

SIMATIC HMI, KTP700 Basic DP, Basic Panel, 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



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
<b>Touch operation</b>	
• Design as touch screen	Yes
<b>Installation type/mounting</b>	
Mounting position	vertical
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°
<b>Supply voltage</b>	
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
<b>Input current</b>	
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>Memory</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

## 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
MPI	Yes

## Protocols (Ethernet)

- TCP/IP No
- DHCP No
- SNMP No
- DCP No
- LLDP No

## WEB characteristics

- HTTP No
- HTML No

## Redundancy mode

- MRP No

## Further protocols

- CAN No
- EtherNet/IP No
- MODBUS Yes; Modicon (MODBUS RTU)

## Interrupts/diagnostics/status information

### Diagnostic messages

- 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)	
<ul style="list-style-type: none"> <li>• Enclosure Type 4 at the front</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Enclosure Type 4x at the front</li> </ul>	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Use in hazardous areas	
<ul style="list-style-type: none"> <li>• ATEX Zone 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• ATEX Zone 22</li> </ul>	No
<ul style="list-style-type: none"> <li>• IECEx Zone 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• IECEx Zone 22</li> </ul>	No
<ul style="list-style-type: none"> <li>• cULus Class I Zone 1</li> </ul>	No
<ul style="list-style-type: none"> <li>• cULus Class I Zone 2, Division 2</li> </ul>	No
<ul style="list-style-type: none"> <li>• FM Class I Division 2</li> </ul>	No
Marine approval	
<ul style="list-style-type: none"> <li>• Germanischer Lloyd (GL)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• American Bureau of Shipping (ABS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Bureau Veritas (BV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Det Norske Veritas (DNV)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Lloyds Register of Shipping (LRS)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Nippon Kaiji Kyokai (Class NK)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Chinese Classification Society (CCS)</li> </ul>	No
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• Operation (vertical installation) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> </ul>	0 °C 50 °C
<ul style="list-style-type: none"> <li>• Operation (max. tilt angle) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> </ul>	0 °C 40 °C
<ul style="list-style-type: none"> <li>• Operation (vertical installation, portrait format) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> </ul>	0 °C 40 °C

<ul style="list-style-type: none"> <li>• Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min. 0 °C</li> <li>— At maximum tilt angle, min. 35 °C</li> </ul> </li> </ul>	
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>• min. -20 °C</li> <li>• max. 60 °C</li> </ul>	
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• Operation, max. 90 %; no condensation</li> </ul>	
<b>Operating systems</b>	
proprietary	Yes
<b>pre-installed operating system</b>	
<ul style="list-style-type: none"> <li>• Windows CE</li> </ul>	No
<b>Configuration</b>	
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	Yes
<b>Configuration software</b>	
<ul style="list-style-type: none"> <li>• STEP 7 Basic (TIA Portal)</li> <li>• STEP 7 Professional (TIA Portal)</li> <li>• WinCC flexible Compact</li> <li>• WinCC flexible Standard</li> <li>• WinCC flexible Advanced</li> <li>• WinCC Basic (TIA Portal)</li> <li>• WinCC Comfort (TIA Portal)</li> <li>• WinCC Advanced (TIA Portal)</li> <li>• WinCC Professional (TIA Portal)</li> </ul>	<ul style="list-style-type: none"> <li>Yes; via integrated WinCC Basic (TIA Portal)</li> <li>Yes; via integrated WinCC Basic (TIA Portal)</li> <li>No</li> <li>No</li> <li>No</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Languages</b>	
<b>Online languages</b>	
<ul style="list-style-type: none"> <li>• Number of online/runtime languages</li> </ul>	10
<b>Project languages</b>	
<ul style="list-style-type: none"> <li>• Languages per project</li> </ul>	32
<b>Functionality under WinCC (TIA Portal)</b>	
Libraries	Yes
Applications/options	
<ul style="list-style-type: none"> <li>• Web browser</li> <li>• SIMATIC WinCC Sm@rtServer</li> </ul>	<ul style="list-style-type: none"> <li>No</li> <li>No</li> </ul>
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
<b>Message system</b>	
• 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 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
• 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
• 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	No
• 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; 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
<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	Yes
• USB	No
• Ethernet	No
• 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)	No
• Allen Bradley (DF1)	Yes
• Mitsubishi (MC TCP/IP)	No
• Mitsubishi (FX)	Yes



- OMRON (FINS TCP) No
- OMRON (LINK/Multilink) Yes
- Modicon (Modbus TCP/IP) No
- Modicon (Modbus) Yes

#### 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	214 mm
Height of housing front	158 mm
Mounting cutout, width	197 mm
Mounting cutout, height	141 mm
Overall depth	39 mm

#### Weights

Weight without packaging	800 g
Weight incl. packaging	1 kg

**last modified:** 03/14/2020