

SIMATIC HMI TP1500 Comfort Outdoor, Comfort Panel, Touch operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0 (Microsoft Support included Security updates discontinued) configurable from WinCC Comfort V13 SP1, HSP



### General information

Product type designation	TP1500 Comfort Outdoor
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### Display

Design of display	TFT, bonded, daylight-readable
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Screen diagonal	15.4 in
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Display width	331.2 mm
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Display height	207 mm
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Number of colors	16 777 216
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### Resolution (pixels)

- |                               |             |
|-------------------------------|-------------|
| • Horizontal image resolution | 1 280 Pixel |
| • Vertical image resolution   | 800 Pixel   |

### Backlighting

- |                                |   |
|--------------------------------|---|
| • MTBF backlighting (at 25 °C) | 50 000 h  |
| • Backlight dimmable           | Yes; LED, can be dimmed manually or automatically |

### Control elements

#### Keyboard fonts

- |                           |   |
|---------------------------|---|
| • Function keys           |   |
| — Number of function keys | 0 |

• Keys with LED	No
• System keys	No
• Numeric keyboard	Yes; Onscreen keyboard
• alphanumeric keyboard	Yes; Onscreen keyboard
<b>Touch operation</b>	
• Design as touch screen	Yes; analog, resistive
<b>Expansions for operator control of the process</b>	
• DP direct LEDs (LEDs as S7 output I/O) — F1...Fx	0
• Direct keys (keys as S7 input I/O) — F1...Fx	0
• Direct keys (touch buttons as S7 input I/O)	40
<b>Installation type/mounting</b>	
Mounting position	vertical
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°
<b>Supply voltage</b>	
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
<b>Input current</b>	
Current consumption (rated value)	1.3 A
Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s
<b>Power</b>	
Active power input, typ.	32 W
<b>Processor</b>	
Processor type	X86
<b>Memory</b>	
Flash	Yes
RAM	Yes
Memory available for user data	12 Mbyte
<b>Type of output</b>	
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 No
- retentive Yes; Back-up duration typically 6 weeks
- synchronizable Yes

## Interfaces

Number of industrial Ethernet interfaces	2
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	1
Number of RS 232 interfaces	0
Number of USB interfaces	2; USB 2.0
• USB Mini B	1; 5-pole
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	0
Number of SD card slots	2
With software interfaces	No

### Industrial Ethernet

- Industrial Ethernet status LED 2
- Number of ports of the integrated switch 2

## Protocols

PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes; WinCC V13 SP1 HSP or higher
PROFIBUS	Yes
MPI	Yes

### Protocols (Ethernet)

- TCP/IP Yes
- DHCP Yes
- SNMP Yes
- DCP Yes
- LLDP Yes

### WEB characteristics

- HTTP Yes
- HTTPS No
- HTML Yes
- XML No
- CSS Yes
- Active X No

• JavaScript	Yes
• Java VM	No
<b>Redundancy mode</b>	
• MRP	Yes; WinCC V13 SP1 HSP or higher
<b>Further protocols</b>	
• CAN	No
• EtherNet/IP	Yes
• MODBUS	Yes
<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)	IP66
Enclosure Type 4 at the front	Yes
Enclosure Type 4x at the front	Yes
IP (rear)	IP20
<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	Yes; For inscription on device rating plate
• ATEX Zone 22	Yes; For inscription on device rating plate
• IECEx Zone 2	Yes; For inscription on device rating plate
• IECEx Zone 22	Yes; For inscription on device rating plate
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes; For inscription on device rating plate
• FM Class I Division 2	Yes; For inscription on device rating plate
<b>Marine approval</b>	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes; Available soon
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	No; Available soon
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes; Available soon
• Polski Rejestr Statkow (PRS)	No
• Chinese Classification Society (CCS)	Yes; Available soon
• Compass working clearance	5 m

Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• Operation (vertical installation) <ul style="list-style-type: none"> <li>— For vertical installation, min. -30 °C</li> <li>— For vertical installation, max. 60 °C; (55 °C, see entry ID: 64847814)</li> </ul> </li> <li>• Operation (max. tilt angle) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min. -30 °C</li> <li>— At maximum tilt angle, min. 50 °C</li> </ul> </li> <li>• Operation (vertical installation, portrait format) <ul style="list-style-type: none"> <li>— For vertical installation, min. -30 °C</li> <li>— For vertical installation, max. 50 °C</li> </ul> </li> <li>• Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min. -30 °C</li> <li>— At maximum tilt angle, min. 45 °C</li> </ul> </li> </ul>	
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> <li>• min. -30 °C</li> <li>• max. 70 °C</li> </ul>	
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max. 3 000 m; Depending on the operating temperature</li> </ul>	
Relative humidity	
<ul style="list-style-type: none"> <li>• Operation, max. 90 %; no condensation</li> </ul>	
Operating systems	
proprietary	No
pre-installed operating system	
<ul style="list-style-type: none"> <li>• Windows CE Yes</li> </ul>	
Configuration	
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	
<ul style="list-style-type: none"> <li>• STEP 7 Basic (TIA Portal) No</li> <li>• STEP 7 Professional (TIA Portal) No</li> <li>• WinCC flexible Compact No</li> <li>• WinCC flexible Standard No</li> <li>• WinCC flexible Advanced No</li> <li>• WinCC Basic (TIA Portal) No</li> <li>• WinCC Comfort (TIA Portal) Yes; WinCC V13 SP1 Update 7 + HSP or higher</li> </ul>	

