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Datasheet 6AV2123-2JB03-0AX0



SIMATIC HMI, KTP900 BASIC, BASIC PANEL, KEY AND TOUCH OPERATION, 9" TFT DISPLAY, 65536 COLORS, PROFINET INTERFACE, CONFIGURATION FROM WINCC BASIC V13/ STEP7 BASIC V13, CONTAINS OPEN SOURCE SW WHICH IS PROVIDED FREE OF CHARGE FOR DETAILS SEE CD

Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	9 in
Display width	198 mm
Display height	111.7 mm
Number of colors	65 536
Resolution (pixels)	
• horizontal image resolution	800
• vertical image resolution	480
Backlighting	
• MTBF backlighting (at 25 °C)	20 000 h
• Backlight dimmable	Yes
Control elements	
Keyboard fonts	
• Number of function keys	8
• Keys with LED	No

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• System keys	No
• Numeric/alphabetical input	
— Numeric keyboard	Yes; Onscreen keyboard
• alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
• Design as touch screen	Yes
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
Supply voltage	
Type of supply voltage	24 V 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)	230 mA
Inrush current A²s	0.2 A²·s
Power	
Power consumption, typ.	5.5 W
Processor	
Processor type	
• X86	No
• ARM	Yes
Memory	
Flash	Yes
RAM	Yes
usable memory for user data	10 Mbyte
Type of output	
Acoustics	
• Buzzer	Yes
• Speaker	No
Time of day	
Clock	
• Hardware clock (real-time clock)	Yes
• Software clock	Yes

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• battery-backed	Yes
• synchronizable	Yes
Interfaces	
Number of RS 485 interfaces	0
Number of USB interfaces	1
Number of SD card slots	0
Number of parallel interfaces	0
Number of 20 mA interfaces (TTY)	0
Number of RS 232 interfaces	0
Number of RS 422 interfaces	0
Number of other interfaces	0
With software interfaces	No
Industrial Ethernet	
• Number of industrial Ethernet interfaces	1
• Industrial Ethernet status LED	2
Protocols	
PROFINET	Yes
PROFINET IO	No
IRT, supported	No
PROFIBUS	No
MPI	No
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	No
• HTML	No
Further protocols	
• CAN	No
• MODBUS	Yes; Modicon (MODBUS TCP/IP)
• EtherNet/IP	Yes
Interrupts/diagnostics/status information	
Diagnostic messages	

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• Diagnostic information readable	No
EMC	
Emission of radio interference acc. to EN 55 011	
• Emission of radio interference acc. to EN 55 011 (limit class A)	Yes
• Emission of radio interference acc. to EN 55 011 (limit class B)	No
Degree and class of protection	
IP (at the front)	65
Enclosure Type 4 at the front	Yes
Enclosure Type 4x at the front	Yes
IP (rear)	20
Standards, approvals, certificates	
CE mark	Yes
KC approval	Yes
cULus	Yes
RCM (former C-TICK)	Yes
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
Ambient conditions	
maximum permissible angle of inclination without external ventilation	35°
Operating temperature	
• Operation (vertical installation)	
— in vertical mounting position, minimum	0 °C
— in vertical mounting position, maximum	50 °C
• Operation (max. tilt angle)	
— at maximum tilt angle, minimum	0 °C
— at maximum tilt angle, maximum	40 °C
• Operation (vertical installation, portrait format)	
— in vertical mounting position, minimum	0 °C
— in vertical mounting position, maximum	40 °C
• Operation (max. tilt angle, portrait format)	
— at maximum tilt angle, minimum	0 °C

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— at maximum tilt angle, maximum	35 °C
Storage/transport temperature	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	90 %
Operating systems	
Windows CE	No
proprietary	Yes
Executable with configuration operating system	
• other	No
Configuration	
Message indicator	Yes
With alarm logging system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe administration	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
• Project languages	
— D	Yes
— GB	Yes
— F	Yes

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— I	Yes
— E	Yes
— Chinese traditional	Yes
— Chinese simplified	Yes
— DK	Yes
— FIN	Yes
— GR	Yes
— J	Yes
— KP/ROK	Yes
— NL	Yes
— N	Yes
— PL	Yes
— P	Yes
— RUS	Yes
— S	Yes
— CZ	Yes
— TR	Yes
— H	Yes
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Number of Visual Basic Scripts	No
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
• Number of bit messages	1 000
• Number of analog messages	25
• S7 alarm number procedure	No
• System messages HMI	Yes
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	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

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• Message indicator	Yes
• Message buffer	Yes
— Number of entries	256
— Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe administration	
• 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
• Start screen configurable	Yes
• 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
• Switch	Yes
• Buttons	Yes
• Graphic display	Yes
• Icons	Yes

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• 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
• Bar graphs	Yes
• Sliders	No
• Pointer instruments	No
• Analog/digital clock	No
Lists	
• Number of text lists per project	150
• 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
• 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

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Security	
• Number of user groups	50
• Number of user rights	32
• Number of users	50
• Password export/import	Yes; Possible via ProSave
• SIMATIC Logon	No
Character sets	
• Keyboard fonts	
— US English	Yes
• Fonts	
— Tahoma	Yes
— Arial	No
— Courier New	No
— WinCC Standard	Yes
— Ideographic languages	Yes
• Font size freely scalable	Yes
Transfer (upload/download)	
• MPI/PROFIBUS DP	No
• USB	No
• Ethernet	Yes
• using external storage medium	No
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
• SINUMERIK	No
• 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

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• Modicon (Modbus)	No
Service tools/configuration aids	
• Clean screen	Yes
• Touch calibration	Yes
• Backup/Restore manually	Yes; Possible via ProSave
• Backup/Restore automatically	No
• Simulation	Yes
• Device switchover	Yes
• Delta transfer	No
Peripherals/Options	
Peripherals	
• Printer	No
• Multimedia Card	No
• SD card	No
• USB memory	Yes
Mechanics/material	
Type of housing (front)	
• Plastic	Yes
• Aluminum	No
• Stainless steel	No
Dimensions	
Width of the housing front	267 mm
Height of housing front	182 mm
Mounting cutout/device depth (W x H x D)	
• Mounting cutout, width	251 mm
• Mounting cutout, height	166 mm
Overall depth	55 mm
Weights	
Weight without packaging	1 130 g
Weight incl. packaging	1 393 g
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