

Siemens 6AV2124-0JC01-0AX0 Manual

Brand	Siemens
Product Series	Sheet15
Product Type	designation TP900 Comfort

Description

6AV2124-0JC01-0AX0

SIMATIC HMI TP900 Comfort, Comfort Panel, touch operation, 9" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable from WinCC Comfort V11

General information

Product type designation TP900 Comfort

Display

Design of display TFT

Screen diagonal 9 in

Display width 195 mm

Display height 117 mm

Number of colors 16 777 216

Resolution (pixels)

- Horizontal image resolution 800 pixel
- Vertical image resolution 480 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; Analog-resistive

Expansions for operator control of the process

- DP direct LEDs (LEDs as S7 output I/O)

— F1...Fx 0

- Direct keys (keys as S7 input I/O)

— F1...Fx 0

- Direct keys (touch buttons as S7 input I/O) 40

Installation type/mounting

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Mounting position vertical

Wall mounting/direct mounting No

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) 0.75 A

Starting current inrush I^2t 0.5 A²·s

Power

Active power input, typ. 18 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 1; 2 ports (switch)

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

- 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

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- 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

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

Media redundancy

— MRP Yes; As of WinCC V12

Further protocols

- CAN No

- MODBUS Yes

Interrupts/diagnostics/status information

Diagnoses

- Diagnostic 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 B, for use in residential areas No

Degree and class of protection

IP (at the front) IP65

IP (rear) IP20

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 Yes

Use in hazardous areas

- ATEX Zone 2 Yes

- ATEX Zone 22 Yes

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- IECEx Zone 2 Yes
- IECEx Zone 22 Yes
- cULus Class I Zone 1 No
- cULus Class I Zone 2, Division 2 Yes
- FM Class I Division 2 Yes

Marine approval

- Germanischer Lloyd (GL) Yes
- American Bureau of Shipping (ABS) Yes
- Bureau Veritas (BV) Yes
- Det Norske Veritas (DNV) Yes
- Lloyds Register of Shipping (LRS) Yes
- Nippon Kaiji Kyokai (Class NK) Yes
- Polski Rejestr Statkow (PRS) 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. 50 °C; (55 °C, see entry ID: 64847814)

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

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

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- WinCC Basic (TIA Portal) No
- WinCC Comfort (TIA Portal) Yes; from V11
- WinCC Advanced (TIA Portal) Yes; from V11
- WinCC Professional (TIA Portal) Yes; from V11

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

Message system

- Number of alarm classes 32
- Bit messages Yes
- Number of bit messages 4 000
- Analog messages Yes
- Number of analog messages 200
- S7 alarm number procedure 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

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

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- Arrays Yes

Images

- Number of configurable images 500
- 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 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

- 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

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— 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
- 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

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- 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 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 274 mm

Height of housing front 190 mm

Mounting cutout, width 251 mm

Mounting cutout, height 166 mm

Overall depth 62.7 mm

Weights

Weight (without packaging) 1.9 kg

Weight (with packaging) 2.6 kg

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