

SIMATIC HMI TP900 COMFORT,  
COMFORT PANEL, TOUCH OPERATION,  
9" WIDESCREEN-TFT-DISPLAY,  
16 MIL. COLORS, PROFINET INTERFACE,  
MPI/PROFIBUS DP INTERFACE,  
12 MB USER MEMORY, WINDOWS CE 6.0,  
CONFIGURABLE FROM WINCC COMFORT V11



## Display

<b>Design of display</b>	TFT
<b>Screen diagonal</b>	9 in
<b>Display width</b>	195 mm
<b>Display height</b>	117 mm
<b>Number of colors</b>	16777216

## Resolution (pixels)

<b>Horizontal image resolution</b>	800
<b>Vertical image resolution</b>	480

## Backlighting

<b>MTBF backlighting (at 25 °C)</b>	80000 h
<b>Dimmable backlight</b>	Yes ; 0-100 %

## Control elements

### Keyboard fonts

<b>Number of function keys</b>	0
<b>Keys with LED</b>	No
<b>System keys</b>	No
<b>Numeric/alphabetical input</b>	
<b>Numeric keyboard</b>	Yes ; Onscreen keyboard

<b>Alphanumeric keyboard</b>	Yes ; Onscreen keyboard
<b>Touch operation</b>	
<b>Design as touch screen</b>	Yes
<b>Expansions for operator control of the process</b>	
<b>DP direct LEDs (LEDs as S7 output I/O)</b>	
<b>F1...Fx</b>	0
<b>Direct keys (keys as S7 input I/O)</b>	
<b>F1...Fx</b>	0
<b>Direct keys (touch buttons as S7 input I/O)</b>	40
<b>Installation type/mounting</b>	
<b>Mounting in portrait format possible</b>	Yes
<b>Mounting in landscape format possible</b>	Yes
<b>Supply voltage</b>	
<b>Type of supply voltage</b>	DC
<b>Rated value (DC)</b>	24 V
<b>permissible range, lower limit (DC)</b>	19.2 V
<b>permissible range, upper limit (DC)</b>	28.8 V
<b>Input current</b>	
<b>Current consumption (rated value)</b>	0.75 A
<b>Inrush current A<sup>2</sup>s</b>	0.5 A <sup>2</sup> s
<b>Power</b>	
<b>Power consumption, typ.</b>	18 W
<b>Processor</b>	
<b>Processor type</b>	
<b>X86</b>	Yes
<b>ARM</b>	No
<b>Memory</b>	
<b>Flash</b>	Yes
<b>RAM</b>	Yes
<b>Usable memory for user data</b>	12 Mbyte
<b>Type of output</b>	
<b>Info LED</b>	No
<b>Power LED</b>	No
<b>Error LED</b>	No
<b>Acoustics</b>	
<b>Buzzer</b>	No
<b>Speaker</b>	Yes
<b>Time of day</b>	

Clock	
Hardware clock (real-time clock)	Yes
Software clock	No
Battery-backed	Yes ; Back-up duration typically 6 weeks
Synchronizable	Yes
Interfaces	
Number of RS 485 interfaces	1 ; RS 422/485 combined
Number of USB interfaces	2 ; USB 2.0
Number of USB Mini B interfaces	1 ; 5-pole
Number of SD card slots	2
Number of parallel interfaces	0
Number of 20 mA interfaces (TTY)	0
Number of RS 232 interfaces	0
Number of RS 422 interfaces	1
Number of other interfaces	0
With software interfaces	No
Industrial Ethernet	
Number of industrial Ethernet interfaces	2
Industrial Ethernet status LED	2
Number of ports of the integrated switch	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT supported	Yes ; As of WinCC V12
MRP supported	Yes ; As of WinCC V12
PROFIBUS	Yes
MPI	Yes
Protocols (Ethernet)	
TCP/IP	Yes
DHCP	Yes
SNMP	Yes
DCP	Yes
LLDP	Yes
WEB characteristics	
HTTP	Yes
HTTPS	No
HTML	Yes
XML	No
CSS	Yes

