

SIPLUS HMI KTP900 Basic Color PN based on 6AV2123-2JB03-0AX0 with conformal coating, -20...+50 °C, 9" TFT display, 65536 colors PROFINET interface



Figure similar

General information	
Product type designation	KTP900 Basic color PN
based on	<a href="#">6AV2123-2JB03-0AX0</a>
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 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	20 000 h
• Backlight dimmable	Yes
Control elements	
Keyboard	
• Function keys	
— Number of function keys	8
— 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
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)	230 mA
Starting current inrush I <sup>2</sup> t	0.2 A <sup>2</sup> ·s
<b>Power</b>	
Active power input, typ.	5.5 W
<b>Processor</b>	
Processor type	ARM
<b>Storage</b>	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
<b>Type of output</b>	
Acoustics	
• Buzzer	Yes
• Speaker	No
<b>Time of day</b>	
Clock	
• Hardware clock (real-time)	Yes
• Software clock	Yes
• retentive	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes
<b>Interfaces</b>	
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
<b>Industrial Ethernet</b>	
• Industrial Ethernet status LED	2
<b>Protocols</b>	
PROFINET	Yes
Supports protocol for PROFINET IO	No
IRT	No
PROFIBUS	No
EtherNet/IP	Yes
MPI	No
<b>Protocols (Ethernet)</b>	
• TCP/IP	Yes
• DHCP	Yes
• DCP	Yes
• LLDP	Yes
<b>WEB characteristics</b>	
• HTTP	No
• HTML	No
<b>Redundancy mode</b>	
Media redundancy	
— MRP	No
<b>Further protocols</b>	
• CAN	No
• MODBUS	Yes; Modicon (MODBUS TCP/IP)
<b>Interrupts/diagnostics/status information</b>	
<b>Diagnoses</b>	
• Diagnostic information readable	No
<b>EMC</b>	

<b>Emission of radio interference acc. to EN 55 011</b>	
• Limit class A, for use in industrial areas	Yes
• Limit class B, for use in residential areas	No
<b>Degree and class of protection</b>	
IP (at the front)	IP65
IP (rear)	IP20
<b>NEMA (front)</b>	
• Enclosure Type 4 at the front	Yes
• Enclosure Type 4x at the front	Yes
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<b>Operation (vertical installation)</b>	
— For vertical installation, min.	-20 °C
— For vertical installation, max.	50 °C
<b>Operation (max. tilt angle)</b>	
— At maximum tilt angle, min.	-20 °C
— At maximum tilt angle, max.	40 °C
<b>Operation (vertical installation, portrait format)</b>	
— For vertical installation, min.	-20 °C
— For vertical installation, max.	40 °C
<b>Operation (max. tilt angle, portrait format)</b>	
— At maximum tilt angle, min.	-20 °C
— At maximum tilt angle, max.	35 °C
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C
• max.	60 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
<b>Relative humidity</b>	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
<b>Use in stationary industrial systems</b>	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
<b>Use on ships/at sea</b>	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
<b>Usage in industrial process technology</b>	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
<b>Remark</b>	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Conformal coating</b>	

- Coatings for printed circuit board assemblies acc. to EN 61086
- Protection against fouling acc. to EN 60664-3
- Military testing according to MIL-I-46058C, Amendment 7
- Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Yes; Class 2 for high reliability

Yes; Type 1 protection

Yes; Discoloration of coating possible during service life

Yes; Conformal coating, Class A

### Operating systems

proprietary	Yes
pre-installed operating system	
<ul style="list-style-type: none"> <li>• Windows CE</li> </ul>	No

### 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

<ul style="list-style-type: none"> <li>• STEP 7 Basic (TIA Portal)</li> </ul>	Yes; via integrated WinCC Basic (TIA Portal)
<ul style="list-style-type: none"> <li>• STEP 7 Professional (TIA Portal)</li> </ul>	Yes; via integrated WinCC Basic (TIA Portal)
<ul style="list-style-type: none"> <li>• WinCC flexible Compact</li> </ul>	No
<ul style="list-style-type: none"> <li>• WinCC flexible Standard</li> </ul>	No
<ul style="list-style-type: none"> <li>• WinCC flexible Advanced</li> </ul>	No
<ul style="list-style-type: none"> <li>• WinCC Basic (TIA Portal)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC Comfort (TIA Portal)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC Advanced (TIA Portal)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC Professional (TIA Portal)</li> </ul>	Yes

