## **SIEMENS**

## **Data sheet**



SIMATIC HMI TP1500 Comfort, 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	
Display		
Design of display	TFT	
Screen diagonal	15.4 in	
Display width	331.2 mm	
Display height	207 mm	
Number of colors	16 777 216	
Resolution (pixels)		
<ul> <li>Horizontal image resolution</li> </ul>	1 280 pixel	
<ul> <li>Vertical image resolution</li> </ul>	800 pixel	
Backlighting		
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	80 000 h	
Backlight dimmable	Yes; 0-100 %	
Control elements		
Keyboard fonts		
Function keys		
<ul> <li>Number of function keys</li> </ul>	0	
<ul> <li>Number of function keys with LEDs</li> </ul>	0	
Keys with LED	No	
System keys	No	
<ul> <li>Numeric keyboard</li> </ul>	Yes; Onscreen keyboard	
alphanumeric keyboard	Yes; Onscreen keyboard	
Touch operation		
Design as touch screen	Yes; Analog-resistive	
Expansions for operator control of the process		
<ul> <li>Direct keys (touch buttons as S7 input I/O)</li> </ul>	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	
Input current		

Current consumption (rated value)  Starting current inrush I²t  O.5 A²·s  Power  Active power input, typ.  41 W	
Power Active power input, typ. 41 W	
Active power input, typ. 41 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  A Hardware clock (real time)	
Hardware clock (real-time)     Software clock     Software clock	
Software clock     Yes     retentive	o duration typically 6 weeks
	p duration typically 6 weeks
,	
Interfaces	
	witch) + independent port
	185 combined
Number of RS 422 interfaces 0; together v	vith RS 485
Number of RS 232 interfaces 0	
Number of USB interfaces 2; USB 2.0	
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 3	
Number of ports of the integrated switch     2	
Protocols	
PROFINET Yes	
Supports protocol for PROFINET IO Yes	
IRT Yes	
PROFIBUS Yes	
EtherNet/IP Yes	
MPI Yes	
Protocols (Ethernet)	
• TCP/IP Yes	
• DHCP Yes	
• SNMP Yes	
• DCP Yes	
• LLDP Yes	
WEB characteristics	
• HTTP Yes	
• HTTPS Yes	
• HTML Yes	
<ul><li>HTML</li><li>XML</li><li>Yes</li><li>Yes</li></ul>	
• HTML Yes	
<ul><li>HTML</li><li>XML</li><li>Yes</li><li>Yes</li></ul>	
<ul><li>HTML</li><li>XML</li><li>CSS</li><li>Yes</li><li>Yes</li></ul>	

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Redundancy mode	
Media redundancy	Vee
— MRP	Yes
Further protocols	No
CAN     MODBUS	No
	Yes
Interrupts/diagnostics/status information	
Diagnoses	V 07 1 1
Diagnostic information readable	Yes; S7 controller
EMC	
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
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
Enclosure Type 4 at the front	Yes
Enclosure Type 4x at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
Use in hazardous areas	
ATEX Zone 2	Yes
ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes; For inscription on device rating plate
• cULus Class II Division 2	No; Available soon
FM Class I Division 2  TM Class I Division 2	Yes; For inscription on device rating plate
• FM Class II Division 2	No; Available soon
Marine approval	N.
Germanischer Lloyd (GL)     Germanischer Lloyd (GL)     Germanischer Lloyd (GL)	No
American Bureau of Shipping (ABS)	No
Bureau Veritas (BV)  Pat Name Veritas (BN)	No No
Det Norske Veritas (DNV)      Versen Register of Shinning (KRS)	No No
Korean Register of Shipping (KRS)      Levels Register of Shipping (LRS)	No No
Lloyds Register of Shipping (LRS)     Nippen Kejii Kuckej (Class NK)	No No
Nippon Kaiji Kyokai (Class NK)     Polski Bojostr Statkow (PBS)	No No
Polski Rejestr Statkow (PRS)     Chinese Classification Society (CCS)	No No
Chinese Classification Society (CCS)  Ambient conditions	No
Ambient conditions	V
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
Operation (vertical installation)	0 °C
<ul><li>For vertical installation, min.</li><li>For vertical installation, max.</li></ul>	
	50 °C; (55 °C, see entry ID: 64847814)
Operation (max. tilt angle)	0.00
At maximum tilt angle, min.  At maximum tilt angle, max	0 °C 40 °C
— At maximum tilt angle, max.  Operation (vertical installation, portrait format)	40 6
	0 °C
<ul><li>For vertical installation, min.</li><li>For vertical installation, max.</li></ul>	40 °C
Operation (max. tilt angle, portrait format)	TO C
Operation (max. tilt angle, portrait format)	

