



SIMATIC HMI TP1500 Basic Color PN, Basic Panel, Touch operation, 15" TFT display, 256 colors, PROFINET interface, configurable as of WinCC flexible 2008 SP2 Compact/ WinCC Basic V10.5/ STEP 7 Basic V10.5, contains open-source software, which is provided free of charge see enclosed CD

| General information                                                   |                        |
|-----------------------------------------------------------------------|------------------------|
| Product type designation                                              | TP1500 Basic color PN  |
| Display                                                               |                        |
| Design of display                                                     | TFT                    |
| Screen diagonal                                                       | 15 in                  |
| Display width                                                         | 304.1 mm               |
| Display height                                                        | 228.1 mm               |
| Number of colors                                                      | 256                    |
| Resolution (pixels)                                                   |                        |
| • Horizontal image resolution                                         | 1 024 pixel            |
| • Vertical image resolution                                           | 768 pixel              |
| Backlighting                                                          |                        |
| • MTBF backlighting (at 25 °C)                                        | 50 000 h               |
| • Backlight dimmable                                                  | No                     |
| Control elements                                                      |                        |
| Keyboard fonts                                                        |                        |
| • Function keys                                                       |                        |
| — Number of function keys                                             | 0                      |
| — Number of function keys with LEDs                                   | 0                      |
| • Keys with LED                                                       | No                     |
| • System keys                                                         | No                     |
| • Numeric keyboard                                                    | Yes; Onscreen keyboard |
| • alphanumeric keyboard                                               | Yes; Onscreen keyboard |
| Touch operation                                                       |                        |
| • Design as touch screen                                              | Yes; Analog-resistive  |
| Installation type/mounting                                            |                        |
| Mounting position                                                     | vertical               |
| Rack mounting                                                         | No                     |
| Wall mounting/direct mounting                                         | No                     |
| Mounting in portrait format possible                                  | No                     |
| 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)                | 0.8 A                        |
| Starting current inrush I <sub>st</sub>          | 0.2 A <sup>2</sup> ·s        |
| <b>Power</b>                                     |                              |
| Active power input, typ.                         | 20 W                         |
| <b>Processor</b>                                 |                              |
| Processor type                                   | RISC 32 bit                  |
| <b>Memory</b>                                    |                              |
| Flash                                            | Yes                          |
| RAM                                              | Yes                          |
| Memory available for user data                   | 2 Mbyte                      |
| <b>Type of output</b>                            |                              |
| Acoustics                                        |                              |
| • Buzzer                                         | Yes                          |
| • Speaker                                        | No                           |
| <b>Time of day</b>                               |                              |
| Clock                                            |                              |
| • Hardware clock (real-time)                     | No                           |
| • Software clock                                 | Yes                          |
| • retentive                                      | No                           |
| • synchronizable                                 | Yes                          |
| <b>Interfaces</b>                                |                              |
| Number of industrial Ethernet interfaces         | 1                            |
| Number of RS 485 interfaces                      | 0                            |
| Number of RS 422 interfaces                      | 0                            |
| Number of RS 232 interfaces                      | 0                            |
| Number of USB interfaces                         | 0                            |
| Number of 20 mA interfaces (TTY)                 | 0                            |
| Number of parallel interfaces                    | 0                            |
| Number of other interfaces                       | 0                            |
| Number of SD card slots                          | 0                            |
| With software interfaces                         | No                           |
| <b>Industrial Ethernet</b>                       |                              |
| • Industrial Ethernet status LED                 | 2                            |
| <b>Protocols</b>                                 |                              |
| PROFINET                                         | Yes                          |
| Supports protocol for PROFINET IO                | No                           |
| IRT                                              | No                           |
| PROFIBUS                                         | No                           |
| EtherNet/IP                                      | Yes                          |
| MPI                                              | No                           |
| <b>Protocols (Ethernet)</b>                      |                              |
| • TCP/IP                                         | Yes                          |
| • DHCP                                           | Yes                          |
| • SNMP                                           | Yes                          |
| • DCP                                            | Yes                          |
| • LLDP                                           | Yes                          |
| <b>WEB characteristics</b>                       |                              |
| • HTTP                                           | No                           |
| • HTML                                           | No                           |
| <b>Further protocols</b>                         |                              |
| • CAN                                            | No                           |
| • MODBUS                                         | Yes; Modicon (MODBUS TCP/IP) |
| <b>Interrupts/diagnostics/status information</b> |                              |
| <b>Diagnoses</b>                                 |                              |
| • Diagnostic information readable                | No                           |
| <b>Degree and class of protection</b>            |                              |
| IP (at the front)                                | IP65                         |
| IP (rear)                                        | IP20                         |
| 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>Use in hazardous areas</b>                            |                                              |
| • ATEX Zone 2                                            | No                                           |
| • ATEX Zone 22                                           | No                                           |
| • cULus Class I Zone 1                                   | No                                           |
| • cULus Class I Zone 2, Division 2                       | No                                           |
| • FM Class I Division 2                                  | No                                           |
| <b>Marine approval</b>                                   |                                              |
| • Germanischer Lloyd (GL)                                | No                                           |
| • American Bureau of Shipping (ABS)                      | No                                           |
| • Bureau Veritas (BV)                                    | No                                           |
| • Det Norske Veritas (DNV)                               | No                                           |
| • Lloyds Register of Shipping (LRS)                      | No                                           |
| • Nippon Kaiji Kyokai (Class NK)                         | No                                           |
| • Polski Rejestr Statkow (PRS)                           | No                                           |
| <b>Ambient conditions</b>                                |                                              |
| <b>Ambient temperature during operation</b>              |                                              |
| Operation (vertical installation)                        |                                              |
| — For vertical installation, min.                        | 0 °C                                         |
| — For vertical installation, max.                        | 50 °C                                        |
| Operation (max. tilt angle)                              |                                              |
| — At maximum tilt angle, min.                            | 0 °C                                         |
| — At maximum tilt angle, max.                            | 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                                              | Yes                                          |
| <b>pre-installed operating system</b>                    |                                              |
| • Windows CE                                             | No                                           |
| <b>configuration / header</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)                              | Yes; via integrated WinCC Basic (TIA Portal) |
| • STEP 7 Professional (TIA Portal)                       | Yes; via integrated WinCC Basic (TIA Portal) |
| • WinCC flexible Compact                                 | Yes                                          |
| • WinCC flexible Standard                                | Yes                                          |
| • WinCC flexible Advanced                                | Yes                                          |
| • WinCC Basic (TIA Portal)                               | Yes                                          |
| • WinCC Comfort (TIA Portal)                             | Yes                                          |
| • WinCC Advanced (TIA Portal)                            | Yes                                          |
| • WinCC Professional (TIA Portal)                        | Yes                                          |
| <b>Languages</b>                                         |                                              |
| <b>Online languages</b>                                  |                                              |
| • Number of online/runtime languages                     | 5                                            |
| <b>Project languages</b>                                 |                                              |
| • Languages per project                                  | 32                                           |

