SIEMENS

Data sheet

6AV2144-8UC10-0AA1



SIMATIC HMI TP1900 Comfort INOX Stainless steel front, continuous decorative foil; Degree of protection front IP66K, 19" widescreen TFT display, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, Windows CE 2013; Configurable from WinCC Comfort V14 SP1 with HSP

Figuresimilar

General information	
Product type designation	TP1900 Comfort INOX
Display	
Design of display	TFT
Screen diagonal	18.5 in
Display width	409.8 mm
Display height	230.4 mm
Number of colors	16 777 216
Resolution (pixels)	
 Horizontal image resolution 	1 366 pixel
 Vertical image resolution 	768 pixel
Backlighting	
 MTBF backlighting (at 25 °C) 	50 000 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; capacitive
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
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

	24.14
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)	1.7 A
Starting current inrush I ² t	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
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	2
 Industrial Ethernet status LED Number of ports of the integrated switch 	3 2
	2
Protocols PROFINET	Yes
Supports protocol for PROFINET IO	Yes
	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	
Redundancy mode MRIP Yes Further protocols • • CAN No • NODBUS Yes Interrupticidignostic status information Diagnoses • Diagnostic information readable Yes; 57 controller Emission of radio interference acc. to EN 56 011 • • Linit class A, for use in industrial areas No Degroes and class of protoction IP • Pi (at the front) IP66K IP (rear) IP20 NEMA (front) IP66K • Enclosure Type 4 at the front No • Enclosure Type 4 at the front Yes • Cen ark Yes - dulus Yes - dulus Yes - dulus Yes - dulus Yes - ATEX Zone 2 Yes - ATEX Zone 2 Yes - ECE Xone 2 Yes - ECEX Zone 2 Yes <tr< td=""><td></td></tr<>	
Media redundancy	
MRP Yes Further protocols No • CAN No • MODBUS Yes Interrupts/diagnostic/status information Diagnoses • Diagnoses • • Diagnosis 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 A, for use in residential areas No Degrees and class of protection IP (eath front) IP (at the front) IP66K IP (rear) IP20 NEMA (fron) • • Enclosure Type 4 at the front No • Enclosure Type 4 st at the front Yes • Cluus Yes RCM (formerly C-TICK) Yes KC aprovals, certificates Ces CE mark Yes • ATEX Zone 2 Yes • ATEX Zone 2 Yes • ATEX Zone 2 Yes • LicEx Zone 2 Yes • ECEX Zone 2 Yes • LicEx Zone 2 Yes	
Further protocols No • CAN No • WODBUS Yes Interrupts/diagnostics/status information Diagnosts • Diagnosts information readable Yes; S7 controller EMC Emission of radio interference acc. to EN 55 011 • Init class A, for use in industrial areas Yes • Limit class A, for use in industrial areas No Degree and class of protection IP66K IP (at the fron) IP66K IP (at the fron) IP66K IP (at the fron) IP20 NRMA (front) • Enclosure Type 4 at the front • Enclosure Type 4 at the front No • Enclosure Type 4 at the front Yes • CE mark Yes cUlus Yes RCM (formetry C-TICK) Yes KC approval Yes • ATEX Zone 2 Yes • ATEX Zone 2 Yes • ATEX Zone 2 Yes • LECEX Zone 2 Yes • ULus Class I Zone 1 No • ULeX Class I Zone 2 Yes	
• CAN No • MODBUS Yes Interruptis/dignostics/latuus information Interruptis/dignostics/latuus information readable • Diagnoses Yes, S7 controller • EMC Emission of radio interference acc. to EN 55 011 • Limit class B, for use in industrial areas Yes • Limit class A, for use in residential areas No • Degree and class of protection IP (at the front) IP (at the front) IP66K IP (rear) IP20 NEMA (front) Ves; indoor use only • Enclosure Type 4 at the front No • Enclosure Type 4 at the front Ves; indoor use only • Standards. paprovals. certificates CE mark CELus Yes RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Gost-R) Yes Use in hazardous areas Yes • ATEX Zone 2 Yes • LOCE Class I Zone 1 No • Use Class I Zone 2 Yes • LOCE Class I Zone 2 Yes • LOCE Class I Zone 1 No • Clus Class I Zone 1 No • Clus Class I Zone 1 No • Use Class I Zone 1 No • Class I Division 2 Yes •	
• MODBUS Yes Interrupts/diagnostic/status information - Diagnostic information readable Yes; S7 controller Emission of radio interference acc. to EN 55 011 - Emission of radio interference acc. to EN 55 011 - Initit class A, for use in industrial areas Yes • Limit class B, for use in industrial areas Yes • Limit class A, for use in industrial areas No Degree and class of protection IP200 IP (at the font) IP200 IP (at the font) IP200 NEMA (front) - Enclosure Type 4 at the front No • Enclosure Type 4 at the front Yes ctC mark Yes ctClus Yes ctClus Yes RCM (formerly Cost-R) Yes Use in hazardous areas Yes • ATEX Zone 2 Yes • LiCEx Zone 2 Yes • LiCEx Zone 2 Yes • LiCEx Zone 2, Division 2 Yes • LiCEx Zone 2, Division 2 Yes • LiCEx Zone 2, Division	
Interrupta/diagnostics/status information Diagnoses • Diagnoses • Diagnostic information readable Yes; \$7 controller Emission of radio interference acc. to EN 55 011 • • Limit class A, for use in industrial areas Yes • Limit class P, for use in incidential areas No Degree and class of protection IP (at the front) IP (at the front) IP 66K IP (at the front) Ves Enclosure Type 4 at the front No • Enclosure Type 4 at the front Yes cluus Yes cluus Yes cluus Yes cluus Yes eCE mark Yes volus Yes EAC (formerly Cost-R) Yes eACL (formerly Cost-R) Yes <td< td=""><td></td></td<>	
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• Limit class B, for use in residential areas No Pogree and class of protection IP (eat the front) IP 66K IP (ear) IP 20 NEMA (front) IP 20 • Enclosure Type 4 at the front No • Enclosure Type 4x at the front No • Enclosure Type 4x at the front Yes; indoor use only Standards, approvals, certificates CE mark CE mark Yes oULus Yes RCM (formerly C-TICK) Yes KC approval Yes EAC (formerly Cost-R) Yes Use in hazardous areas Yes • ATEX Zone 2 Yes • IECEx Zone 2 Yes • IECEX Zone 2 Yes • IECEX Zone 2 Yes • CULus Class I Zone 1, No No • cULus Class I Zone 2, Division 2 Yes • FM Class I Division 2 No Marine approval No; In application process • American Bureau of Shipping (ABS) No; In preparation • Bureau Vertias (BV) No; In preparation <td< td=""><td></td></td<>	
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Polski Rejestr Statkow (PRS) No; in preparation	
in propulation cooley (coo)	
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, max. 40 °C	
Operation (vertical installation, portrait format)	
— For vertical installation, min. 0 °C	
— For vertical installation, max. 40 °C	
Operation (max. tilt angle, portrait format)	

