

SIMATIC HMI TP1500Comfort Pro, support arm, 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 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 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; 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 A <sup>2</sup> ·s      |
| Power                                                                 |                            |
| Active power input, typ.                                              | 36 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 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

#### Media redundancy

|       |     |
|-------|-----|
| — MRP | Yes |
|-------|-----|

### Further protocols

|       |    |
|-------|----|
| • CAN | No |
|-------|----|

|                                                          |                                    |
|----------------------------------------------------------|------------------------------------|
| • EtherNet/IP                                            | Yes                                |
| • MODBUS                                                 | Yes                                |
| <b>Interrupts/diagnostics/status information</b>         |                                    |
| <b>Diagnoses</b>                                         |                                    |
| • Diagnostic information readable                        | Yes; S7 controller                 |
| <b>EMC</b>                                               |                                    |
| <b>Emission of radio interference acc. to EN 55 011</b>  |                                    |
| • 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                                              | No; Available soon                 |
| EAC (formerly Gost-R)                                    | No; Available soon                 |
| <b>Ambient conditions</b>                                |                                    |
| Suited for indoor use                                    | Yes                                |
| Suited for outdoor use                                   | No                                 |
| <b>Ambient temperature during operation</b>              |                                    |
| • 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, min.                            | 40 °C                              |
| <b>Ambient temperature during storage/transportation</b> |                                    |
| • min.                                                   | -20 °C                             |
| • max.                                                   | 60 °C                              |
| <b>Relative humidity</b>                                 |                                    |
| • Operation, max.                                        | 90 %; no condensation              |
| <b>Operating systems</b>                                 |                                    |
| proprietary                                              | No                                 |
| <b>pre-installed operating system</b>                    |                                    |
| • 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                         |
| <b>Configuration software</b>                  |                             |
| • 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>                               |                             |
| <b>Online languages</b>                        |                             |
| • Number of online/runtime languages           | 32                          |
| <b>Project languages</b>                       |                             |
| • Languages per project                        | 32                          |
| <b>Functionality under WinCC (TIA Portal)</b>  |                             |
| 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                         |
| <b>Message system</b>                          |                             |
| • 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     |
| — 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                                                            |
| <b>Security</b>                   |                                                                |
| • Number of user groups           | 50                                                             |
| • Number of user rights           | 32                                                             |
| • Number of users                 | 50                                                             |
| • Password export/import          | Yes                                                            |
| • SIMATIC Logon                   | Yes                                                            |
| <b>Logging through printer</b>    |                                                                |
| • Alarms                          | Yes                                                            |
| • Report (shift log)              | Yes                                                            |
| • Hardcopy                        | Yes                                                            |
| • Electronic print to file        | Yes; PDF, HTML                                                 |
| <b>Character sets</b>             |                                                                |
| • Keyboard fonts                  |                                                                |
| — US English                      | Yes                                                            |
| <b>Transfer (upload/download)</b> |                                                                |
| • MPI/PROFIBUS DP                 | Yes                                                            |
| • USB                             | Yes                                                            |
| • Ethernet                        | Yes                                                            |
| • using external storage medium   | Yes                                                            |
| <b>Process coupling</b>           |                                                                |
| • 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                            |
| 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                                             |                               |
| Width of the housing front                             | 396 mm                        |
| Height of housing front                                | 256 mm; Without basic adapter |
| Overall depth                                          | 101 mm; Without basic adapter |
| Weights                                                |                               |
| Weight without packaging                               | 6.3 kg                        |
| <b>last modified:</b>                                  | 10/09/2020                    |