| Functionality under WinCC (TIA Portal)                       |          |
|--------------------------------------------------------------|----------|
| Libraries                                                    | Yes      |
| Applications/options                                         | none     |
| • Web browser                                                | No       |
| • SIMATIC WinCC Sm@rtServer                                  | No       |
| Task planner                                                 |          |
| • time-controlled                                            | No       |
| • task-controlled                                            | Yes      |
| Message system                                               |          |
| • Number of alarm classes                                    | 32       |
| • Bit messages                                               | Yes      |
| — Number of bit messages                                     | 200      |
| • Analog messages                                            | Yes      |
| — Number of analog messages                                  | 15       |
| • System messages HMI                                        | Yes      |
| • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... ) | No       |
| • Number of characters per message                           | 80       |
| • Number of process values per message                       | 8        |
| • Message indicator                                          | Yes      |
| • Message buffer                                             |          |
| — Number of entries                                          | 256      |
| — Circulating buffer                                         | Yes      |
| — retentive                                                  | Yes      |
| — maintenance-free                                           | Yes      |
| Recipe management                                            |          |
| • Number of recipes                                          | 5        |
| • Data records per recipe                                    | 20       |
| • Entries per data record                                    | 20       |
| • Size of internal recipe memory                             | 40 kbyte |
| • Recipe memory expandable                                   | No       |
| Variables                                                    |          |
| • Number of variables per device                             | 500      |
| • Number of variables per screen                             | 30       |
| • Limit values                                               | Yes      |
| • Multiplexing                                               | Yes      |
| • Structures                                                 | No       |
| • Arrays                                                     | Yes      |
| Images                                                       |          |
| • Number of configurable images                              | 50       |
| • Permanent window/default                                   | Yes      |
| • Global image                                               | Yes      |
| • Image selection by PLC                                     | Yes      |
| • Image number in the PLC                                    | Yes      |
| Image objects                                                |          |
| • Number of objects per image                                | 30       |
| • 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                       | 5        |
| • Alarm view                                                 | Yes      |
| • Trend view                                                 | Yes      |

