SIEMENS

Data sheet

6AV2124-0MC24-1AX0

SIMATIC HMI TP1200 Comfort Pro for supporting foot (expandable, flange at bottom), 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



Product type designation TP1200 PRO Display TFT Screen diagonal 12.1 in Display width 261.1 mm Display height 183.2 mm Number of colors 16 777 216 Resolution (pixels) 600 pixel • Horizontal image resolution 800 pixel Backlighting 600 pixel Backlight dimmable Yes; LED, dimmable Control elements 0 Control status 0 • Function keys 0 • Number of function keys 0 • Keys with LED No • System keys No • Numer of function keys with LEDs 0 • Expansions for operator control of the process 0 • Direct keys (ouch buttons as S7 input I/O) 40 Installation type/mounting Pedestal Mounting position vertical Mounting position	General information	
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) 1777 216 Vertical image resolution 1280 pixel Vertical image resolution 800 pixel Backlighting 60 000 h Vertical immable Yes; LED, dimmable Control elements 0 Keyboard fonts 0 – Number of function keys 0 – Numer keyboard Yes; Onscreen keyboard Touch operation Yes; Projective-capacitive Expansions for operator control of the process 0	Product type designation	TP1200 PRO
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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 • Function keys • Function keys 0 • Number of function keys 0 • Number of function keys with LEDs 0 • Keys with LED No • System keys No • Numeric keyboard Yes; Onscreen keyboard • Obsign as touch screen Yes; Onscreen keyboard • Design as touch screen Yes; Projective-capacitive Expansions for operation 0 • Direct keys (touch buttons as S7 input I/O) 40 Installation type/mounting Pedestal Mounting position vertical Mounting in portrait format possible No maximum permissible angle of inclination without external vertical 35° Supply voltage DC	Display height	163.2 mm
• Horizontal image resolution 1 280 pixel • Vertical image resolution 800 pixel Backlighting	Number of colors	16 777 216
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Installation type/mounting Pedestal Mounting position vertical Mounting in portrait format possible No maximum permissible angle of inclination without external ventilation 35° Supply voltage DC	Expansions for operator control of the process	
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Mounting position vertical Mounting in portrait format possible No maximum permissible angle of inclination without external ventilation 35° Supply voltage DC	Installation type/mounting	
Mounting in portrait format possible No maximum permissible angle of inclination without external ventilation 35° Supply voltage DC	Mounting	Pedestal
maximum permissible angle of inclination without external ventilation 35° Supply voltage DC	Mounting position	vertical
ventilation Supply voltage Type of supply voltage DC	Mounting in portrait format possible	No
Type of supply voltage DC		35°
	Supply voltage	
Rated value (DC) 24 V	Type of supply voltage	DC
	Rated value (DC)	24 V
permissible range, lower limit (DC) 19.2 V	permissible range, lower limit (DC)	19.2 V

permissible range, upper limit (DC)	28.8 V
Input current	
	4.5.4
Current consumption (rated value)	1.5 A
Starting current inrush I ² t	0.5 A ² ·s
Power	
Active power input, typ.	36 W
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	
• 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 USB interfaces	2; USB 2.0
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
• XML	Yes
• CSS	Yes
Active X	Yes
JavaScript	Yes
● Java VM	No

