

SIMATIC HMI, TP700 BASIC, BASIC PANEL, NEUTRAL DESIGN, TOUCH OPERATION, 7" 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



## General information

Product type designation	KTP700 Basic color PN
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## 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	No
• 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	Horizontal, 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

<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

### Protocols

PROFINET	Yes
Supports protocol for PROFINET IO	No
IRT	No
MRP	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
• EtherNet/IP	Yes
• MODBUS	Yes; Modicon (MODBUS TCP/IP)

### Interrupts/diagnostics/status information

#### Diagnostic messages

• Diagnostic information readable	No
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### 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
Enclosure Type 4 at the front	Yes

Enclosure Type 4x at the front	Yes
IP (rear)	IP20
<b>Standards, approvals, certificates</b>	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
<b>Marine approval</b>	
• 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
<b>Use in hazardous areas</b>	
• 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
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• 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, min.	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, min.	35 °C
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C
• max.	60 °C
<b>Relative humidity</b>	

- Operation, max.

90 %; no condensation

## Operating systems

proprietary	Yes
pre-installed operating system	
• Windows CE	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

• 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	
• time-controlled	No
• task-controlled	Yes
Help system	
• 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 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	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	No
<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 (LINK/Multilink)	No
• Modicon (Modbus TCP/IP)	Yes
• Modicon (Modbus)	No
<b>Service tools/configuration aids</b>	
• Backup/Restore manually	Yes
• Backup/Restore automatically	No
• Simulation	Yes



- Device switchover Yes

## Peripherals/Options

### Peripherals

- 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	780 g
Weight incl. packaging	990 g

**last modified:** 10/13/2017