|                                                        |     |
|--------------------------------------------------------|-----|
| • User view                                            | Yes |
| • Status/control                                       | No  |
| • Sm@rtClient view                                     | No  |
| • Recipe view                                          | Yes |
| • f(x) trend view                                      | No  |
| • System diagnostics view                              | No  |
| • Media Player                                         | No  |
| • Bar graphs                                           | Yes |
| • Sliders                                              | No  |
| • Pointer instruments                                  | No  |
| • Analog/digital clock                                 | No  |
| <b>Lists</b>                                           |     |
| • Number of text lists per project                     | 150 |
| • Number of entries per text list                      | 30  |
| • Number of graphics lists per project                 | 100 |
| • Number of entries per graphics list                  | 30  |
| <b>Archiving</b>                                       |     |
| • Number of archives per device                        | 0   |
| <b>Security</b>                                        |     |
| • Number of user groups                                | 50  |
| • Number of user rights                                | 32  |
| • Number of users                                      | 50  |
| • Password export/import                               | No  |
| • SIMATIC Logon                                        | No  |
| <b>Character sets</b>                                  |     |
| • Keyboard fonts<br>— US English                       | Yes |
| <b>Transfer (upload/download)</b>                      |     |
| • MPI/PROFIBUS DP                                      | No  |
| • USB                                                  | No  |
| • Ethernet                                             | Yes |
| • using external storage medium                        | No  |
| <b>Process coupling</b>                                |     |
| • S7-1200                                              | Yes |
| • S7-1500                                              | Yes |
| • S7-200                                               | Yes |
| • S7-300/400                                           | Yes |
| • LOGO!                                                | Yes |
| • WinAC                                                | Yes |
| • SINUMERIK                                            | No  |
| • SIMOTION                                             | No  |
| • Allen Bradley (EtherNet/IP)                          | Yes |
| • Allen Bradley (DF1)                                  | No  |
| • Mitsubishi (MC TCP/IP)                               | Yes |
| • Mitsubishi (FX)                                      | No  |
| • OMRON (FINS TCP)                                     | No  |
| • OMRON (LINK/Multilink)                               | No  |
| • Modicon (Modbus TCP/IP)                              | Yes |
| • Modicon (Modbus)                                     | Yes |
| <b>Service tools/configuration aids</b>                |     |
| • Backup/Restore manually                              | Yes |
| • Backup/Restore automatically                         | No  |
| • Simulation                                           | Yes |
| • Device switchover                                    | Yes |
| <b>Peripherals/Options</b>                             |     |
| Printer                                                | No  |
| SIMATIC HMI MM memory card: Multi Media Card           | No  |
| SIMATIC HMI SD memory card: Secure Digital memory card | No  |
| USB memory                                             | No  |

| Mechanics/material         |                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------|
| Enclosure material (front) |                                                                                             |
| • Plastic                  | Yes                                                                                         |
| • Aluminum                 | No                                                                                          |
| • Stainless steel          | No                                                                                          |
| Dimensions                 |                                                                                             |
| Width of the housing front | 400 mm                                                                                      |
| Height of housing front    | 310 mm                                                                                      |
| Mounting cutout, width     | 367 mm                                                                                      |
| Mounting cutout, height    | 289 mm                                                                                      |
| Overall depth              | 60 mm                                                                                       |
| Weights                    |                                                                                             |
| Weight (without packaging) | 4.2 kg                                                                                      |
| Weight (with packaging)    | 4.68 kg                                                                                     |
| last modified:             | 5/27/2022  |