Redundancy mode	
Redundancy mode Media redundancy	
- MRP	Yes
Further protocols	165
• CAN	No
MODBUS	Yes
Interrupts/diagnostics/status information	165
Diagnoses	Ves: 67 centraller
Diagnostic information readable EMC	Yes; S7 controller
Emission of radio interference acc. to EN 55 011	Ver
• 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.	60 °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	
 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 Advanced (TIA Portal) Yes: V14 SP1 HSP and higher Unice Orlessional (TA Portal) Yes: V14 SP1 HSP and higher Indiguages Source of animefurther languages Source of animefurther languages Isource of animefurther Isource of animefurther languages Isource of animefurther Isource of animaters per message Isource of animefurther Isource of anim		
VinCC Professional (TIA Portal) Yes: V14 SP1 HSP and higher Vinct of online languages S2 Number of online languages Languages per project S2 Languages per project S2 Protect analy under WinCC (TIA Porta) Languages Ves Applications/uploins Ves Ves Pocket Evael Ves Pocket Evael Ves Pocket Evael Ves Pocket Evael Ves Ves Pocket Evael Ves V	WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher
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Project languages 32 Functionally under WinGC (TA Portal) 1 Libraries Yes Applications/points Yes • Web browser Yes • Pocket Word Yes • Pocket Exel Yes • Media Payer Yes • Media Payer Yes • SiMATIC WinCC Sing/riferver Yes • SimATIC WinCC Caudit Yes • Number of Visual Basic Scripts Yes • Number of visual Basic Scripts Yes • Number of alarm classes 32 • Bit messages 4000 • Analog messages 200 • S alarm number procedure Yes • System messages HMI Yes • System respect of characters per message 80 • Number of noncess values per message 80 • Number of rol characters per message 80 • Number of rol characters per message 80		
• Languages per project 32 Functionality under WinCC (TIA Portal) Libraries • Veb browser Yes • Veb browser Yes • Veb browser Yes • Ocbat Word Yes • Ocbat Word Yes • Ocbat Word Yes • Dob Viewer Yes • SIMATIC WinCC SagtServer Yes • SIMATIC WinCC Audit Yes • SIMATIC WinCC Audit Yes • Task planner * • time controlled Yes • task controlled Yes • Bitl messages 22 • Bitl messages 20 • System messages system 4000 • Analog messages 20 • System messages HM Yes • System messages HM Yes • System messages Indictor Yes • System messages Indictor Yes • Number of brances per message 80 • Acknowledgment groups Yes • Message indictor Yes • Message indict	Number of online/runtime languages	32
Functionality under Winde (TIA Portal) Litzries Yes Applications/options Yes • Ookek Word Yes • Pocket Excel Yes • Pocket Excel Yes • Market Word ves • Bide Playsr Yes • SIMATIC WinCC CamgetServer Yes • SIMATIC WinCC CamgetServer Yes • SIMATIC WinCC CamgetServer Yes • Sime-Controlled Yes Mumber of size Basic Scripts Tas planner • Number of analog messages - Number of confeactes	Project languages	
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Applicationsloptions Yes • Veb browser Yes • Cocket Excel Yes • PDF Viewer Yes • Midal Player Yes • Midal Player Yes • SIMATIC WinCC Sm@rtServer Yes • SiMATIC WinCC Audit Yes Number of Visual Basic Scripts Yes Task planner ************************************	Functionality under WinCC (TIA Portal)	
• Web browser Yes • Pocket Word Yes • Pocket Excel Yes • EVEr Viewer Yes • Media Player Yes • SIMATIC WinCC Sm@rtServer Yes • SIMATIC WinCC Audt Yes • Mumber of Visual Basic Scripts Yes • Task planner Yes • Immer of Visual Basic Scripts Yes • Immer of Visual Basic Scripts Yes • Immer of Visual Basic Scripts Yes • Immer of Int classes 32 • It messages 4000 • Analog messages	Libraries	Yes
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• PDF ViewerYes• Media PlayerYes• SIMATIC WINCC Surgit/ServerYes• SIMATIC WINCC AuditYes• Number of Visual Basic ScriptsYesTask planner*********************************	 Pocket Word 	Yes
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Message system 32 Number of alarm classes 32 Bit messages 4000 - Number of bit messages 4000 • Analog messages 200 • S7 alarm number procedure Yes • System messages HMI 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 • Mumber of process values per message 300 • Data records per recipe 500 • Entries per data record 1000 • Size of internal recipe memory 2 Mbyte • Recipe memory expandable Yes Variables Yes • Number of variables per screen 400 • Limit values Yes • Mumber of configurable images Yes • Mumber of configurable images 500 • Entries Yes • Mumber of configurable images 500 • Permanent window/default </td <td>time-controlled</td> <td>Yes</td>	time-controlled	Yes
• Number of alarm classes 32 • Bit messages - - Number of bit messages 4000 • Analog messages - - Number of analog messages 200 • S7 alarm number procedure Yes • System messages BHM Yes • System event, more (SIMATIC S7, SINUMERIK, Yes Yes • Simmer of braceters per message 80 • Number of characters per message 80 • Number of process values per message 8 • Acknowledgment groups Yes • Mumber of recipes 300 • Data records per recipe 500 • Entries per data record 1000 • Size of internal recipe memory 2 Mbyte • Recipe memory expandable Yes Variables Yes Variables per date record 400 • Limit values Yes • Mumber of variables per device 2 048 • Number of variables per device 2 048 • Mumber of configurable images Yes • Mumber of configurable images Yes • Arrays Yes • Permanent window/defau	task-controlled	Yes
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• Message indicatorYesRecipe management300• Number of recipes300• Data records per recipe500• Entries per data record1 000• Size of internal recipe memory2 Mbyte• Recipe memory expandableYesVariablesYes• Number of variables per device2 048• Number of variables per screen400• Limit valuesYes• MuttiplexingYes• StructuresYes• ArraysYesImages500• Number of configurable images500• Permanent window/defaultYes• Global imageYes• Stide-in imagesYes• Slide-in imagesYes	 Number of process values per message 	8
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• Permanent window/defaultYes• Global imageYes• Pop-up imagesYes• Slide-in imagesYes		
• Global image Yes • Pop-up images Yes • Slide-in images Yes		
Pop-up images Yes Slide-in images Yes		
• Slide-in images Yes	-	
Image selection by PLC Ves	-	
	Image selection by PLC	Yes
Image number in the PLC Yes		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
Recipe view	Yes
• f(x) trend view	Yes
System diagnostics view	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	163
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	500
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 Short-term archive	Yes
Memory location	Vec
— Memory card	Yes
— USB memory	Yes
— Ethernet	Yes
Data storage format	N/
- CSV	Yes
— TXT	Yes
— RDB	Yes
Security	50
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

- Depart (shift les)	Vee
Report (shift log)	Yes
Hardcopy	Yes
Electronic print to file	Yes; PDF, HTML
Character sets	
Keyboard fonts	Vee
— US English	Yes
Transfer (upload/download) • MPI/PROFIBUS DP	N
	Yes
• USB	Yes
Ethernet	Yes
using external storage medium	1es
Process coupling • S7-1200	Yes
• \$7-1500	Yes
• \$7-100 • \$7-200	Yes
• \$7-200 • \$7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
• SINUMERIK	Yes; With SINUMERIK option package as from WinCC V15 or higher
SINOMERIK 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	Yes; Up to 2 GB
card	
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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