— At maximum tilt angle, min.	0°C
— At maximum tilt angle, min. — At maximum tilt angle, max.	0 ℃ 35 °C
Ar maximum un angle, max. Ambient temperature during storage/transportation	
min.	-20 °C
• mm. • max.	-20 °C
Relative humidity	00 C
	70 %: no condensation
Operation, max. Operating systems	70 %; no condensation
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 Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher
WinCC Advanced (TIA Portal)	Yes; V14 SP1 HSP and higher
WinCC Professional (TIA Portal)	Yes; V14 SP1 HSP and 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 WINCO 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
	J20
Message system • Number of alarm classes	32
	32
Bit messages	6.000
— Number of bit messages	6 000
Analog messages	000
— Number of analog messages	200
 S7 alarm number procedure 	Yes
System messages HMI	Yes
	Yes Yes
 System messages HMI System event, more (SIMATIC S7, SINUMERIK, 	
 System messages HMI System event, more (SIMATIC S7, SINUMERIK, SIMOTION,) 	Yes

Manager indicator	V
Message indicator	Yes
Message buffer — Number of entries	4.004
	1 024
 — Circulating buffer — retentive 	Yes
	Yes
- maintenance-free	Yes
Recipe management Number of recipes	500
	1 000
Data records per recipeEntries per data record	2 000
Size of internal recipe memory	
Recipe memory expandable	4 Mbyte Yes
Variables	
Number of variables per device	4 096
Number of variables per screen	400
Limit values	Yes
	Yes
Multiplexing Structures	Yes
• Arrays	Yes
• Anays Images	
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 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
HTML browser	Yes
• PDF display	
	Yes
• IP camera display	
	Yes
IP camera display	Yes Yes
IP camera displayBar graphs	Yes Yes Yes
IP camera displayBar graphsSliders	Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments 	Yes Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock 	Yes Yes Yes Yes
 IP camera display Bar graphs Sliders Pointer instruments Analog/digital clock Lists	Yes Yes Yes Yes Yes

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 	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
• 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	

Yes
Yes; Up to 128 MB
Yes; Up to 2 GB
No
Yes
Yes; Up to 16 GB
Yes; Up to 8 GB
Yes
No
No
Yes
483 mm
337 mm
465 mm
319 mm
73 mm
7.9 kg

last modified:

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