<b>Active X</b>	No
<b>JavaScript</b>	Yes
<b>Java VM</b>	No
<b>Further protocols</b>	
<b>CAN</b>	No
<b>MODBUS</b>	Yes
<b>Supports protocol for EtherNet/IP</b>	Yes
<b>EMC</b>	
<b>Emission of radio interference acc. to EN 55 011</b>	
<b>Emission of radio interferences acc. to EN 55 011 (limit class A)</b>	Yes
<b>Emission of radio interference acc. to EN 55 011 (limit class B)</b>	No
<b>Degree and class of protection</b>	
<b>IP (at the front)</b>	IP65
<b>Enclosure Type 4 at the front</b>	Yes
<b>Enclosure type 4x at the front</b>	Yes
<b>IP (rear)</b>	IP20
<b>Standards, approvals, certificates</b>	
<b>CE mark</b>	Yes
<b>KC approval</b>	Yes
<b>cULus</b>	Yes
<b>RCM (former C-TICK)</b>	Yes
<b>Marine approval</b>	
<b>GL</b>	Yes
<b>ABS</b>	Yes
<b>BV</b>	Yes
<b>DNV</b>	Yes
<b>LRS</b>	Yes
<b>Class NK</b>	Yes
<b>PRS</b>	No
<b>Use in hazardous areas</b>	
<b>ATEX Zone 2</b>	Yes
<b>ATEX Zone 22</b>	Yes
<b>cULus Class I Zone 1</b>	No
<b>cULus Class I Zone 2, Division 2</b>	Yes
<b>FM Class I Division 2</b>	Yes
<b>Ambient conditions</b>	
<b>Mounting position</b>	vertical

maximum permissible angle of inclination without external ventilation	35 °
<b>Operating temperature</b>	
<b>Operation (vertical installation)</b>	
in vertical mounting position, minimum	0 °C
in vertical mounting position, maximum	50 °C ; (55 °C, see entry ID:64847814)
<b>Operation (max. tilt angle)</b>	
at maximum tilt angle, minimum	0 °C
at maximum tilt angle, maximum	40 °C
<b>Operation (vertical installation, portrait format)</b>	
in vertical mounting position, minimum	0 °C
in vertical mounting position, maximum	40 °C
<b>Operation (max. tilt angle, portrait format)</b>	
at maximum tilt angle, minimum	0 °C
at maximum tilt angle, maximum	35 °C
<b>Storage/transport temperature</b>	
Min.	-20 °C
max.	60 °C
<b>Relative humidity</b>	
max. relative humidity	90 %
<b>Operating systems</b>	
Windows CE	Yes
proprietary	No
<b>[nicht versorgt: TAK_ACE281_001_000]</b>	
other	No
<b>Configuration</b>	
Message indicator	Yes
With alarm logging system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe administration	Yes
<b>Configuration software</b>	
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 V11

<b>WinCC Advanced (TIA Portal)</b>	Yes ; from V11
<b>WinCC Professional (TIA Portal)</b>	Yes ; from V11
<b>Languages</b>	
<b>Online languages</b>	
<b>Number of online/runtime languages</b>	32
<b>Languages</b>	
<b>Languages per project</b>	32
<b>Languages</b>	
<b>D</b>	Yes
<b>GB</b>	Yes
<b>F</b>	Yes
<b>I</b>	Yes
<b>E</b>	Yes
<b>Chinese traditional</b>	Yes
<b>Chinese simplified</b>	Yes
<b>DK</b>	Yes
<b>FIN</b>	Yes
<b>GR</b>	Yes
<b>J</b>	Yes
<b>KP/ROK</b>	Yes
<b>NL</b>	Yes
<b>N</b>	Yes
<b>PL</b>	Yes
<b>P</b>	Yes
<b>RUS</b>	Yes
<b>S</b>	Yes
<b>CZ</b>	Yes
<b>SK</b>	Yes
<b>TR</b>	Yes
<b>H</b>	Yes
<b>Functionality under WinCC (TIA Portal)</b>	
<b>Libraries</b>	Yes
<b>Applications/options</b>	
<b>Internet Explorer</b>	Yes
<b>Pocket Word</b>	Yes
<b>Pocket Excel</b>	Yes
<b>PDF Viewer</b>	Yes
<b>Media Player</b>	Yes
<b>SIMATIC WinCC Sm@rtServer</b>	Yes

