Data sheet

SIPLUS HMI TP1200 Comfort for medial exposure with conformal coating based on 6AV2124-0MC01-0AX0



Figure similar

General information	
Product type designation	TP1200 Comfort
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; 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
Expansions for operator control of the process	
DP direct LEDs (LEDs as S7 output I/O)	
— F1Fx	0
Direct keys (keys as S7 input I/O)	
— F1Fx	0
Direct keys (touch buttons as S7 input I/O)	40
Direct keys (touch buttons as 37 input 170)	
Installation type/mounting	
Mounting position	vertical
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without	35°
external ventilation	
Supply voltage	
Supply voltage Type of supply voltage	DC
Type of supply voltage Rated value (DC)	DC 24 V
Type of supply voltage Rated value (DC) permissible range, lower limit (DC)	24 V 19.2 V
Type of supply voltage Rated value (DC)	24 V
Type of supply voltage Rated value (DC) permissible range, lower limit (DC)	24 V 19.2 V
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC)	24 V 19.2 V
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current	24 V 19.2 V 28.8 V
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t	24 V 19.2 V 28.8 V 0.85 A
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t	24 V 19.2 V 28.8 V 0.85 A
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ.	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ.	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ.	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ. Processor Processor type	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ. Processor Processor type Memory	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ. Processor Processor type Memory Flash	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s 20 W X86
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ. Processor Processor type Memory Flash RAM Memory available for user data	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s 20 W X86
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ. Processor Processor type Memory Flash RAM Memory available for user data Type of output	24 V 19 2 V 28.8 V 0.85 A 0.5 A²-s 20 W X86 Yes Yes 12 Mbyte
Type of supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Input current Current consumption (rated value) Starting current inrush I²t Power Active power input, typ. Processor Processor type Memory Flash RAM Memory available for user data	24 V 19.2 V 28.8 V 0.85 A 0.5 A ² ·s 20 W X86

Error LED	No	
Acoustics		
• Buzzer	No	
Speaker	Yes	

Time of day

Clock

- Hardware clock (real-time) Yes
- Software clock No
- retentive Yes; Back-up duration typically 6 weeks
- synchronizable Yes

Interfaces	
Number of industrial Ethernet interfaces	2
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	1
Number of RS 232 interfaces	0
Number of USB interfaces	2; USB 2.0
• USB Mini B	1; 5-pole
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	2
 Number of ports of the integrated switch 	2

Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes; As of WinCC V12
PROFIBUS	Yes
MPI	Yes
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	Yes
• HTTPS	No
• HTML	Yes

• VMI	No
• XML	Yes
• CSS	
• Active X	No Vac
• JavaScript	Yes
• Java VM	No
Redundancy mode	V A (W) 00 V/0
• MRP	Yes; As of WinCC V12
Further protocols	
• CAN	No
EtherNet/IP	Yes
• MODBUS	Yes
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
Enclosure Type 4 at the front	Yes
Enclosure Type 4x at the front	Yes
IP (rear)	IP20
Ambient conditions	
Ambient conditions Suited for indoor use	Yes
	Yes No
Suited for indoor use	
Suited for indoor use Suited for outdoor use	
Suited for indoor use Suited for outdoor use Ambient temperature during operation	
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation)	No
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min.	No 0 °C; = Tmin
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max.	No 0 °C; = Tmin
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle)	0 °C; = Tmin 50 °C; = Tmax
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) — At maximum tilt angle, min.	0 °C; = Tmin 50 °C; = Tmax 0 °C; = Tmin
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, min.	0 °C; = Tmin 50 °C; = Tmax 0 °C; = Tmin
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, min. • Operation (vertical installation, portrait format)	0 °C; = Tmin 50 °C; = Tmax 0 °C; = Tmin 40 °C; = Tmax
Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, min. • Operation (vertical installation, portrait format) — For vertical installation, min.	0 °C; = Tmin 50 °C; = Tmax 0 °C; = Tmin 40 °C; = Tmax 0 °C; = Tmin
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Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, min. • Operation (vertical installation, portrait format) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle, portrait format) — At maximum tilt angle, min.	0 °C; = Tmin 50 °C; = Tmax 0 °C; = Tmin 40 °C; = Tmax 0 °C; = Tmin 40 °C; = Tmax 0 °C; = Tmin
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Suited for indoor use Suited for outdoor use Ambient temperature during operation • Operation (vertical installation) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle) — At maximum tilt angle, min. — At maximum tilt angle, min. • Operation (vertical installation, portrait format) — For vertical installation, min. — For vertical installation, max. • Operation (max. tilt angle, portrait format) — At maximum tilt angle, min. — At maximum tilt angle, min. Ambient temperature during storage/transportation • min.	0 °C; = Tmin 50 °C; = Tmax 0 °C; = Tmin 40 °C; = Tmax 0 °C; = Tmin 40 °C; = Tmin 40 °C; = Tmax 0 °C; = Tmax -20 °C

Ambient air temperature-barometric pressure- altitude	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)
Relative humidity	
 With condensation, tested in accordance with IEC 60068-2-38, max. 	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Coolants and lubricants	
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
 to biologically active substances according to EN 60721-3-3 	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
 to chemically active substances according to EN 60721-3-3 	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
 to biologically active substances according to EN 60721-3-6 	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
 to chemically active substances according to EN 60721-3-6 	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
 to mechanically active substances according to EN 60721-3-6 	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
 Against chemically active substances acc. to EN 60654-4 	Yes; Class 3 (excluding trichlorethylene)
 Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark	
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
 Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high availability
 Protection against fouling acc. to EN 60664-3 	Yes; Type 1 protection
 Military testing according to MIL-I-46058C, Amendment 7 	Yes; Discoloration of coating possible during service life
 Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	Yes; Conformal coating, Class A