### Languages

Online languages	
<ul style="list-style-type: none"> <li>• Number of online/runtime languages</li> </ul>	10
Project languages	
<ul style="list-style-type: none"> <li>• Languages per project</li> </ul>	32

### Functionality under WinCC (TIA Portal)

Libraries	Yes
Applications/options	
<ul style="list-style-type: none"> <li>• Web browser</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• SIMATIC WinCC Sm@rtServer</li> </ul>	Yes; Available with WinCC (TIA Portal) V14 or higher
Number of Visual Basic Scripts	No
Task planner	Yes
<ul style="list-style-type: none"> <li>• time-controlled</li> </ul>	No
<ul style="list-style-type: none"> <li>• task-controlled</li> </ul>	Yes
Help system	Yes
<ul style="list-style-type: none"> <li>• Number of characters per info text</li> </ul>	500

### Message system

<ul style="list-style-type: none"> <li>• Number of alarm classes</li> </ul>	32
<ul style="list-style-type: none"> <li>• Bit messages <ul style="list-style-type: none"> <li>— Number of bit messages</li> </ul> </li> </ul>	1 000
<ul style="list-style-type: none"> <li>• Analog messages <ul style="list-style-type: none"> <li>— Number of analog messages</li> </ul> </li> </ul>	25
<ul style="list-style-type: none"> <li>• S7 alarm number procedure</li> </ul>	No
<ul style="list-style-type: none"> <li>• System messages HMI</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... )</li> </ul>	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
<ul style="list-style-type: none"> <li>• Number of characters per message</li> </ul>	80
<ul style="list-style-type: none"> <li>• Number of process values per message</li> </ul>	8
<ul style="list-style-type: none"> <li>• Acknowledgment groups</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Message indicator</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Message buffer <ul style="list-style-type: none"> <li>— Number of entries</li> <li>— Circulating buffer</li> </ul> </li> </ul>	Yes 256 Yes

— retentive	Yes
— maintenance-free	Yes
<b>Recipe management</b>	
• 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
<b>Variables</b>	
• Number of variables per device	800
• Number of variables per screen	100
• Limit values	Yes
• Multiplexing	Yes
• Structures	No
• Arrays	Yes
<b>Images</b>	
• 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
<b>Image objects</b>	
• 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
<b>Complex image objects</b>	
• 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
<b>Lists</b>	
• 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
<b>Archiving</b>	

• 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
<b>Security</b>	
• Number of user groups	50
• Number of user rights	32
• Number of users	50
• Password export/import	Yes
• SIMATIC Logon	No
<b>Character sets</b>	
• Keyboard fonts	
— US English	Yes
<b>Transfer (upload/download)</b>	
• MPI/PROFIBUS DP	No
• USB	No
• Ethernet	Yes
• using external storage medium	Yes
<b>Process coupling</b>	
• 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 (Host Link)	No
• Modicon (Modbus TCP/IP)	Yes
• Modicon (Modbus RTU)	No
<b>Service tools/configuration aids</b>	
• Backup/Restore manually	Yes
• Backup/Restore automatically	No
• Simulation	Yes
• Device switchover	Yes
<b>Peripherals/Options</b>	
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	267 mm
Height of housing front	182 mm
Mounting cutout, width	251 mm
Mounting cutout, height	166 mm
mounting depth	39.4 mm

**Weights**

Weight (without packaging)	1 130 g
Weight (with packaging)	1 393 g

**Classifications**

	Version	Classification
eClass	14	27-33-02-01
eClass	12	27-33-02-01
eClass	9.1	27-33-02-01
eClass	9	27-33-02-01
eClass	8	27-24-23-02
eClass	7.1	27-24-23-02
eClass	6	27-24-23-02
ETIM	10	EC001412
ETIM	9	EC001412
ETIM	8	EC001412
ETIM	7	EC001412
IDEA	4	6607
UNSPSC	15	43-21-15-06

**Approvals / Certificates**

**General Product Approval**

[Manufacturer Declaration](#)



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