Data sheet

6AV2124-0XC02-0AX1



SIMATIC HMI TP2200 Comfort, Comfort Panel, Touch operation, 22" 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	TP2200 Comfort
Display	
Design of display	TFT
Screen diagonal	21.5 in
Display width	475.2 mm
Display height	267.3 mm
Number of colors	16 777 216
Resolution (pixels)	
 Horizontal image resolution 	1 920 pixel
Vertical image resolution	1 080 pixel
Backlighting	
 MTBF backlighting (at 25 °C) 	30 000 h
Backlight dimmable	Yes; 0-100 %
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	
 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
Input current	

Company company (4.7.0
Current consumption (rated value)	1.7 A
Starting current inrush I²t	0.5 A ² ·s
Power	
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	
Hardware clock (real-time)	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 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	110
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)	163
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
DCP	Yes
• LLDP	Yes
WEB characteristics	100
HTTP	Yes
• HTTPS	Yes
• HTML	Yes
• XML	Yes
• XIVIL • CSS	Yes
Active X Leve Script	Yes
JavaScript JavaSVM	Yes
• Java VM	No

Redundancy mode	
Media redundancy	
— MRP	Yes
Further protocols	165
• CAN	No
MODBUS	Yes
	165
Interrupts/diagnostics/status information	
Diagnoses - Diagnoseis information readable	Voc. C7 controller
Diagnostic information readable	Yes; S7 controller
EMC	
Emission of radio interference acc. to EN 55 011	V
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)	W
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	Yes; For inscription on device rating plate
FM Class II Division 2	No; Available soon
Marine approval	
Germanischer Lloyd (GL)	No
American Bureau of Shipping (ABS)	No
Bureau Veritas (BV)	No
Det Norske Veritas (DNV)	No
Korean Register of Shipping (KRS)	No
Lloyds Register of Shipping (LRS)	No
Nippon Kaiji Kyokai (Class NK) Nippon Kaiji Kyokai (Class NK)	No
Polski Rejestr Statkow (PRS)	No
Chinese Classification Society (CCS)	No
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	0 °C 45 °C
For vertical installation, max. Operation (max. tilt angle)	45 °C
For vertical installation, max. Operation (max. tilt angle) At maximum tilt angle, min.	45 °C 0 °C
— For vertical installation, max. Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, max.	45 °C
— For vertical installation, max. Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, max. Operation (vertical installation, portrait format)	45 °C 0 °C 40 °C
— For vertical installation, max. Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, max. Operation (vertical installation, portrait format) — For vertical installation, min.	45 °C 0 °C 40 °C 0 °C
— For vertical installation, max. Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, max. Operation (vertical installation, portrait format)	45 °C 0 °C 40 °C

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Windows CE		NO
Message Indicator		Ves: Windows Embedded Compact 2013
Message indicator		103, Wildows Embedded Oompact 2010
Alarm system (incl. buffer and acknowledgment) Process value default (input) possible Process value default (input) possible Recipe management STEP 7 Professional (TIA Portal) STEP 7 Professional (TIA Portal) STEP 7 Professional (TIA Portal) VinicC flexible Compact VinicC flexible Standard VinicC flexible Standard VinicC Comfort (TIA Portal) VinicC Basic (TIA Portal) VinicC Comfort (TIA Portal) VinicC Professional (TIA Portal) Vinic VinicC Professional (TIA Portal) Vinic VinicC Professional (TIA Portal) Vinic VinicC Vinic		Vee
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Process value default (input) possible Recipe management Recipe management Professional (TIA Portal) STEP 7 Pasic (TIA Portal) STEP 7 Professional (TIA Portal) WinrCC flexible Compact WinrCC flexible Standard WinrCC flexible Standard WinrCC Cexible Advanced WinrCC Stasic (TIA Portal) WinrCC Comfort (TIA Portal) WinrCC Advanced (TIA Portal) WinrCC Advanced (TIA Portal) WinrCC Advanced (TIA Portal) WinrCC Professional (TIA Portal) WinrC Professional (TIA Portal) WinrCC Professional (TIA Portal) WinrC Professional (TIA Porta		
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 System event, more (SIMATIC S7, SINUMERIK, SIMOTION,) Number of characters per message 	•	Yes
SIMOTION,) • Number of characters per message 80		Yes
	 Number of characters per message 	80
 Number of process values per message 8 	 Number of process values per message 	8
Acknowledgment groups Yes	 Acknowledgment groups 	Yes
Message indicator Yes	Message indicator	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	165
Number of variables per device	4 096
Number of variables per screen	400
Limit values	Yes
Multiplexing	Yes
Structures	Yes
• Arrays	Yes
Images	165
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 selection by TEC Image number in the PLC	Yes
Image number in the PLC	100
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
Complex image objects	
Number of complex objects per screen	40
 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
HTML browser	Yes
PDF display	Yes
· - · - · · · · · · · · · · · · · · · ·	
	Yes
IP camera display	Yes Yes
IP camera displayBar graphs	Yes
IP camera displayBar graphsSlidersPointer instruments	Yes Yes
IP camera displayBar graphsSliders	Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock 	Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock Lists	Yes Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock Lists Number of text lists per project Number of entries per text list 	Yes Yes Yes Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock Lists Number of text lists per project Number of entries per text list Number of graphics lists per project 	Yes Yes Yes Yes Yes 500 500
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock Lists Number of text lists per project Number of entries per text list 	Yes Yes Yes Yes Yes Yes 500 500
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 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock Lists Number of text lists per project Number of entries per text list Number of graphics lists per project Number of entries per graphics list Archiving Number of archives per device 	Yes Yes Yes Yes Yes 500 500 500 500

Process value archive	Vaa
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
Security	
 Number of user groups 	50
 Number of user rights 	32
 Number of users 	50
 Password export/import 	Yes
SIMATIC Logon	Yes
Logging through printer	
Alarms	Yes
Report (shift log)	Yes
Hardcopy	Yes
Electronic print to file	Yes; PDF, HTML
Character sets	
Keyboard fonts	
— 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
• WinAC	Yes
• SINUMERIK	Yes; With SINUMERIK option package as from WinCC V15 or higher
SINUMERIKSIMOTION	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes
SINUMERIKSIMOTIONAllen Bradley (EtherNet/IP)	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes
SINUMERIKSIMOTIONAllen Bradley (EtherNet/IP)Allen Bradley (DF1)	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes Yes No
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes Yes Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically Simulation 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically Simulation 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically Simulation Device switchover 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically Simulation Device switchover Peripherals/Options	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically Simulation Device switchover Peripherals/Options Printer 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes
 SINUMERIK SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) Modicon (Modbus) OPC UA Client OPC UA Server Service tools/configuration aids Backup/Restore manually Backup/Restore automatically Simulation Device switchover Peripherals/Options Printer SIMATIC HMI MM memory card: Multi Media Card 	Yes; With SINUMERIK option package as from WinCC V15 or higher Yes Yes Yes Yes Yes No Yes

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	560 mm
Height of housing front	380 mm
Mounting cutout, width	542 mm
Mounting cutout, height	362 mm
Overall depth	75 mm
Weights	
Weight (without packaging)	6.7 kg