Operating systems

pre-installed operating system Yes Configuration Yes 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 • STEP 7 Basic (TIA Portal) No • WinCC flexible Compact No • WinCC flexible Standard No • WinCC Rexible Standard No • WinCC Bexible Advanced No • WinCC Conflort (TIA Portal) Yes; from V11 • WinCC Conflort (TIA Portal) Yes; from V11 • WinCC Professional (TIA Portal) Yes; from V11 Languages Police Indusers Online languages • No • Number of online/runtime languages 32 Functionality under WinCC (TIA Portal) Yes Libraries Yes Applications/options Yes • Pocket Word Yes • Pocket Excel Yes • Pocket Wo	proprietary	No
Message indicator Message indicator Message indicator Alarm system (incl. buffer and acknowledgment) Process value display (output) Process value default (input) possible Recipe management Process value default (input) possible Process va	pre-installed operating system	
Message indicator	Windows CE	Yes
Message indicator	Configuration	
Alarm system (incl. buffer and acknowledgment) Process value display (output) Process value display (output) Process value default (input) possible Recipe management Pes Configuration software • STEP 7 Basic (TIA Portal) • WinCC flexible Compact • WinCC flexible Standard • WinCC flexible Standard • WinCC flexible Standard • WinCC Basic (TIA Portal) • WinCC Compact • WinCC Basic (TIA Portal) • WinCC Abdanced • WinCC Oresional (TIA Portal) • WinCC Abdanced (TIA Portal) • WinCC Professional (TIA Portal) • WinCC Abdanced (TIA Portal) • WinCC Professional (TIA Portal) • WinCC Abdanced (TIA Portal) Libraries • Languages • Languages per project 32 Functionality under WinCC (TIA Portal) Libraries • Yes Applications/options • Web browser • Pocket Word • Pocket Word • Pocket Exel • PDF Viewer • Media Player • Media Player • SIMATIC WinCC Sm@rtServer • SIMATIC WinCC Addit • Yes Number of Visual Basic Scripts Task planner • ime-controlled • task-controlled • task-controlled • task-controlled • Yes	*	Ves
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Applications/options • Web browser • Pocket Word • Pocket Excel • Pocket Excel • PDF Viewer • Media Player • SIMATIC WinCC Sm@rtServer • SIMATIC WinCC Audit Yes Number of Visual Basic Scripts Task planner • time-controlled • task-controlled • task-controlled • Number of characters per info text 70	Functionality under WinCC (TIA Portal)	
 Web browser Pocket Word Pocket Excel Yes PDF Viewer Media Player SIMATIC WinCC Sm@rtServer SIMATIC WinCC Audit Yes Number of Visual Basic Scripts Task planner time-controlled task-controlled Yes Help system Number of characters per info text 70 	Libraries	Yes
 Pocket Word Pocket Excel PDF Viewer Media Player SIMATIC WinCC Sm@rtServer SIMATIC WinCC Audit Yes Number of Visual Basic Scripts Task planner time-controlled task-controlled Yes Help system Number of characters per info text 70 	Applications/options	
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 Media Player SIMATIC WinCC Sm@rtServer SIMATIC WinCC Audit Yes Number of Visual Basic Scripts Task planner time-controlled task-controlled Yes Help system Number of characters per info text 70 	Pocket Excel	Yes
SIMATIC WinCC Sm@rtServer 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 70	PDF Viewer	Yes
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Task planner • time-controlled Yes • task-controlled Yes Help system • Number of characters per info text 70	SIMATIC WinCC Audit	Yes
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Help system • Number of characters per info text 70		Yes
• Number of characters per info text 70	• task-controlled	Yes
• Number of characters per info text 70	Help system	
		70

 Number of alarm classes 	32
Bit messages	
 Number of bit messages 	4 000
Analog messages	
 Number of analog messages 	200
S7 alarm number procedure	Yes
System messages HMI	Yes
 System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) 	Yes
Number of characters per message	80
 Number of process values per message 	8
 Acknowledgment groups 	Yes
Message indicator	Yes
Message buffer	
— Number of entries	1 024
 Circulating buffer 	Yes
— retentive	Yes
— maintenance-free	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
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
• Recipe view	Yes
• f(x) trend view	Yes
 System diagnostics view 	Yes
Media Player	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	
 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 	No
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
• SIMOTION	No; With WinCC, subsequent version
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
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Modicon (Modbus)	Yes
Modicon (Modbus)OPC UA Client	

Service tools/configuration aids	
Backup/Restore manually	Yes
	Yes
Backup/Restore automatically	
Simulation	Yes
Device switchover	Yes
Peripherals/Options	
Peripherals	
Printer	Yes
SIMATIC HMI MM memory card: Multi Media	Yes
Card	
SIMATIC HMI SD memory card: Secure Digital	Yes
memory card	
• USB memory	Yes
Network camera	Yes
Mechanics/material Enclosure material (front)	
	No
• Plastic	
Aluminum	Yes
Stainless steel	No
Dimensions	
Width of the housing front	330 mm
Height of housing front	241 mm
Mounting cutout, width	310 mm
Mounting cutout, height	221 mm
Overall depth	65 mm
Maighta	
Weights Weight without packaging	2.8 kg
Weight incl. packaging Weight incl. packaging	
weight life. packaging	3.5 kg
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