6AV2124-0MC24-0AX0

Data sheet

SIMATIC HMI TP1200 Comfort Pro for support arm (not expandable, flange on top), Comfort Panel, touch operation, 12" Widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, WEC 2013, configurable from WinCC Comfort V14 SP1 with HSP



General information		
Product type designation	TP1200 PRO	
Display		
Design of display	TFT	
Screen diagonal	12.1 in	
Display width	261.1 mm	
Display height	163.2 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) 	80 000 h	
Backlight dimmable	Yes; LED, dimmable	
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; Projective-capacitive	
Expansions for operator control of the process		
 Direct keys (touch buttons as S7 input I/O) 	40	
Installation type/mounting		
Mounting	Support arm	
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	
Current consumption (rated value)	1.5 A
Starting current inrush I²t	0.5 A ² ·s
Power	
	36 W
Active power input, typ.	30 VV
Processor	
Processor type	X86
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	12 Mbyte
Type of output	
Info LED	No
Power LED	No
Error LED	No
Acoustics	INO
	Na
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 No 422 interfaces	o, together with the 400
Number of LISB interfaces	2· LISB 2.0
Number of USB interfaces	2; USB 2.0
Number of SD card slots	2
Number of SD card slots With software interfaces	
Number of SD card slots With software interfaces Industrial Ethernet	2 No
Number of SD card slots With software interfaces Industrial Ethernet • Industrial Ethernet status LED	2 No 3
Number of SD card slots With software interfaces Industrial Ethernet • Industrial Ethernet status LED • Number of ports of the integrated switch	2 No
Number of SD card slots With software interfaces Industrial Ethernet • Industrial Ethernet status LED	2 No 3
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET	2 No 3
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols	2 No 3 2
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET	No 3 2 Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO	No 3 2 Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT	2 No 3 2 Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS	2 No 3 2 Yes Yes Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP	2 No 3 2 Yes Yes Yes Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI	2 No 3 2 Yes Yes Yes Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet)	2 No 3 2 Yes Yes Yes Yes Yes Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP	2 No 3 2 Yes Yes Yes Yes Yes Yes Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP	2 No 3 2 Yes Yes Yes Yes Yes Yes Yes Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP	2 No 3 2 Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP	2 No 3 2 Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP WEB characteristics	2 No 3 2 Yes
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Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP WEB characteristics HTTP HTTPS	2 No 3 2 Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP WEB characteristics HTTP HTTPS HTML	2 No 3 2 Yes
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Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP WEB characteristics HTTP HTTPS HTML XML CSS	2 No 3 2 Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP WEB characteristics HTTP HTTPS HTML XML CSS Active X	2 No 3 2 Yes
Number of SD card slots With software interfaces Industrial Ethernet Industrial Ethernet status LED Number of ports of the integrated switch Protocols PROFINET Supports protocol for PROFINET IO IRT PROFIBUS EtherNet/IP MPI Protocols (Ethernet) TCP/IP DHCP SNMP DCP LLDP WEB characteristics HTTP HTTPS HTML XML CSS	2 No 3 2 Yes

Redundancy mode	
Media redundancy — MRP	Yes
	163
Further protocols • CAN	No
MODBUS	Yes
Interrupts/diagnostics/status information	165
Diagnoses	V 07t
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)	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°C
— For vertical installation, max.	45 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0°C
— At maximum tilt angle, min.	40 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	0° 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 display (output) Process value default (input) possible	Yes
Recipe management	Yes
Configuration software	100
STEP 7 Basic (TIA Portal)	No
STEP / Basic (TIA Portal) STEP 7 Professional (TIA Portal)	No
WinCC flexible Compact	No
WinCC flexible Compact WinCC flexible Standard	
Wincc flexible Standard Wincc flexible Advanced	No No
	No
 WinCC Basic (TIA Portal) 	INO

WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher
WinCC Advanced (TIA Portal)	Yes; V14 SP1 HSP and higher
WinCC Advanced (TIA Fortal) WinCC Professional (TIA Portal)	Yes; V14 SP1 HSP and higher
Languages	res, vir or ritor and higher
Online languages	
Number of online/runtime languages	32
Project languages	32
Languages per project	32
Functionality under WinCC (TIA Portal)	52
Libraries	Voc
	Yes
Applications/options • Web browser	Yes
Pocket Word	Yes
Pocket Excel	Yes
PDF Viewer	Yes
Media Player	Yes
•	Yes
 SIMATIC WinCC Sm@rtServer SIMATIC WinCC Audit 	Yes
Number of Visual Basic Scripts	Yes
Task planner	160
• time-controlled	Yes
task-controlled	Yes
Message system	
Number of alarm classes	32
Bit messages	02
Number of bit messages	4 000
Analog messages	7 000
Number of analog messages	200
S7 alarm number procedure	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
Recipe management	
 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
Variables	
 Number of variables per device 	2 048
 Number of variables per screen 	400
Limit values	Yes
 Multiplexing 	Yes
 Structures 	Yes
Arrays	Yes
Images	
 Number of configurable images 	500
 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 	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
Complex image objects	
Number of complex objects per screen	20
Alarm view	Yes
Trend view	Yes
User view	Yes
Status/control	Yes
Sm@rtClient view	Yes
	Yes
Recipe view f(x) trand view	Yes
• f(x) trend view	
System diagnostics view Modia Player	Yes
Media Player	Yes
HTML browser	Yes
PDF display	Yes
IP camera display	Yes
Bar graphs	Yes
• Sliders	Yes
 Pointer instruments 	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 entries per graphics list	500
Archiving	
 Number of archives per device 	50
 Number of entries per archive 	20 000
 Message archive 	Yes
 Process value archive 	Yes
 Archiving methods 	
Archiving methods— Sequential archive	Yes
_	
— Sequential archive	Yes
— Sequential archive— Short-term archive	Yes
— Sequential archive— Short-term archive• Memory location	Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card 	Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory 	Yes Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet 	Yes Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet • Data storage format 	Yes Yes Yes Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet • Data storage format — CSV 	Yes Yes Yes Yes Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet • Data storage format — CSV — TXT 	Yes Yes Yes Yes Yes Yes Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet • Data storage format — CSV — TXT — RDB Security 	Yes Yes Yes Yes Yes Yes Yes Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet • Data storage format — CSV — TXT — RDB Security • Number of user groups 	Yes
 — Sequential archive — Short-term archive • Memory location — Memory card — USB memory — Ethernet • Data storage format — CSV — TXT — RDB Security • Number of user groups • Number of user rights 	Yes Yes Yes Yes Yes Yes Yes Yes Yes Yas Yes Yes Yes Yes Yes
Sequential archive Short-term archive • Memory location Memory card USB memory Ethernet • Data storage format CSV TXT RDB Security • Number of user groups • Number of users	Yes Yes Yes Yes Yes Yes Yes Yes You Yes Yes Yes You Yes Yes You Yes Yes Yes
- Sequential archive - Short-term archive • Memory location - Memory card - USB memory - Ethernet • Data storage format - CSV - TXT - RDB Security • Number of user groups • Number of user rights • Number of users • Password export/import	Yes Yes Yes Yes Yes Yes Yes Yes Solution Yes Yes Yes
- Sequential archive - Short-term archive • Memory location - Memory card - USB memory - Ethernet • Data storage format - CSV - TXT - RDB Security • Number of user groups • Number of user rights • Number of users • Password export/import • SIMATIC Logon	Yes Yes Yes Yes Yes Yes Yes Yes You Yes Yes Yes You Yes Yes You Yes Yes Yes
- Sequential archive - Short-term archive • Memory location - Memory card - USB memory - Ethernet • Data storage format - CSV - TXT - RDB Security • Number of user groups • Number of users • Password export/import	Yes Yes Yes Yes Yes Yes Yes Yes Solution Yes Yes 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
• \$7-300/400	Yes
• LOGO!	Yes
WinAC	Yes
SINUMERIK	Yes; With SINUMERIK option package as from WinCC V15 or higher
• 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
Service tools/configuration aids	
 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 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)	
Plastic	No
Aluminum	Yes
Stainless steel	No
Dimensions	
Width of the housing front	313 mm
Height of housing front	226 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter
Weights	
Weight (without packaging)	4.9 kg
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