



SIMATIC HMI TP700 Comfort INOX Stainless steel front, glass pane, capacitive touch, degree of protection front IP69K, 7" widescreen TFT display, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, WinCC Comfort V15.1

General information	
Product type designation	TP700 Comfort INOX PCT
Display	
Design of display	TFT
Screen diagonal	7 in
Display width	152.4 mm
Display height	91.4 mm
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	80 000 h
• Backlight dimmable	Yes; 0-100 %
Control elements	
Keyboard fonts	
• Function keys	
— Number of function keys	0
— 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
• Design as multi-touch screen	No
• Monitor keyboard	Yes
Expansions for operator control of the process	
• DP direct LEDs (LEDs as S7 output I/O)	
— F1...Fx	0
• Direct keys (keys as S7 input I/O)	
— F1...Fx	0
• Direct keys (touch buttons as S7 input I/O)	32
Installation type/mounting	
Mounting position	vertical
Mounting in portrait format possible	No
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
<b>Input current</b>	
Current consumption (rated value)	0.5 A
Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s
<b>Power</b>	
Active power input, typ.	12 W
<b>Processor</b>	
Processor type	x86, 500 MHz
<b>Memory</b>	
Flash	Yes
RAM	Yes
Memory available for user data	12 Mbyte
<b>Type of output</b>	
Info LED	No
Power LED	No
Error LED	No
Acoustics	Speaker
• Buzzer	No
• Speaker	Yes
<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; 2 ports (switch)
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of RS 422 interfaces	0; together with RS 485
Number of RS 232 interfaces	0
Number of USB interfaces	2; USB 2.0
• USB Mini B	1; 5-pole
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	0
Number of SD card slots	2
With software interfaces	No
<b>Industrial Ethernet</b>	
• Industrial Ethernet status LED	2
• Number of ports of the integrated switch	2
<b>Protocols</b>	
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes; As of WinCC V15.1
PROFIBUS	Yes
EtherNet/IP	Yes
MPI	Yes
<b>Protocols (Ethernet)</b>	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
<b>WEB characteristics</b>	
• HTTP	Yes
• HTTPS	Yes
• HTML	Yes

• XML	Yes
• CSS	Yes
• Active X	Yes
• JavaScript	Yes
• Java VM	No
<b>Redundancy mode</b>	
Media redundancy	
— MRP	Yes; As of WinCC V15.1
<b>Further protocols</b>	
• CAN	No
• MODBUS	Yes
<b>EMC</b>	
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)	IP66 / IPx6K and IP69 / IPx9K
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4 at the front	No
• Enclosure Type 12 at the front	No
<b>Standards, approvals, certificates</b>	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	No
EAC (formerly Gost-R)	Yes
<b>Use in hazardous areas</b>	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes
• cULus Class II Division 2	No
• FM Class I Division 2	No
• FM Class II Division 2	No
<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.	0 °C
— For vertical installation, max.	50 °C; (55 °C, see entry ID: 64847814)
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	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, 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.	2 000 m
<b>Relative humidity</b>	
• Operation, max.	90 %; no condensation

Operating systems	
proprietary	No
pre-installed operating system	
• Windows CE	Yes
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)	No
• STEP 7 Professional (TIA Portal)	No
• WinCC flexible Compact	No
• WinCC flexible Standard	No
• WinCC flexible Advanced	No
• WinCC Basic (TIA Portal)	No
• WinCC Comfort (TIA Portal)	Yes; From WinCC V15.1 HSP
• WinCC Advanced (TIA Portal)	Yes; From WinCC V15.1 HSP
• WinCC Professional (TIA Portal)	Yes; From WinCC V15.1 HSP
Languages	
Online languages	
• Number of online/runtime languages	32
Project languages	
• Languages per project	32
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Applications/options	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent
• Web browser	Yes
• Pocket Word	Yes; Viewer
• Pocket Excel	Yes; Viewer
• PDF Viewer	Yes
• Media Player	Yes
• SIMATIC WinCC Sm@rtServer	Yes
• SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	Yes
• time-controlled	Yes
• task-controlled	Yes
Help system	
• Number of characters per info text	70
Message system	
• Number of alarm classes	32
• Bit messages	
— Number of bit messages	4 000
• Analog messages	
— Number of analog messages	200
• S7 alarm number procedure	Yes
• System messages HMI	Yes
• System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... )	Yes
• Number of characters per message	80
• Number of process values per message	8
• Acknowledgment groups	Yes
• Message indicator	Yes
• Message buffer	
— Number of entries	1 024
— Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes

Recipe management	
• Number of recipes	300
• Data records per recipe	500
• Entries per data record	1 000
• Size of internal recipe memory	2 Mbyte
• Recipe memory expandable	Yes
Variables	
• Number of variables per device	2 048
• Number of variables per screen	400
• Limit values	Yes
• Multiplexing	Yes
• Structures	Yes
• Arrays	Yes
Images	
• Number of configurable images	500
• Permanent window/default	Yes
• Global image	Yes
• Pop-up images	Yes
• Slide-in images	Yes
• Image selection by PLC	Yes
• Image number in the PLC	Yes
Image objects	
• Number of objects per image	400
• 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
Complex image objects	
• Number of complex objects per screen	20
• Alarm view	Yes
• Trend view	Yes
• User view	Yes
• Status/control	Yes
• Sm@rtClient view	Yes
• Recipe view	Yes
• f(x) trend view	Yes
• System diagnostics view	Yes
• Media Player	Yes
• HTML browser	Yes
• PDF display	Yes
• IP camera display	Yes
• Bar graphs	Yes
• Sliders	Yes
• Pointer instruments	Yes
• Analog/digital clock	Yes
Lists	
• Number of text lists per project	500
• Number of entries per text list	500
• Number of graphics lists per project	500
• Number of entries per graphics list	500
Archiving	
• Number of archives per device	50
• Number of entries per archive	20 000
• Message archive	Yes
• Process value archive	Yes

- Archiving methods
  - Sequential archive
  - Short-term archive
- Memory location
  - Memory card
  - USB memory
  - Ethernet
- Data storage format
  - CSV
  - TXT
  - RDB

Sequential log, circular log, alarm log, process value archive  
 Yes  
 Yes  
 SD/MMC card, Ethernet, USB memory stick  
 Yes  
 Yes  
 Yes  
 CSV file, readable, e.g. with MS Excel, MS Access  
 Yes  
 Yes  
 Yes

**Security**

- Number of user groups
- Number of user rights
- Number of users
- Password export/import
- SIMATIC Logon

50  
 32  
 50  
 Yes  
 Yes

**Logging through printer**

- Alarms
- Report (shift log)
- Hardcopy
- Electronic print to file

Yes  
 Yes  
 Yes  
 No

**Character sets**

- Keyboard fonts
  - US English

US American (English)  
 Yes

**Transfer (upload/download)**

- MPI/PROFIBUS DP
- USB
- Ethernet
- using external storage medium

Yes  
 Yes  
 Yes  
 Yes

**Process coupling**

- S7-1200
- S7-1500
- S7-200
- S7-300/400
- LOGO!
- WinAC
- SINUMERIK
- SIMOTION
- Allen Bradley (EtherNet/IP)
- Allen Bradley (DF1)
- Mitsubishi (MC TCP/IP)
- Mitsubishi (FX)
- OMRON (FINS TCP)
- OMRON (LINK/Multilink)
- Modicon (Modbus TCP/IP)
- Modicon (Modbus)
- OPC UA Client
- OPC UA Server

Yes  
 Yes  
 Yes  
 Yes  
 Yes  
 Yes  
 Yes; with SINUMERIK option package  
 Yes  
 Yes  
 Yes  
 Yes  
 Yes  
 Yes  
 No  
 Yes  
 Yes  
 Yes  
 Yes  
 Yes

**Service tools/configuration aids**

- Backup/Restore manually
- Backup/Restore automatically
- Simulation
- Device switchover

Yes  
 Yes  
 Yes  
 Yes

**Peripherals/Options**

- Printer
- SIMATIC HMI MM memory card: Multi Media Card
- SIMATIC HMI SD memory card: Secure Digital memory card
- SIMATIC HMI CF memory card Compact Flash Card
- USB memory
- SIMATIC IPC USB Flashdrive (USB stick)

Yes  
 Yes; Up to 128 MB  
 Yes; Up to 2 GB  
 No  
 Yes  
 Yes; Up to 16 GB

SIMATIC HMI USB stick	Yes; Up to 8 GB
Network camera	Yes
<b>Accessories</b>	
Further accessories are available	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)
<b>Mechanics/material</b>	
Enclosure material (front)	
• Plastic	No
• Aluminum	No
• Stainless steel	Yes
<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	66 mm
<b>Weights</b>	
Weight (without packaging)	2 kg
Weight (with packaging)	2.3 kg

**last modified:**

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