

SIPLUS HMI TP1500 COMFORT FOR medial stress with conformal coating based on 6AV2124-0QC02-0AX0

General information

Product type designation	TP1500 Comfort
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Display

Design of display	TFT
Screen diagonal	15.4 in
Display width	331.2 mm
Display height	207 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 |
| • Keys with LED | No |
| • System keys | No |
| • Numeric keyboard | Yes |
| • alphanumeric keyboard | Yes |

Touch operation

- | | |
|--------------------------|-----|
| • Design as touch screen | Yes |
|--------------------------|-----|

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
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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 I ² t	0.5 A ² ·s

Power

Active power input, typ.	36 W
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Processor

Processor type	X86
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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	No
• retentive	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes

Interfaces

Number of industrial Ethernet interfaces	3
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 3
- 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	Yes
• HTML	Yes
• XML	Yes
• CSS	Yes
• Active X	Yes
• JavaScript	Yes
• Java VM	No

Redundancy mode

• MRP	Yes
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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

Suited for indoor use	Yes
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Suited for outdoor use	No
Ambient temperature during operation	
<ul style="list-style-type: none"> • Operation (vertical installation) <ul style="list-style-type: none"> — For vertical installation, min. 0 °C; = Tmin — For vertical installation, max. 50 °C; = Tmax • Operation (max. tilt angle) <ul style="list-style-type: none"> — At maximum tilt angle, min. 0 °C; = Tmin — At maximum tilt angle, min. 40 °C; = Tmax • Operation (vertical installation, portrait format) <ul style="list-style-type: none"> — For vertical installation, min. 0 °C; = Tmin — For vertical installation, max. 40 °C; = Tmax • Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> — At maximum tilt angle, min. 0 °C; = Tmin — At maximum tilt angle, min. 40 °C; = Tmax 	
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. -20 °C • max. 60 °C 	
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. 5 000 m • 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	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> — Resistant to commercially available coolants and lubricants Yes; Incl. diesel and oil droplets in the air 	
Use in stationary industrial systems	
<ul style="list-style-type: none"> — 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	
<ul style="list-style-type: none"> — 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; *
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721	* 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	
proprietary	No
pre-installed operating system	
• Windows CE	Yes
Configuration	
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 Comfort (TIA Portal)	Yes; V11 SP2 or higher
• WinCC Advanced (TIA Portal)	Yes; V11 SP2 or higher
• WinCC Professional (TIA Portal)	Yes; V11 SP2 or higher
Languages	
Online languages	
• Number of online/runtime languages	32
Project languages	
• 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	
— Number of bit messages	6 000
• 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	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	
• Number of variables per device	4 096
• Number of variables per screen	400

• Limit values	Yes
• Multiplexing	Yes
• Structures	Yes
• Arrays	Yes
Images	
• Number of configurable images	750
• 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	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
• 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	50 000
• 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
- 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

Peripherals

- Printer Yes
- SIMATIC HMI MM memory card: Multi Media Card Yes
- SIMATIC HMI SD memory card: Secure Digital memory card Yes
- USB memory Yes
- Network camera Yes

Mechanics/material

Enclosure material (front)

- Plastic No
- Aluminum Yes
- Stainless steel No

Dimensions

Width of the housing front	415 mm
Height of housing front	310 mm
Mounting cutout, width	396 mm
Mounting cutout, height	291 mm
Overall depth	75 mm

Weights

Weight without packaging

5.2 kg

last modified:

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