

SIPLUS HMI KTP700 Basic DP based on 6AV2123-2GA03-0AX0 with conformal coating, -20...+50 °C, key/touch operation, 7" TFT display, 65536 colors, PROFIBUS interface, configurable as of WinCC Basic V13/STEP 7 Basic V13, contains open source software, which is provided free of charge see enclosed CD-ROM

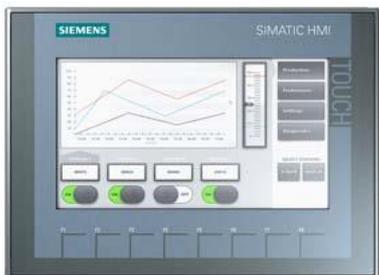


Figure similar

General information	
Product type designation	KTP700 Basic color DP
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	7 in
Display width	154.1 mm
Display height	85.9 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 fonts	
• 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 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 <sub>t</sub>	0.2 A <sup>2</sup> ·s

Power	
Active power input, typ.	5.5 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	0
Number of RS 485 interfaces	1
Number of RS 422 interfaces	1; together with RS 485
Number of RS 232 interfaces	0; with optional adapter
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	0
Protocols	
PROFINET	No
Supports protocol for PROFINET IO	No
IRT	No
PROFIBUS	Yes
EtherNet/IP	No
MPI	Yes
Protocols (Ethernet)	
• TCP/IP	No
• DHCP	No
• SNMP	No
• DCP	No
• LLDP	No
WEB characteristics	
• HTTP	No
• HTML	No
Redundancy mode	
Media redundancy	
— MRP	No
Further protocols	
• CAN	No
• MODBUS	Yes; Modicon (MODBUS RTU)
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
<b>Degree and class of protection</b>	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4 at the front	Yes
• Enclosure Type 4x at the front	Yes
<b>Ambient conditions</b>	
Suited for indoor use	Yes
Suited for outdoor use	No
<b>Ambient temperature during operation</b>	
Operation (vertical installation)	
— For vertical installation, min.	-20 °C; = Tmin
— For vertical installation, max.	50 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	-20 °C; = Tmin
— At maximum tilt angle, max.	40 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	-20 °C; = Tmin
— For vertical installation, max.	40 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	-20 °C; = Tmin
— 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 when condensation present), vertical mounting position
<b>Resistance</b>	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— 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, *
Use on ships/at sea	
— 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; *
Usage in industrial process technology	
— 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	
• 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
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
- 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
<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
• 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
• 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

<ul style="list-style-type: none"> <li>• Memory location <ul style="list-style-type: none"> <li>— Memory card</li> <li>— USB memory</li> <li>— Ethernet</li> </ul> </li> <li>• Data storage format <ul style="list-style-type: none"> <li>— CSV</li> <li>— TXT</li> <li>— RDB</li> </ul> </li> </ul>	 No Yes No  No Yes No
<b>Security</b>	
<ul style="list-style-type: none"> <li>• Number of user groups</li> <li>• Number of user rights</li> <li>• Number of users</li> <li>• Password export/import</li> <li>• SIMATIC Logon</li> </ul>	 50 32 50 Yes No
<b>Character sets</b>	
<ul style="list-style-type: none"> <li>• Keyboard fonts <ul style="list-style-type: none"> <li>— US English</li> </ul> </li> </ul>	 Yes
<b>Transfer (upload/download)</b>	
<ul style="list-style-type: none"> <li>• MPI/PROFIBUS DP</li> <li>• USB</li> <li>• Ethernet</li> <li>• using external storage medium</li> </ul>	 Yes No No No
<b>Process coupling</b>	
<ul style="list-style-type: none"> <li>• S7-1200</li> <li>• S7-1500</li> <li>• S7-200</li> <li>• S7-300/400</li> <li>• LOGO!</li> <li>• WinAC</li> <li>• SINUMERIK</li> <li>• SIMOTION</li> <li>• Allen Bradley (EtherNet/IP)</li> <li>• Allen Bradley (DF1)</li> <li>• Mitsubishi (MC TCP/IP)</li> <li>• Mitsubishi (FX)</li> <li>• OMRON (FINS TCP)</li> <li>• OMRON (LINK/Multilink)</li> <li>• Modicon (Modbus TCP/IP)</li> <li>• Modicon (Modbus)</li> </ul>	 Yes Yes Yes Yes Yes Yes Yes; No access to NCK data Yes No Yes No Yes No Yes No Yes Yes
<b>Service tools/configuration aids</b>	
<ul style="list-style-type: none"> <li>• Backup/Restore manually</li> <li>• Backup/Restore automatically</li> <li>• Simulation</li> <li>• Device switchover</li> </ul>	 Yes No Yes 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
USB memory	Yes
<b>Mechanics/material</b>	
Enclosure material (front) <ul style="list-style-type: none"> <li>• Plastic</li> <li>• Aluminum</li> <li>• Stainless steel</li> </ul>	 Yes No No
<b>Dimensions</b>	
Width of the housing front	214 mm
Height of housing front	158 mm
Mounting cutout, width	197 mm
Mounting cutout, height	141 mm

Overall depth	39 mm
<b>Weights</b>	
Weight (without packaging)	800 g
Weight (with packaging)	1 kg

**last modified:** 10/8/2021 