

Siemens 6AV2123-2DB03-0AX0 Manual

Brand	Siemens
Product Series	Sheet15
Product Type	designation KTP400 Basic

Description

6AV2123-2DB03-0AX0

SIMATIC HMI, KTP400 Basic, Basic Panel, Key/touch operation, 4" TFT display, 65536 colors, PROFINET interface, configurable from WinCC Basic V13/ STEP 7 Basic V13, contains open-source software, which is provided free of charge see enclosed CD

General information

Product type designation KTP400 Basic

Display

Design of display TFT widescreen display, LED backlighting

Screen diagonal 4.3 in

Display width 95 mm

Display height 53.9 mm

Number of colors 65 536

Resolution (pixels)

- Horizontal image resolution 480 pixel
- Vertical image resolution 272 pixel

Backlighting

- MTBF backlighting (at 25 °C) 20 000 h
- Backlight dimmable Yes

Control elements

Keyboard fonts

- Function keys
- Number of function keys 4
- 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

Installation type/mounting

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

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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) 125 mA

Starting current inrush I^2t 0.2 A²·s

Power

Active power input, typ. 3 W

Processor

Processor type ARM

Memory

Flash Yes

RAM Yes

Memory available for user data 10 Mbyte

Type of output

Acoustics

- Buzzer Yes
- Speaker No

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

Number of RS 485 interfaces 0

Number of RS 422 interfaces 0

Number of RS 232 interfaces 0

Number of USB interfaces 1; Up to 16 GB

Number of 20 mA interfaces (TTY) 0

Number of parallel interfaces 0

Number of other interfaces 0

Number of SD card slots 0

With software interfaces No

Industrial Ethernet

- Industrial Ethernet status LED 2

Protocols

PROFINET Yes

Supports protocol for PROFINET IO No

IRT No

PROFIBUS No

EtherNet/IP Yes

MPI No

Protocols (Ethernet)

- TCP/IP Yes
- DHCP Yes

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- SNMP Yes

- DCP Yes

- LLDP Yes

WEB characteristics

- HTTP No

- HTML No

Redundancy mode

Media redundancy

— MRP No

Further protocols

- CAN No

- MODBUS Yes; Modicon (MODBUS TCP/IP)

Interrupts/diagnostics/status information

Diagnoses

- Diagnostic information readable No

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 No

- ATEX Zone 22 No

- IECEx Zone 2 No

- IECEx Zone 22 No

- cULus Class I Zone 1 No

- cULus Class I Zone 2, Division 2 No

- FM Class I Division 2 No

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

- Chinese Classification Society (CCS) No

Ambient conditions

Suited for indoor use Yes

Suited for outdoor use No

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Ambient temperature during operation

Operation (vertical installation)

— For vertical installation, min. 0 °C

— For vertical installation, max. 50 °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 Yes

pre-installed operating system

- Windows CE No

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) Yes; via integrated WinCC Basic (TIA Portal)

- STEP 7 Professional (TIA Portal) Yes; via integrated WinCC Basic (TIA Portal)

- WinCC flexible Compact No

- WinCC flexible Standard No

- WinCC flexible Advanced No

- WinCC Basic (TIA Portal) Yes

- WinCC Comfort (TIA Portal) Yes

- WinCC Advanced (TIA Portal) Yes

- WinCC Professional (TIA Portal) Yes

Languages

Online languages

- Number of online/runtime languages 10

Project languages

- Languages per project 32

Functionality under WinCC (TIA Portal)

Libraries Yes

Applications/options

- Web browser Yes

- SIMATIC WinCC Sm@rtServer Yes; Available with WinCC (TIA Portal) V14 or higher

Number of Visual Basic Scripts No

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Task planner Yes

- time-controlled No
- task-controlled Yes

Help system Yes

- Number of characters per info text 500

Message system

- Number of alarm classes 32
- Bit messages
 - Number of bit messages 1 000
- Analog messages
 - Number of analog messages 25
- S7 alarm number procedure No
- System messages HMI Yes
- System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...)

Yes; System message buffer of the SIMATIC S7-1200 and S7-1500

- Number of characters per message 80
- Number of process values per message 8
- Acknowledgment groups Yes
- Message indicator Yes
- Message buffer
 - Number of entries 256
 - Circulating buffer Yes
 - retentive Yes
 - maintenance-free Yes

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Recipe management

- Number of recipes 50
- Data records per recipe 100
- Entries per data record 100
- Size of internal recipe memory 256 kbyte
- Recipe memory expandable No

Variables

- Number of variables per device 800
- Number of variables per screen 100
- Limit values Yes
- Multiplexing Yes
- Structures No
- Arrays Yes

Images

- Number of configurable images 250
- Permanent window/default Yes
- Global image Yes

Pop-up images No

- Slide-in images No
- Image selection by PLC Yes
- Image number in the PLC Yes

Image objects

- Number of objects per image 100
- 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 10
- Alarm view Yes
- Trend view Yes
- User view Yes
- Status/control No
- Sm@rtClient view No
- Recipe view Yes
- f(x) trend view No
- System diagnostics view Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
- Media Player No
- HTML browser Yes
- PDF display No
- IP camera display No
- Bar graphs Yes
- Sliders No
- Pointer instruments No
- Analog/digital clock No

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Lists

- Number of text lists per project 300
- Number of entries per text list 100
- Number of graphics lists per project 100
- Number of entries per graphics list 100

Archiving

- Number of archives per device 2; One message and one process value archive
- Number of entries per archive 10 000
- Message archive Yes
- Process value archive Yes
- Archiving methods
 - Sequential archive Yes
 - Short-term archive Yes
- Memory location
 - Memory card No
 - USB memory Yes
 - Ethernet No
- Data storage format
 - CSV No
 - TXT Yes
 - RDB No

Security

- Number of user groups 50
- Number of user rights 32
- Number of users 50

- Password export/import Yes
- SIMATIC Logon No

Character sets

- Keyboard fonts
- US English Yes

Transfer (upload/download)

- MPI/PROFIBUS DP No
- USB No
- 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; No access to NCK data
- SIMOTION Yes
- Allen Bradley (EtherNet/IP) Yes
- Allen Bradley (DF1) No
- Mitsubishi (MC TCP/IP) Yes
- Mitsubishi (FX) No
- OMRON (FINS TCP) No
- OMRON (LINK/Multilink) No
- Modicon (Modbus TCP/IP) Yes
- Modicon (Modbus) No

Service tools/configuration aids

- Backup/Restore manually Yes
- Backup/Restore automatically No
- Simulation Yes
- Device switchover Yes

Peripherals/Options

Printer No

SIMATIC HMI MM memory card: Multi Media Card No

SIMATIC HMI SD memory card: Secure Digital memory card No

SIMATIC HMI CF memory card Compact Flash Card No

USB memory Yes

SIMATIC IPC USB Flashdrive (USB stick) Yes

SIMATIC HMI USB stick Yes

Mechanics/material

Enclosure material (front)

- Plastic Yes
- Aluminum No
- Stainless steel No

Dimensions

Width of the housing front 140 mm

Height of housing front 116 mm

Mounting cutout, width 124 mm

Mounting cutout, height 100 mm

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Overall depth 34.9 mm

Weights

Weight (without packaging) 360 g

Weight (with packaging) 470 g

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