— At maximum tilt angle, min.	0 °C
At maximum tilt angle, min.  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
Operation, max.	56 %, no condensation
	Na
proprietary	No
pre-installed operating system  • Windows CE	Vac: Mindayya Embaddad Campact 2012
	Yes; Windows Embedded Compact 2013
configuration / header	
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> <li>STEP 7 Basic (TIA Portal)</li> </ul>	No
<ul> <li>STEP 7 Professional (TIA Portal)</li> </ul>	No
<ul> <li>WinCC flexible Compact</li> </ul>	No
<ul> <li>WinCC flexible Standard</li> </ul>	No
<ul> <li>WinCC flexible Advanced</li> </ul>	No
<ul> <li>WinCC Basic (TIA Portal)</li> </ul>	No
<ul> <li>WinCC Comfort (TIA Portal)</li> </ul>	Yes; V14 SP1 HSP and higher
<ul> <li>WinCC Advanced (TIA Portal)</li> </ul>	Yes; V14 SP1 HSP and higher
<ul> <li>WinCC Professional (TIA Portal)</li> </ul>	Yes; V14 SP1 HSP and higher
Languages	
Online languages	
Number of online/runtime languages	32
Project languages	<u> </u>
Languages per project	32
Functionality under WinCC (TIA Portal)	32
Libraries	Yes
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Applications/options	Voc
Web browser	Yes
Pocket Word	Yes
Pocket Excel	Yes
PDF Viewer	Yes
Media Player	Yes
<ul> <li>SIMATIC WinCC Sm@rtServer</li> </ul>	Yes
SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
<ul><li>time-controlled</li></ul>	Yes
task-controlled	Yes
Help system	
Number of characters per info text	320
Message system	
<ul> <li>Number of alarm classes</li> </ul>	32
Bit messages	
<ul> <li>Number of bit messages</li> </ul>	6 000
<ul> <li>Analog messages</li> </ul>	
Number of analog messages	200
S7 alarm number procedure	Yes
System messages HMI	Yes
System event, more (SIMATIC S7, SINUMERIK,	Yes
SIMOTION, )	
<ul> <li>Number of characters per message</li> </ul>	80
<ul> <li>Number of process values per message</li> </ul>	8

