

Siemens 6AV6642-0BA01-1AX1 Manual

Brand	Siemens
Product Series	Sheet15
Product Type	designation TP 177B 6" PN/DP

Description

6AV6642-0BA01-1AX1 - SiePortal - Siemens

OPERATOR INTERFACE

SIMATIC TP 177B 6" PN/DP

24 VDC

6 INCH TOUCHSCREEN

COLOR

MPI/DP/PPI/PN

RS485/RS422/USB INTERFACE ETHERNET 10/100 INTERFACE PRINTER INTERFACE SLOT FOR MMC

General information

Product type designation TP 177B 6" PN/DP

Customer-specific configuration Yes

Display

Design of display STN

Screen diagonal 5.7 in

Color display Yes

Number of colors 256

Resolution (pixels)

- Horizontal image resolution 320 Pixel
- Vertical image resolution 240 Pixel

Backlighting

- MTBF backlighting (at 25 °C) 50 000 h

Control elements

Control elements Touch screen

Keyboard fonts

- System keys Yes
- Numeric keyboard Yes

- alphanumeric keyboard Yes

- hexadecimal keyboard Yes

- Multi-key operation No

Touch operation

- Design as touch screen Yes; analog, resistive

Connection type

- Type of connection for mouse/keyboard/barcode reader

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USB / USB / USB

Installation type/mounting

Mounting position vertical

maximum permissible angle of inclination without

external ventilation

35°

Supply voltage

Type of supply voltage DC

Input current

Current consumption (rated value) 0.24 A

Starting current inrush I^2t 0.5 A²·s

Processor

Processor type ARM, 200 MHz

Memory

Type of memory Flash / RAM

Memory available for user data 2 048 kbyte

Time of day

Clock

- Type Hardware clock, synchronizable, no battery backup
- retentive No
- synchronizable Yes

Interfaces

Interfaces/bus type RS 232 optional, 1x RS 422, 1x RS 485, 1x Ethernet (RJ45) (max.

12 Mbit/s)

Number of industrial Ethernet interfaces 1

Number of RS 485 interfaces 1

Number of RS 422 interfaces 1

Number of USB interfaces 1; Up to 1 GB

PC card slot No

CF card slot No

Multimedia card/SD card slot combined, from E-status 016 in connection with WinCC flexible

2008 SP1, MMC max. 128 MB / SD max. 512 MB

With software interfaces No

Protocols

Supports protocol for PROFINET IO Yes

PROFIsafe No

PROFIBUS Yes

Protocols (Ethernet)

- TCP/IP Yes

Protocols (terminal link)

- Sm@rtServer Yes

Further protocols

- EtherNet/IP Yes
- MODBUS Yes
- other bus systems Yes

Degree and class of protection

IP (at the front) IP65

NEMA (front) NEMA 4x, NEMA 12 (when installed)

IP (rear) IP20

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Standards, approvals, certificates

Certifications CE, GL, ABS, BV, DNV, LRS, FM Class I Div. 2, UL, CSA, cULus,
EX Zone 2, EX Zone 22, C-TICK, NEMA 4x, NEMA 12

cULus Yes

EAC (formerly Gost-R) No

Suitable for safety functions No

Use in hazardous areas

- ATEX Zone 2 Yes
- ATEX Zone 22 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
- Polski Rejestr Statkow (PRS) No

Ambient conditions

Ambient temperature during operation

- min. 0 °C
- max. 50 °C

Ambient temperature during storage/transportation

- min. -20 °C
- max. 60 °C

Relative humidity

- Operation, max. 90 %

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Operating systems

pre-installed operating system Windows CE

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

- Configuration tool WinCC flexible Compact Version 2005 or higher (to be ordered separately)
- STEP 7 Basic (TIA Portal) No
- STEP 7 Professional (TIA Portal) No
- WinCC flexible Compact Yes
- WinCC flexible Standard Yes
- WinCC flexible Advanced Yes
- WinCC Basic (TIA Portal) No
- WinCC Comfort (TIA Portal) Yes
- WinCC Advanced (TIA Portal) Yes
- WinCC Professional (TIA Portal) Yes

Languages

Online languages

- Number of online/runtime languages 5

Project languages

- Languages per project 32

Functionality under WinCC (TIA Portal)

Libraries Yes

Task planner Yes

Help system Yes

- Number of characters per info text 70

Message system

- Number of alarm classes 32

- Number of messages 2 000

- Bit messages Yes

— Number of bit messages 2 000

- Analog messages Yes

— Number of analog messages 50

- Telegram message procedure Alarm S No

- System messages HMI Yes

- System messages PLC Yes

- System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)

