

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

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

Resolution (pixels)

horizontal image resolution	1366
vertical image resolution	768

Backlighting

MTBF backlighting (at 25 °C)	50000 h
Backlight dimmable	Yes ; 0-100 %

Control elements

Keyboard fonts

Number of function keys	0
Keys with LED	No
System keys	No
Numeric/alphabetical input	
Numeric keyboard	Yes

alphanumeric keyboard	Yes
Touch operation	
Design as touch screen	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)	40
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
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
Input current	
Current consumption (rated value)	1.3 A
Inrush current A ² s	0.5 A ² s
Power	
Power consumption, typ.	32 W
Processor	
Processor type	
X86	Yes
ARM	No
Memory	
Flash	Yes
RAM	Yes
usable memory for user data	24 Mbyte
Type of output	
Info LED	No
Power LED	No
Error LED	No
Acoustics	
Buzzer	No
Speaker	Yes
Time of day	

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
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

Active X	Yes
JavaScript	Yes
Java VM	No
Further protocols	
CAN	No
MODBUS	Yes
EtherNet/IP	Yes
EMC	
Emission of radio interference acc. to EN 55 011	
Emission of radio interference acc. to EN 55 011 (limit class A)	Yes
Emission of radio interference acc. to EN 55 011 (limit class B)	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
Standards, approvals, certificates	
CE mark	Yes
KC approval	Yes
cULus	Yes
RCM (former C-TICK)	Yes
Marine approval	
Germanischer Lloyd (GL)	No
American Bureau of Shipping (ABS)	No
Bureau Veritas (BV)	No
Det Norske Veritas (DNV)	No
Lloyds Register of Shipping (LRS)	No
Nippon Kaiji Kyokai (Class NK)	No
Polski Rejestr Statkow (PRS)	No
Use in hazardous areas	
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	Yes
FM Class I Division 2	Yes

Ambient conditions	
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	35 °
Operating temperature	
Operation (vertical installation)	
in vertical mounting position, minimum	0 °C
in vertical mounting position, maximum	45 °C
Operation (max. tilt angle)	
at maximum tilt angle, minimum	0 °C
at maximum tilt angle, maximum	40 °C
Operation (vertical installation, portrait format)	
in vertical mounting position, minimum	0 °C
in vertical mounting position, maximum	40 °C
Operation (max. tilt angle, portrait format)	
at maximum tilt angle, minimum	0 °C
at maximum tilt angle, maximum	35 °C
Storage/transport temperature	
min.	-20 °C
max.	60 °C
Relative humidity	
Operation, max.	90 %
Operating systems	
Windows CE	Yes
proprietary	No
Executable with configuration operating system	
other	No
Configuration	
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
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 ; V11 SP2 or higher
WinCC Advanced (TIA Portal)	Yes ; V11 SP2 or higher
WinCC Professional (TIA Portal)	Yes ; V11 SP2 or higher
Languages	
Online languages	
Number of online/runtime languages	32
Project languages	
Languages per project	32
Project languages	
D	Yes
GB	Yes
F	Yes
I	Yes
E	Yes
Chinese traditional	Yes
Chinese simplified	Yes
DK	Yes
FIN	Yes
GR	Yes
J	Yes
KP/ROK	Yes
NL	Yes
N	Yes
PL	Yes
P	Yes
RUS	Yes
S	Yes
CZ	Yes
SK	Yes
TR	Yes
H	Yes
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Applications/options	
Internet Explorer	Yes
Pocket Word	Yes
Pocket Excel	Yes
PDF Viewer	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
Message system	
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
Recipe administration	
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
Variables	
Number of variables per device	4096
Number of variables per screen	400
Limit values	Yes
Multiplexing	Yes
Structures	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
Switch	Yes
Buttons	Yes
Graphic display	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
Fonts	
Tahoma	Yes
Arial	Yes
Courier New	Yes
WinCC Standard	Yes
Ideographic languages	Yes
Font size freely scalable	Yes
additional character sets loadable	Yes
Transfer (upload/download)	

MPI/PROFIBUS DP	Yes
USB	Yes
Ethernet	Yes
using external storage medium	No
Process coupling	
S7-1200	Yes
S7-1500	Yes
S7-200	Yes
S7-300/400	Yes
LOGO!	Yes
WinAC	Yes
SINUMERIK	Yes
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
Service tools/configuration aids	
Clean screen	Yes
Touch calibration	Yes
Backup/Restore manually	Yes
Backup/Restore automatically	Yes
Simulation	Yes
Device switchover	Yes
Delta transfer	Yes
Peripherals/Options	
Peripherals	
Printer	Yes
Multimedia Card	Yes
SD card	Yes
USB memory	Yes
Network camera	Yes
Mechanics/material	

Type of housing (front)	
Plastic	No
Aluminum	Yes
Stainless steel	No
Dimensions	
Width of the housing front	483 mm
Height of housing front	337 mm
Mounting cutout/device depth (W x H x D)	
Mounting cutout, width	465 mm
Mounting cutout, height	319 mm
Overall depth	75 mm
Weights	
Weight without packaging	6.5 kg
Status	Jul 15, 2014