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Acknowledgment groups	Yes
Message indicator	Yes
Message buffer	4.004
— Number of entries	1 024
— Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe management	
<ul> <li>Number of recipes</li> </ul>	500
<ul> <li>Data records per recipe</li> </ul>	1 000
<ul> <li>Entries per data record</li> </ul>	2 000
<ul> <li>Size of internal recipe memory</li> </ul>	4 Mbyte
Recipe memory expandable	Yes
Variables	
<ul> <li>Number of variables per device</li> </ul>	4 096
<ul> <li>Number of variables per screen</li> </ul>	400
<ul><li>Limit values</li></ul>	Yes
<ul> <li>Multiplexing</li> </ul>	Yes
<ul> <li>Structures</li> </ul>	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
	1 es
Complex image objects	40
<ul><li>Number of complex objects per screen</li><li>Alarm view</li></ul>	40 Voc
	Yes
Trend view	Yes
• User view	Yes
Status/control	Yes
Sm@rtClient view	Yes
Recipe view	Yes
• f(x) trend view	Yes
<ul> <li>System diagnostics view</li> </ul>	Yes
Media Player	Yes
HTML browser	Yes
<ul><li>PDF display</li></ul>	Yes
IP camera display	Yes
Bar graphs	Yes
<ul> <li>Sliders</li> </ul>	Yes
<ul> <li>Pointer instruments</li> </ul>	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 graphics lists per project     Number of entries per graphics list	500
Archiving	300
Number of archives per device	50
Number of antitives per archive	50 000
Message archive	Yes
Process value archive	Yes
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Archiving methods     Convertiel archive	Voo
— Sequential archive	Yes
— Short-term archive	Yes
Memory location	V
— 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
<ul> <li>Password export/import</li> </ul>	Yes
SIMATIC Logon	Yes
Logging through printer	
<ul><li>Alarms</li></ul>	Yes
<ul><li>Report (shift log)</li></ul>	Yes
<ul><li>Hardcopy</li></ul>	Yes
Electronic print to file	Yes; PDF, HTML
Character sets	
<ul> <li>Keyboard fonts</li> </ul>	
— US English	Yes
Transfer (upload/download)	
MPI/PROFIBUS DP	Yes
• USB	Yes
• Ethernet	Yes
using external storage medium	Yes
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
<ul><li>WinAC</li></ul>	Yes
<ul><li>SINUMERIK</li></ul>	Yes; With SINUMERIK option package as from WinCC V15 or higher
• SIMOTION	Yes
<ul> <li>Allen Bradley (EtherNet/IP)</li> </ul>	Yes
<ul><li>Allen Bradley (EtherNet/IP)</li><li>Allen Bradley (DF1)</li></ul>	Yes Yes
Allen Bradley (DF1)	Yes
<ul><li>Allen Bradley (DF1)</li><li>Mitsubishi (MC TCP/IP)</li></ul>	Yes Yes
<ul><li>Allen Bradley (DF1)</li><li>Mitsubishi (MC TCP/IP)</li><li>Mitsubishi (FX)</li></ul>	Yes Yes Yes
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> </ul>	Yes Yes Yes No
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> <li>OMRON (LINK/Multilink)</li> </ul>	Yes Yes Yes No Yes
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> <li>OMRON (LINK/Multilink)</li> <li>Modicon (Modbus TCP/IP)</li> </ul>	Yes Yes Yes No Yes Yes
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> <li>OMRON (LINK/Multilink)</li> <li>Modicon (Modbus TCP/IP)</li> <li>Modicon (Modbus)</li> <li>OPC UA Client</li> </ul>	Yes Yes Yes No Yes Yes Yes Yes Yes
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> <li>OMRON (LINK/Multilink)</li> <li>Modicon (Modbus TCP/IP)</li> <li>Modicon (Modbus)</li> <li>OPC UA Client</li> <li>OPC UA Server</li> </ul>	Yes Yes Yes No Yes Yes Yes
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> <li>OMRON (LINK/Multilink)</li> <li>Modicon (Modbus TCP/IP)</li> <li>Modicon (Modbus)</li> <li>OPC UA Client</li> <li>OPC UA Server</li> </ul> Service tools/configuration aids	Yes Yes Yes No Yes Yes Yes Yes Yes
<ul> <li>Allen Bradley (DF1)</li> <li>Mitsubishi (MC TCP/IP)</li> <li>Mitsubishi (FX)</li> <li>OMRON (FINS TCP)</li> <li>OMRON (LINK/Multilink)</li> <li>Modicon (Modbus TCP/IP)</li> <li>Modicon (Modbus)</li> <li>OPC UA Client</li> <li>OPC UA Server</li> </ul>	Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes

<ul> <li>Simulation</li> </ul>	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)	
<ul> <li>Plastic</li> </ul>	No
<ul> <li>Aluminum</li> </ul>	Yes
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	75 mm
Weights	
Weight (without packaging)	4.4 kg