

SIMATIC HMI TP1900 COMFORT,  
COMFORT PANEL, TOUCH OPERATION,  
19" WIDESCREEN-TFT-DISPLAY,  
16 MIL. COLORS, PROFINET INTERFACE,  
MPI/PROFIBUS DP INTERFACE,  
24 MB USER MEMORY, WINDOWS CE 6.0,  
CONFIGURABLE FROM WINCC COMFORT V11 SP2



## Display

<b>Design of display</b>	TFT
<b>Screen diagonal</b>	18.5 in
<b>Display width</b>	409.8 mm
<b>Display height</b>	230.4 mm
<b>Number of colors</b>	16777216

## Resolution (pixels)

<b>Horizontal image resolution</b>	1366
<b>Vertical image resolution</b>	768

## Backlighting

<b>MTBF backlighting (at 25 °C)</b>	50000 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

Alphanumeric keyboard	Yes
<b>Touch operation</b>	
Design as touch screen	Yes
<b>Expansions for operator control of the process</b>	
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)	40
<b>Installation type/mounting</b>	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
<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)	1.3 A
Inrush current A <sup>2</sup> s	0.5 A <sup>2</sup> s
<b>Power</b>	
Power consumption, typ.	32 W
<b>Processor</b>	
Processor type	
X86	Yes
ARM	No
<b>Memory</b>	
Flash	Yes
RAM	Yes
Usable memory for user data	24 Mbyte
<b>Type of output</b>	
Info LED	No
Power LED	No
Error LED	No
Acoustics	
Buzzer	No
Speaker	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	3
Industrial Ethernet status LED	3
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
PROFIBUS	Yes
MPI	Yes
Protocols (Ethernet)	
TCP/IP	Yes
DHCP	Yes
SNMP	Yes
DCP	Yes
LLDP	Yes
WEB characteristics	
HTTP	Yes
HTTPS	Yes
HTML	Yes
XML	Yes
CSS	Yes

<b>Active X</b>	Yes
<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>Interrupts/diagnostics/status information</b>	
<b>Diagnostic messages</b>	
<b>Diagnostic information readable</b>	Yes ; S7 controller
<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</b>	Yes
<b>KC approval</b>	Yes
<b>cULus</b>	Yes
<b>C-TICK</b>	Yes
<b>Marine approval</b>	
<b>GL</b>	No
<b>ABS</b>	No
<b>BV</b>	No
<b>DNV</b>	No
<b>LRS</b>	No
<b>Class NK</b>	No
<b>PRS</b>	No
<b>Use in hazardous areas</b>	
<b>ATEX Zone 2</b>	No
<b>ATEX Zone 22</b>	No
<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
<b>maximum permissible angle of inclination without external ventilation</b>	35 °
<b>Operating temperature</b>	
<b>Operation (vertical installation)</b>	
in vertical mounting position/ minimum	0 °C
in vertical mounting position/ maximum	45 °C
<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>	
<b>Min.</b>	-20 °C
<b>max.</b>	60 °C
<b>Relative humidity</b>	
<b>max. relative humidity</b>	90 %
<b>Operating systems</b>	
<b>Windows CE</b>	Yes
<b>proprietary</b>	No
<b>other</b>	No
<b>Configuration</b>	
<b>Message indicator</b>	Yes
<b>With alarm logging system (incl. buffer and acknowledgment)</b>	Yes
<b>Process value display (output)</b>	Yes
<b>Process value default (input) possible</b>	Yes
<b>Recipe administration</b>	Yes
<b>Configuration software</b>	
<b>STEP 7 Basic (TIA Portal)</b>	No
<b>STEP 7 Professional (TIA Portal)</b>	No
<b>WinCC flexible Compact</b>	No
<b>WinCC flexible Standard</b>	No
<b>WinCC flexible Advanced</b>	No

<b>WinCC Basic (TIA Portal)</b>	No
<b>WinCC Comfort (TIA Portal)</b>	Yes ; V11 SP2 or higher
<b>WinCC Advanced (TIA Portal)</b>	Yes ; V11 SP2 or higher
<b>WinCC Professional (TIA Portal)</b>	Yes ; V11 SP2 or higher
<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

