## SIEMENS

## Data sheet

## 6AV2124-0QC24-1AX0

SIMATIC HMI TP1500 Comfort Pro, for supporting foot (expandable, flange at bottom), 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)		
<ul> <li>Horizontal image resolution</li> </ul>	1 366 pixel	
<ul> <li>Vertical image resolution</li> </ul>	768 pixel	
Backlighting		
<ul> <li>MTBF backlighting (at 25 °C)</li> </ul>	50 000 h	
Backlight dimmable	Yes; 0-100 %	
Control elements		
Keyboard fonts		
<ul> <li>Function keys</li> </ul>		
<ul> <li>— Number of function keys</li> </ul>	0	
<ul> <li>— Number of function keys with LEDs</li> </ul>	0	
Keys with LED	No	
<ul> <li>System keys</li> </ul>	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		
<ul> <li>Direct keys (touch buttons as S7 input I/O)</li> </ul>	40	
Installation type/mounting		
Mounting	Pedestal	
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		

	1.5 A
Current consumption (rated value) Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s
Power	0.3 A 'S
	20.141
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	
<ul> <li>Hardware clock (real-time)</li> </ul>	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 other interfaces	0
Number of SD card slots	2
With software interfaces	No
Industrial Ethernet	
<ul> <li>Industrial Ethernet status LED</li> </ul>	3
<ul> <li>Number of ports of the integrated switch</li> </ul>	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
• XML	Yes
• CSS	Yes
Active X	Yes
JavaScript	Yes
• Java VM	No
Redundancy mode	
Media redundancy	
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— MRP	Yes
Further protocols	
• CAN	No
• MODBUS	Yes
Interrupts/diagnostics/status information	
Diagnoses	
Diagnostic information readable	Yes; S7 controller
EMC	
Emission of radio interference acc. to EN 55 011	
<ul> <li>Limit class A, for use in industrial areas</li> </ul>	Yes
• Limit class B, for use in residential areas	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP65
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	No; Available soon
EAC (formerly Gost-R)	No; Available soon
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min.	0°0
— For vertical installation, max.	45 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0°0
— At maximum tilt angle, max.	40 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	00 °C
Relative humidity	
Operation, max.	90 %; no condensation
Operating systems	
proprietary	No
pre-installed operating system	
Windows CE	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	No
<ul> <li>STEP 7 Basic (TIA Portal)</li> <li>STEP 7 Professional (TIA Portal)</li> </ul>	No
WinCC flexible Compact	No
Winder lexible compact     Winder lexible Standard	No
Wind C flexible Standard     Wind C flexible Advanced	No
WinCo liexible Advanced     WinCo liexible Advanced     WinCo liexible Advanced	No
WinCo Dasic (TA Portal)     WinCo 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
Languages	

Online languages	32
Number of online/runtime languages     Project languages	32
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	320
Message system	
Number of alarm classes	32
Bit messages	6.000
— Number of bit messages	6 000
<ul> <li>Analog messages</li> <li>— Number of analog messages</li> </ul>	200
<ul> <li>S7 alarm number procedure</li> </ul>	Yes
System messages HMI	Yes
System event, more (SIMATIC S7, SINUMERIK,	Yes
SIMOTION, )	
Number of characters per message	80
Number of process values per message	8
Acknowledgment groups	Yes
Message indicator	Yes
Message buffer	1.024
— Number of entries     — Circulating buffer	1 024 Yes
— circulating buller — 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	
<ul> <li>Number of variables per device</li> </ul>	4 096
<ul> <li>Number of variables per screen</li> </ul>	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     Slide in images	Yes
<ul><li>Slide-in images</li><li>Image selection by PLC</li></ul>	Yes
Image selection by PLC     Image number in the PLC	Yes
· Inage number III the FLO	100

Image objects	
Image objects	600
Number of objects per image	600 Xee
• 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	
<ul> <li>Number of complex objects per screen</li> </ul>	40
Alarm view	Yes
Trend view	Yes
User view	Yes
Status/control	Yes
<ul> <li>Sm@rtClient view</li> </ul>	Yes
Recipe view	Yes
• f(x) trend view	Yes
<ul> <li>System diagnostics view</li> </ul>	Yes
Media Player	Yes
HTML browser	Yes
PDF display	Yes
<ul> <li>IP camera display</li> </ul>	Yes
Bar graphs	Yes
Sliders	Yes
Pointer instruments	Yes
Analog/digital clock	Yes
Lists	
<ul> <li>Number of text lists per project</li> </ul>	500
<ul> <li>Number of entries per text list</li> </ul>	500
- Number of entities per text list	500
Number of graphics lists per project	500
Number of graphics lists per project	500
<ul> <li>Number of graphics lists per project</li> <li>Number of entries per graphics list</li> </ul>	500
<ul> <li>Number of graphics lists per project</li> <li>Number of entries per graphics list</li> <li>Archiving</li> </ul>	500 500
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Hardcopy	Yes
Electronic print to file	Yes; PDF, HTML
Character sets	
Keyboard fonts	
— US English	Yes
Transfer (upload/download)	165
MPI/PROFIBUS DP	Yes
• USB	Yes
Ethernet	Yes
using external storage medium	Yes
Process coupling	100
• \$7-1200	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
SINOMERAR     SIMOTION	Yes
Allen Bradley (EtherNet/IP)	Yes
Allen Bradley (DF1)	Yes
Mitsubishi (MC TCP/IP)	Yes
Mitsubishi (KX)	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	165
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 MM memory card: Multi Media Card	
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	6.2 kg
Weight (without packaging)	6.3 kg
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