No

- Lines 1

- Number of characters per message 80

- Number of process values per message 8

- Acknowledgment groups

— Number of acknowledgment groups 99

- Message indicator Yes

- acoustic feedback No

- First/last value Yes

Recipe management

- Number of recipes 100

- Data records per recipe 200

- Entries per data record 200

- Recipe memory 32 KB integrated Flash, expandable

Variables

- Number of variables per device 1 000

- Number of variables per screen 50

- Number of variables 1 000

- Initial values 1 000

- Type Date & Time 1 000

- Limit values Yes

- Multiplexing Yes

- Structures No

Images

- Number of configurable images 500

- Permanent window/default Yes

- Start screen configurable Yes

- Image selection by PLC Yes

- Image number in the PLC Yes

Image objects

- Text objects 2,500 text elements

- Number of I/O fields per image 50

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- Number of date/time fields 30
 - Index of screen context No
 - Return Yes
 - Graphics object Bit maps, icons, icon (full-screen), vector graphics
 - Icons 500
 - Icon (full screen) 50
- Complex image objects
- Status/control With SIMATIC S7

- dynamic objects Diagrams, bar graphs, sliders, analog display, invisible buttons
 - Number of objects per project 500
 - Number of curve diagrams per image 5
 - Methods Trend
 - Bar graphs
 - Number of bars per chart 5
 - Sliders
 - Number of slides per image 0
 - Pointer instruments
 - Number of analog indicators per image 0
 - Limit value lines Yes
 - Number of alphanumerical fields 1 000
 - alphanumeric fields per image 100
 - Number of numerical fields 1 000
 - numerical fields per image 100
 - Number of password fields 1 000
 - Number of visible switches per project 1 000
 - visible switches per image 100
 - hidden switches per image 100
 - Number of status switches per project 1 000
 - Number of status switches per image 100
 - Number of selector switches per project 1 000
 - Selector switches per image 100
 - Number of decade switches per project 0
 - Decade switches per image 0
 - Number of signal lamps per project 1 000
 - Signal lamps per image 100
- Attributes for dynamic objects
- Color change Yes
 - X/Y movement Yes
 - Hide Yes
 - Angle of rotation No
- Lists
- Number of text lists per project 300
 - Number of text lists per image 10
 - Number of entries per text list 30
 - Number of graphics lists per project 100
 - Number of graphic lists per image 10
 - Number of entries per graphics list 30
- Security
- Number of user groups 50

- Number of user rights 32
- Password export/import Yes

Data carrier support

- PC card No
- CF card No

Logging through printer

- Recording/Printing Alarms, report (shift report), color print, hardcopy

Transfer (upload/download)

- Transfer of configuration MPI/PROFIBUS DP, serial, USB, Ethernet, by means of external storage medium, automatic transfer recognition

Process coupling

- Connection to controller S5, S7-200, S7-300/400, Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Mitsubishi (FX), Telemecanique (ADJUST), Modicon (Modbus), further non-Siemens drivers, see chapter "System interfaces"

- S7-1200 Yes
- S7-1500 No
- S7-200 Yes
- PPI (point-to-point) Yes
- PPI network No
- MPI Yes
- PROFIBUS DP Yes
- Ethernet Yes

- S7-300/400 Yes
- MPI Yes
- PROFIBUS DP Yes
- PROFINET Yes

- S5 Yes; only PROFIBUS DP
- serial No
- PROFIBUS DP Yes

- TI 505 No
- Allen Bradley (DF1) Yes
- Allen Bradley (DF485) Yes
- Mitsubishi (FX) Yes
- Telemecanique (ADJUST) No
- Telemecanique (Uni-Telway) Yes; Only in combination with WinCC flexible
- OMRON (LINK/Multilink) Yes
- Modicon (Modbus) Yes

Functions

- Key repeat No
- TAB sequence Yes
- Calculating functions Yes

Animate Yes

- Menu tree editor Yes
- Unit switchover No

Service tools/configuration aids

- Clean screen Yes
- Touch calibration Yes
- Backup/Restore manually Yes

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- Simulation Yes
- Device switchover Yes
- Delta transfer Yes
- Monitoring function for battery and memory No
- Trace (operation archive) No

Expandability/openness

- Open Platform Program Yes

Peripherals/Options

Peripherals Printer

- SIMATIC HMI MM memory card: Multi Media

Card

Yes

Additional software components loadable Yes

Dimensions

Width of the housing front 212 mm

Height of housing front 156 mm

Mounting cutout, width 198 mm

Mounting cutout, height 142 mm

Overall depth 44 mm

Weights

Weight (without packaging) 0.8 kg

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