Media Player	Yes
SIMATIC WinCC Sm@rtServer	Yes
SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
time-controlled	Yes
task-controlled	Yes
Help system	
Number of characters per info text	320
<b>Message system</b>	
Number of alarm classes	32
Number of bit messages	6000
Number of analog messages	200
S7 alarm number procedure	Yes
System messages HMI	Yes
System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	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	1024
Circulating buffer	Yes
retentive	Yes
maintenance-free	Yes
<b>Recipe administration</b>	
Number of recipes	500
Data records per recipe	1000
Entries per data record	2000
Size of internal recipe memory	4 Mbyte
Recipe memory expandable	Yes
<b>Variables</b>	
Number of variables per device	4096
Number of variables per screen	400
Limit values	Yes
Multiplexing	Yes
Structs	Yes
Arrays	Yes

Images	
Number of configurable images	750
Permanent window/default	Yes
Global image	Yes
Start screen configurable	Yes
Image selection by PLC	Yes
Image number in the PLC	Yes
Image objects	
Number of objects per image	600
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 view	Yes
Icons	Yes
Geometric objects	Yes
Complex image objects	
Number of complex objects per screen	40
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
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	50000
Message archive	Yes
Process value archive	Yes
Archiving methods	
Sequential archive	Yes
Short-term archive	Yes
Memory location	
Memory card	Yes
USB memory	Yes
Ethernet	Yes
Data storage format	
CSV	Yes
TXT	Yes
RDB	Yes
Security	
Number of user groups	50
Number of user rights	32
Number of users	50
Password export/import	Yes
SIMATIC Logon	Yes
Logging through printer	
Alarms	Yes
Report (shift log)	Yes
Hardcopy	Yes
Electronic print to file	Yes ; pdf, html
Character sets	
Keyboard fonts	
US English	Yes
Character sets	
Tahoma	Yes
Arial	Yes
Courier New	Yes
WinCC flexible Standard	Yes
Ideographic languages	Yes
Font size freely scalable	Yes
Additional character sets can be loaded	Yes
Transfer (upload/download)	

<b>MPI/PROFIBUS DP</b>	Yes
<b>USB</b>	Yes
<b>Ethernet</b>	Yes
<b>using external storage medium</b>	No
<b>Process coupling</b>	
<b>S7-1200</b>	Yes
<b>S7-1500</b>	Yes
<b>S7-200</b>	Yes
<b>S7-300/400</b>	Yes
<b>LOGO!</b>	Yes
<b>Win AC</b>	Yes
<b>SINUMERIK</b>	No
<b>SIMOTION</b>	No ; With WinCC, subsequent version
<b>Allen Bradley (EtherNet/IP)</b>	Yes
<b>Allen Bradley (DF1)</b>	Yes
<b>Mitsubishi (MC TCP/IP)</b>	Yes
<b>Mitsubishi (FX)</b>	Yes
<b>OMRON (FINS TCP)</b>	No
<b>OMRON (LINK/Multilink)</b>	Yes
<b>Modicon (Modbus TCP/IP)</b>	Yes
<b>Modicon (Modbus)</b>	Yes
<b>OPC UA Client</b>	Yes
<b>OPC UA Server</b>	No
<b>Service tools/configuration aids</b>	
<b>Clean screen</b>	Yes
<b>Touch calibration</b>	Yes
<b>Backup/restore</b>	Yes
<b>Backup/Restore automatically</b>	Yes
<b>Simulation</b>	Yes
<b>Device switchover</b>	Yes
<b>Delta transfer</b>	Yes
<b>I/O / Options</b>	
<b>I/O devices</b>	
<b>Printer</b>	Yes
<b>MultiMediaCard</b>	Yes
<b>SD card</b>	Yes
<b>USB memory</b>	Yes
<b>Network camera</b>	Yes
<b>Mechanics/material</b>	

<b>Type of housing (front)</b>	
Plastic	No
Aluminum	Yes
Stainless steel	No
<b>Dimensions</b>	
Width of the housing front	483 mm
Height of housing front	337 mm
<b>Mounting cutout (W x H x D)</b>	
Mounting cutout, width	465 mm
Mounting cutout, height	319 mm
Device depth	75 mm
<b>Weights</b>	
Weight without packaging	6.5 kg
Status	Dec 12, 2013