6AV2124-0UC02-0AX1

Data sheet

SIMATIC HMI TP1900 Comfort, Comfort Panel, Touch operation, 19" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, WEC 2013, configurable from WinCC Comfort V14 SP1 with HSP



General information	
Product type designation	TP1900 Comfort
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; Analog-resistive
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
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 I²t	0.5 A²⋅s
Starting current inrush I-t Power	0.0 M .9
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	2,
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 Number of other interfaces	0
Number of SD card slots	2
With software interfaces	No 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 InvoScript	Yes
JavaScriptJava VM	Yes No
Java vm Redundancy mode	110
Media redundancy	
wedia reduitabley	

MDD	Voc
— MRP	Yes
Further protocols • CAN	No
MODBUS	
Interrupts/diagnostics/status information	Yes
Diagnoses	Voc. C7 controller
Diagnostic information readable EMC	Yes; S7 controller
Emission of radio interference acc. to EN 55 011	
Limit class A, for use in industrial areas	Yes
Limit class A, for use in industrial areas Limit class B, for use in residential areas	No
Degree and class of protection	NO
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	11 20
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	Yes
EAC (formerly Gost-R)	Yes
Use in hazardous areas	
ATEX Zone 2	Yes
ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes; For inscription on device rating plate
• cULus Class II Division 2	No; Available soon
• FM Class I Division 2	Yes; For inscription on device rating plate
FM Class II Division 2	No; Available soon
Marine approval	
Germanischer Lloyd (GL)	No
American Bureau of Shipping (ABS)	No
Bureau Veritas (BV)	No
Det Norske Veritas (DNV)	No
Korean Register of Shipping (KRS)	No
Lloyds Register of Shipping (LRS)	No
Nippon Kaiji Kyokai (Class NK)	No
Polski Rejestr Statkow (PRS)	No
Chinese Classification Society (CCS)	No
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, max.	35 °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 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 WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	Von
time-controlled teak controlled	Yes
task-controlled	Yes
Message system • Number of alarm classes	32
Number of alarm classes Bit messages	02
Number of bit messages	6 000
Analog messages	
— 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 	500
Data records per recipe	1 000
 Entries per data record 	2 000

Size of internal regine memory	4 Mhyta
 Size of internal recipe memory Recipe memory expandable 	4 Mbyte Yes
Variables	TES
Number of variables per device	4 096
Number of variables per device Number of variables per screen	400
Limit values	Yes
	Yes
Multiplexing Structures	Yes
• Structures	Yes
Arrays Images	TES
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 selection by FLC Image number in the PLC	Yes
	165
Image objects • Number of objects per image	600
Text fields	Yes
I/O fields	Yes
Graphic I/O fields (graphics list) Symbolic I/O fields (toxt list)	Yes
Symbolic I/O fields (text list) Date/time fields	Yes
Date/time fields	Yes
• Switches	Yes
Buttons	Yes
Graphic display	Yes
• Icons	Yes
Geometric objects	Yes
Complex image objects	40
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
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
	Yes Yes

— 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	
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 SD memory card. Secure Digital memory card SIMATIC HMI CF memory card Compact Flash Card	No
·	Yes
USB memory SIMATIC IDC USB Elephdrive (USB stick)	
SIMATIC IPC USB Flashdrive (USB stick) SIMATIC HMI USB stick	Yes; Up to 16 GB
	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	483 mm
Height of housing front	337 mm
Mounting cutout, width	465 mm
Mounting cutout, height	319 mm
Overall depth	75 mm
Weights	
Weight (without packaging)	5.6 kg

last modified: 9/7/2023 🖸