |
|---------------------------------------------------|------------------------------------|
| — MRP                                             | Yes                                |
| Further protocols                                 |                                    |
| • CAN                                             | No                                 |
| • MODBUS                                          | Yes                                |
| <b>Interrupts/diagnostics/status information</b>  |                                    |
| Diagnoses                                         |                                    |
| • Diagnostic information readable                 | Yes; S7 controller                 |
| <b>EMC</b>                                        |                                    |
| 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                                 |
| <b>Degree and class of protection</b>             |                                    |
| IP (at the front)                                 | IP65                               |
| IP (rear)                                         | IP65                               |
| NEMA (front)                                      |                                    |
| • Enclosure Type 4 at the front                   | Yes                                |
| • Enclosure Type 4x at the front                  | Yes                                |
| <b>Standards, approvals, certificates</b>         |                                    |
| CE mark                                           | Yes                                |
| cULus                                             | Yes                                |
| RCM (formerly C-TICK)                             | Yes                                |
| KC approval                                       | Yes                                |
| <b>Ambient conditions</b>                         |                                    |
| 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.                 | 45 °C                              |
| Operation (max. tilt angle)                       |                                    |
| — At maximum tilt angle, min.                     | 0 °C                               |
| — At maximum tilt angle, max.                     | 40 °C                              |
| Ambient temperature during storage/transportation |                                    |
| • min.                                            | -20 °C                             |
| • max.                                            | 60 °C                              |
| Relative humidity                                 |                                    |
| • Operation, max.                                 | 90 %; no condensation              |
| <b>Operating systems</b>                          |                                    |
| proprietary                                       | No                                 |
| pre-installed operating system                    |                                    |
| • Windows CE                                      | Yes; Windows Embedded Compact 2013 |
| <b>Configuration</b>                              |                                    |
| 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        |
| <b>Languages</b>                                  |                                    |

|                                                              |         |
|--------------------------------------------------------------|---------|
| 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 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     |
| • Message buffer                                             |         |
| — Number of entries                                          | 1 024   |
| — Circulating buffer                                         | Yes     |
| — 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                |        |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                             |         |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|
| <ul style="list-style-type: none"><li>• Alarms</li><li>• Report (shift log)</li><li>• Hardcopy</li><li>• Electronic print to file</li></ul>                                                                                                                                                                                                                                                                                                                                                     | Yes<br>Yes<br>Yes<br>Yes; PDF, HTML                                                                                                                                                         |         |                |
| Character sets                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                             |         |                |
| <ul style="list-style-type: none"><li>• Keyboard fonts<ul style="list-style-type: none"><li>— US English</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                                                                    | Yes                                                                                                                                                                                         |         |                |
| Transfer (upload/download)                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                             |         |                |
| <ul style="list-style-type: none"><li>• MPI/PROFIBUS DP</li><li>• USB</li><li>• Ethernet</li><li>• using external storage medium</li></ul>                                                                                                                                                                                                                                                                                                                                                      | Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                    |         |                |
| Process coupling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                             |         |                |
| <ul style="list-style-type: none"><li>• S7-1200</li><li>• S7-1500</li><li>• S7-200</li><li>• S7-300/400</li><li>• LOGO!</li><li>• WinAC</li><li>• SINUMERIK</li><li>• SIMOTION</li><li>• Allen Bradley (EtherNet/IP)</li><li>• Allen Bradley (DF1)</li><li>• Mitsubishi (MC TCP/IP)</li><li>• Mitsubishi (FX)</li><li>• OMRON (FINS TCP)</li><li>• OMRON (Host Link)</li><li>• Modicon (Modbus TCP/IP)</li><li>• Modicon (Modbus RTU)</li><li>• OPC UA Client</li><li>• OPC UA Server</li></ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; With SINUMERIK option package as from WinCC V15 or higher<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |         |                |
| Service tools/configuration aids                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                             |         |                |
| <ul style="list-style-type: none"><li>• Backup/Restore manually</li><li>• Backup/Restore automatically</li><li>• Simulation</li><li>• Device switchover</li></ul>                                                                                                                                                                                                                                                                                                                               | Yes<br>Yes<br>Yes<br>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                                                                                                                                                                                          |         |                |
| 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) <ul style="list-style-type: none"><li>• Plastic</li><li>• Aluminum</li><li>• Stainless steel</li></ul>                                                                                                                                                                                                                                                                                                                                                               | No<br>Yes<br>No                                                                                                                                                                             |         |                |
| Dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                             |         |                |
| Width of the housing front                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 396 mm                                                                                                                                                                                      |         |                |
| Height of housing front                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 225.5 mm; Without basic adapter                                                                                                                                                             |         |                |
| Weights                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                             |         |                |
| Weight (without packaging)                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6.3 kg                                                                                                                                                                                      |         |                |
| Classifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                             |         |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                             | Version | Classification |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | eClass                                                                                                                                                                                      | 16      | 27-33-02-01    |

|        |     |             |
|--------|-----|-------------|
| eClass | 14  | 27-33-02-01 |
| eClass | 12  | 27-33-02-01 |
| eClass | 9.1 | 27-33-02-01 |
| eClass | 9   | 27-33-02-01 |
| eClass | 8   | 27-24-23-02 |
| eClass | 7.1 | 27-24-23-02 |
| eClass | 6   | 27-24-23-02 |
| ETIM   | 10  | EC001412    |
| ETIM   | 9   | EC001412    |
| ETIM   | 8   | EC001412    |
| ETIM   | 7   | EC001412    |
| IDEA   | 4   | 6607        |
| UNSPSC | 15  | 43-21-15-06 |

Approvals / Certificates

General Product Approval



EG-Konf.

[Manufacturer Declaration](#)



RCM

[Miscellaneous](#)



UL



|                          |     |             |
|--------------------------|-----|-------------|
| General Product Approval | EMV | Environment |
|--------------------------|-----|-------------|



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