- WinCC Advanced (TIA Portal)
- WinCC Professional (TIA Portal)

Yes; WinCC V13 SP1 Update 7 + HSP or higher  
 Yes; WinCC V13 SP1 Update 7 + HSP or higher

Languages	
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	70
Message system	
• Number of alarm classes	32
• Bit messages	
— Number of bit messages	4 000
• Analog messages	
— Number of analog messages	200
• S7 alarm number procedure	Yes
• System messages HMI	Yes
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	Yes
• Number of characters per message	80
• Number of process values per message	8
• Acknowledgment groups	Yes
• Message indicator	Yes
• Message buffer	
— Number of entries	1 024
— Circulating buffer	Yes
— retentive	Yes

— maintenance-free	Yes
<b>Recipe management</b>	
• Number of recipes	300
• Data records per recipe	500
• Entries per data record	1 000
• Size of internal recipe memory	2 Mbyte
• Recipe memory expandable	Yes
<b>Variables</b>	
• Number of variables per device	2 048
• Number of variables per screen	400
• Limit values	Yes
• Multiplexing	Yes
• Structures	Yes
• Arrays	Yes
<b>Images</b>	
• Number of configurable images	500
• Permanent window/default	Yes
• Global image	Yes
• Image selection by PLC	Yes
• Image number in the PLC	Yes
<b>Image objects</b>	
• Number of objects per image	400
• Text fields	Yes
• I/O fields	Yes
• Graphic I/O fields (graphics list)	Yes
• Symbolic I/O fields (text list)	Yes
• Date/time fields	Yes
• Switches	Yes
• Buttons	Yes
• Graphic display	Yes
• Icons	Yes
• Geometric objects	Yes
<b>Complex image objects</b>	
• Number of complex objects per screen	20
• Alarm view	Yes
• Trend view	Yes
• User view	Yes
• Status/control	Yes
• Sm@rtClient view	Yes
• Recipe view	Yes
• f(x) trend view	Yes

• System diagnostics view	Yes
• Media Player	Yes
• IP camera display	Yes; Webcam type see FAQs
• Bar graphs	Yes
• Sliders	Yes
• Pointer instruments	Yes
• Analog/digital clock	Yes
<b>Lists</b>	
• 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
<b>Archiving</b>	
• Number of archives per device	50
• Number of entries per archive	20 000
• 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; Backup/restore
<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
• 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
<b>Service tools/configuration aids</b>	
• Backup/Restore manually	Yes
• Backup/Restore automatically	Yes
• Simulation	Yes
• Device switchover	Yes
<b>Peripherals/Options</b>	
<b>Peripherals</b>	
• Printer	Yes
• SIMATIC HMI MM memory card: Multi Media Card	Yes
• SIMATIC HMI SD memory card: Secure Digital memory card	Yes
• SIMATIC HMI CF memory card Compact Flash Card	No
• USB memory	Yes; e.g. USB RFID reader, see FAQ entry ID: 99808171
• SIMATIC IPC USB Flashdrive (USB stick)	Yes

- SIMATIC HMI USB stick
- Network camera

Yes  
 Yes; See FAQ Entry ID: 62383298 and entry ID: 65647473

### Accessories

Expansion module	Optional e.g. USB RFID reader, see FAQ entry ID: 99808171
Further accessories are available	Yes; Mounting clips and 2-pin power supply connector

### Mechanics/material

Enclosure material (front)	
<ul style="list-style-type: none"> <li>• Plastic</li> </ul>	No
<ul style="list-style-type: none"> <li>• Aluminum</li> </ul>	Yes; Powder-coated, UV resistant
<ul style="list-style-type: none"> <li>• Stainless steel</li> </ul>	No

### Dimensions

Width of the housing front	415 mm
Height of housing front	310 mm
Mounting cutout, width	396 mm
Mounting cutout, height	291 mm
Overall depth	77 mm

### Weights

Weight without packaging	4 kg
Weight incl. packaging	6.2 kg

### Other

Note: Power, quantity structure and performance correspond to a standard 12" Comfort Panel

**last modified:** 06/03/2019