



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
Display	
Design of display	TFT, bonded, daylight-readable
Screen diagonal	15.4 in
Display width	331.2 mm
Display height	207 mm
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	1 280 pixel
• Vertical image resolution	800 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h
• Backlight dimmable	Yes; LED, can be dimmed manually or automatically
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
Expansions for operator control of the process	
• 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
Installation type/mounting	
Mounting position	vertical
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V

permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
<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
<b>Time of day</b>	
Clock	
• Hardware clock (real-time)	Yes
• Software clock	No
• retentive	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes
<b>Interfaces</b>	
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
<b>Industrial Ethernet</b>	
• Industrial Ethernet status LED	2
• Number of ports of the integrated switch	2
<b>Protocols</b>	
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes; WinCC V13 SP1 HSP or higher
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	No
• HTML	Yes
• XML	No
• CSS	Yes

• Active X	No
• JavaScript	Yes
• Java VM	No
<b>Redundancy mode</b>	
Media redundancy	
— MRP	Yes; WinCC V13 SP1 HSP or higher
<b>Further protocols</b>	
• CAN	No
• MODBUS	Yes
<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)	IP66
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	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; in preparation
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	No; in preparation
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes; in preparation
• Polski Rejestr Statkow (PRS)	No
• Chinese Classification Society (CCS)	Yes; in preparation
• Compass working clearance	5 m
<b>Ambient conditions</b>	
Suited for indoor use	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant
<b>Ambient temperature during operation</b>	
Operation (vertical installation)	
— For vertical installation, min.	-30 °C
— For vertical installation, max.	60 °C; (55 °C, see entry ID: 64847814)
Operation (max. tilt angle)	
— At maximum tilt angle, min.	-30 °C
— At maximum tilt angle, max.	50 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	-30 °C
— For vertical installation, max.	50 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	-30 °C
— At maximum tilt angle, max.	45 °C
Ambient temperature during storage/transportation	

• min.	-30 °C
• max.	70 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	3 000 m; Depending on the operating temperature
<b>Relative humidity</b>	
• Operation, max.	90 %; no condensation
<b>Operating systems</b>	
proprietary	No
<b>pre-installed operating system</b>	
• Windows CE	Yes
<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)	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; WinCC V13 SP1 Update 7 + HSP or higher
• WinCC Advanced (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher
• WinCC Professional (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or 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
<b>Applications/options</b>	
• 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
<b>Task planner</b>	
• time-controlled	Yes
• task-controlled	Yes
<b>Help system</b>	
• Number of characters per info text	70
<b>Message system</b>	
• 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 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

<ul style="list-style-type: none"> <li>● Message buffer <ul style="list-style-type: none"> <li>— Number of entries</li> <li>— Circulating buffer</li> <li>— retentive</li> <li>— maintenance-free</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>1 024</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Recipe management</b>	
<ul style="list-style-type: none"> <li>● Number of recipes</li> <li>● Data records per recipe</li> <li>● Entries per data record</li> <li>● Size of internal recipe memory</li> <li>● Recipe memory expandable</li> </ul>	<ul style="list-style-type: none"> <li>300</li> <li>500</li> <li>1 000</li> <li>2 Mbyte</li> <li>Yes</li> </ul>
<b>Variables</b>	
<ul style="list-style-type: none"> <li>● Number of variables per device</li> <li>● Number of variables per screen</li> <li>● Limit values</li> <li>● Multiplexing</li> <li>● Structures</li> <li>● Arrays</li> </ul>	<ul style="list-style-type: none"> <li>2 048</li> <li>400</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Images</b>	
<ul style="list-style-type: none"> <li>● Number of configurable images</li> <li>● Permanent window/default</li> <li>● Global image</li> <li>● Image selection by PLC</li> <li>● Image number in the PLC</li> </ul>	<ul style="list-style-type: none"> <li>500</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Image objects</b>	
<ul style="list-style-type: none"> <li>● Number of objects per image</li> <li>● Text fields</li> <li>● I/O fields</li> <li>● Graphic I/O fields (graphics list)</li> <li>● Symbolic I/O fields (text list)</li> <li>● Date/time fields</li> <li>● Switches</li> <li>● Buttons</li> <li>● Graphic display</li> <li>● Icons</li> <li>● Geometric objects</li> </ul>	<ul style="list-style-type: none"> <li>400</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Complex image objects</b>	
<ul style="list-style-type: none"> <li>● Number of complex objects per screen</li> <li>● Alarm view</li> <li>● Trend view</li> <li>● User view</li> <li>● Status/control</li> <li>● Sm@rtClient view</li> <li>● Recipe view</li> <li>● f(x) trend view</li> <li>● System diagnostics view</li> <li>● Media Player</li> <li>● IP camera display</li> <li>● Bar graphs</li> <li>● Sliders</li> <li>● Pointer instruments</li> <li>● Analog/digital clock</li> </ul>	<ul style="list-style-type: none"> <li>20</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes; Webcam type see FAQs</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Lists</b>	
<ul style="list-style-type: none"> <li>● Number of text lists per project</li> <li>● Number of entries per text list</li> <li>● Number of graphics lists per project</li> <li>● Number of entries per graphics list</li> </ul>	<ul style="list-style-type: none"> <li>500</li> <li>500</li> <li>500</li> <li>500</li> </ul>
<b>Archiving</b>	
<ul style="list-style-type: none"> <li>● Number of archives per device</li> <li>● Number of entries per archive</li> <li>● Message archive</li> </ul>	<ul style="list-style-type: none"> <li>50</li> <li>20 000</li> <li>Yes</li> </ul>

• Process value archive	Yes
• Archiving methods	Yes
— Sequential archive	Yes
— Short-term archive	Yes
• Memory location	Yes
— Memory card	Yes
— USB memory	Yes
— Ethernet	Yes
• Data storage format	Yes
— 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	Yes
— 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>	
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	Yes
Network camera	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)	
• Plastic	No
• Aluminum	Yes; Powder-coated, UV resistant
• Stainless steel	No

### Dimensions

Width of the housing front	415 mm
Height of housing front	310 mm
Mounting cutout, width	396 mm
Mounting cutout, height	291 mm
Overall depth	73.2 mm

### Weights

Weight (without packaging)	4 kg
Weight (with packaging)	6.2 kg

### Other

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

	Version	Classification
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

[Manufacturer Declaration](#)



[Miscellaneous](#)



#### EMV For use in hazardous locations



[FM](#)



[CCC-Ex](#)

#### For use in hazardous locations Maritime application

[EM](#)



[Miscellaneous](#)

[CCC-Ex](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

Maritime application



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