<b>SIMATIC WinCC Audit</b>	Yes
<b>Number of Visual Basic Scripts</b>	Yes
<b>Task planner</b>	
<b>time-controlled</b>	Yes
<b>task-controlled</b>	Yes
<b>Help system</b>	
<b>Number of characters per info text</b>	70
<b>Message system</b>	
<b>Number of alarm classes</b>	32
<b>Number of bit messages</b>	4000
<b>Number of analog messages</b>	200
<b>S7 alarm number procedure</b>	Yes
<b>System messages HMI</b>	Yes
<b>System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)</b>	Yes
<b>Number of characters per message</b>	80
<b>Number of process values per message</b>	8
<b>Acknowledgment groups</b>	Yes
<b>Message indicator</b>	Yes
<b>Message buffer</b>	
<b>Number of entries</b>	1024
<b>Circulating buffer</b>	Yes
<b>retentive</b>	Yes
<b>maintenance-free</b>	Yes
<b>Recipe administration</b>	
<b>Number of recipes</b>	300
<b>Data records per recipe</b>	500
<b>Entries per data record</b>	1000
<b>Size of internal recipe memory</b>	2 Mbyte
<b>Recipe memory expandable</b>	Yes
<b>Variables</b>	
<b>Number of variables per device</b>	2048
<b>Number of variables per screen</b>	400
<b>Limit values</b>	Yes
<b>Multiplexing</b>	Yes
<b>Structs</b>	Yes
<b>Arrays</b>	Yes
<b>Images</b>	
<b>Number of configurable images</b>	500

Permanent window/default	Yes
Global image	Yes
Start screen configurable	Yes
Image selection by PLC	Yes
Image number in the PLC	Yes
<b>Image objects</b>	
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
Switch	Yes
Buttons	Yes
Graphic view	Yes
Icons	Yes
Geometric objects	Yes
<b>Complex image objects</b>	
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
Bar graphs	Yes
Sliders	Yes
Pointer instruments	Yes
Analog/digital clock	Yes
<b>Lists</b>	
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
<b>Archiving</b>	
Number of archives per device	50



<b>Number of entries per archive</b>	20000
<b>Message archive</b>	Yes
<b>Process value archive</b>	Yes
<b>Archiving methods</b>	
<b>Sequential archive</b>	Yes
<b>Short-term archive</b>	Yes
<b>Memory location</b>	
<b>Memory card</b>	Yes
<b>USB memory</b>	Yes
<b>Ethernet</b>	Yes
<b>Data storage format</b>	
<b>CSV</b>	Yes
<b>TXT</b>	Yes
<b>RDB</b>	Yes
<b>Security</b>	
<b>Number of user groups</b>	50
<b>Number of user rights</b>	32
<b>Number of users</b>	50
<b>Password export/import</b>	Yes
<b>SIMATIC Logon</b>	Yes
<b>Logging through printer</b>	
<b>Alarms</b>	Yes
<b>Report (shift log)</b>	Yes
<b>Hardcopy</b>	Yes
<b>Electronic print to file</b>	Yes ; pdf, html
<b>Character sets</b>	
<b>Keyboard fonts</b>	
<b>US English</b>	Yes
<b>Character sets</b>	
<b>Tahoma</b>	Yes
<b>Arial</b>	Yes
<b>Courier New</b>	Yes
<b>WinCC flexible Standard</b>	Yes
<b>Ideographic languages</b>	Yes
<b>Font size freely scalable</b>	Yes
<b>Additional character sets can be loaded</b>	Yes
<b>Transfer (upload/download)</b>	
<b>MPI/PROFIBUS DP</b>	Yes
<b>USB</b>	Yes

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
Win AC	Yes
SINUMERIK	No
SIMOTION	No ; With WinCC, subsequent version
Allen Bradley (EtherNet/IP)	Yes
Allen Bradley (DF1)	Yes
Mitsubishi (MC TCP/IP)	Yes
Mitsubishi (FX)	Yes
OMRON (FINS TCP)	No
OMRON (LINK/Multilink)	Yes
Modicon (Modbus TCP/IP)	Yes
Modicon (Modbus)	Yes
OPC UA Client	Yes
OPC UA Server	No
<b>Service tools/configuration aids</b>	
Clean screen	Yes
Touch calibration	Yes
Backup/restore	Yes
Backup/Restore automatically	Yes
Simulation	Yes
Device switchover	Yes
Delta transfer	Yes
<b>I/O/Options</b>	
<b>I/O devices</b>	
Printer	Yes
Multi Media Card	Yes
SD card	Yes
USB memory	Yes
Network camera	Yes
<b>Mechanics/material</b>	
<b>Type of housing (front)</b>	
Plastic	No

<b>Aluminum</b>	Yes
<b>Stainless steel</b>	No
<b>Dimensions</b>	
<b>Width of the housing front</b>	274 mm
<b>Height of housing front</b>	190 mm
<b>Mounting cutout (W x H x D)</b>	
<b>Mounting cutout, width</b>	251 mm
<b>Mounting cutout, height</b>	166 mm
<b>Device depth</b>	63 mm
<b>Weights</b>	
<b>Weight without packaging</b>	1.9 kg
<b>Weight incl. packaging</b>	2.6 kg
Status	Mar 31, 2014