

SIMATIC HMI TP1900 Comfort INOX Stainless steel front, continuous decorative foil; Degree of protection front IP66K, 19" widescreen TFT display, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, Windows CE 2013; Configurable from WinCC Comfort V14 SP1 with HSP

### General information

Product type designation	TP1900 Comfort INOX
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### Display

Design of display	TFT
Screen diagonal	18.5 in
Display width	409.8 mm
Display height	230.4 mm
Number of colors	16 777 216

### Resolution (pixels)

- |                               |             |
|-------------------------------|-------------|
| • Horizontal image resolution | 1 366 Pixel |
| • Vertical image resolution   | 768 Pixel   |

### Backlighting

- |                                |              |
|--------------------------------|--------------|
| • MTBF backlighting (at 25 °C) | 50 000 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 |
|--------------------------|-----|

#### 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 position	vertical
Mounting in portrait format possible	Yes
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

### Input current

Current consumption (rated value)	1.7 A
Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s

### Power

Active power input, typ.	41 W
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### Processor

Processor type	X86
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### Memory

Flash	Yes
RAM	Yes
Memory available 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)	Yes
• Software clock	Yes
• retentive	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes

### Interfaces

Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port
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

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	3
• Number of ports of the integrated switch	2
<b>Protocols</b>	
PROFINET	Yes
Supports protocol for PROFINET IO	Yes
IRT	Yes
PROFIBUS	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>	
<b>Media redundancy</b>	
— MRP	Yes
<b>Further protocols</b>	
• CAN	No
• EtherNet/IP	Yes
• MODBUS	Yes
<b>Interrupts/diagnostics/status information</b>	
<b>Diagnoses</b>	
• Diagnostic information readable	Yes; S7 controller
<b>EMC</b>	
Emission of radio interference acc. to EN 55 011	

- Limit class A, for use in industrial areas
- Limit class B, for use in residential areas

Yes

No

### Degree and class of protection

IP (at the front)

IP66K

IP (rear)

IP20

NEMA (front)

- Enclosure Type 4 at the front
- Enclosure Type 4x at the front

No

Yes; indoor use only

### Standards, approvals, certificates

CE mark

Yes

cULus

Yes

RCM (formerly C-TICK)

Yes

KC approval

Yes

EAC (formerly Gost-R)

Yes

### Use in hazardous areas

- ATEX Zone 2
- ATEX Zone 22
- IECEx Zone 2
- IECEx Zone 22
- cULus Class I Zone 1
- cULus Class I Zone 2, Division 2
- FM Class I Division 2

Yes

Yes

Yes

Yes

No

Yes

No

### Marine approval

- Germanischer Lloyd (GL)
- American Bureau of Shipping (ABS)
- Bureau Veritas (BV)
- Det Norske Veritas (DNV)
- Korean Register of Shipping (KRS)
- Lloyds Register of Shipping (LRS)
- Nippon Kaiji Kyokai (Class NK)
- Polski Rejestr Statkow (PRS)
- Chinese Classification Society (CCS)

No; In application process

No; Available soon

No; Available soon

No; Available soon

No; Available soon

No; Available soon

No; Available soon

No; Available soon

No; Available soon

### Ambient conditions

Suited for indoor use

Yes

Suited for outdoor use

No

### Ambient temperature during operation

- Operation (vertical installation)
  - For vertical installation, min.
  - For vertical installation, max.
- Operation (max. tilt angle)
  - At maximum tilt angle, min.

0 °C

45 °C

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.	70 %; no condensation
<b>Operating systems</b>	
proprietary	No
<b>pre-installed operating system</b>	
• Windows CE	Yes; Windows Embedded Compact 2013
<b>Configuration</b>	
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	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; V14 SP1 HSP and higher
• WinCC Advanced (TIA Portal)	Yes; V14 SP1 HSP and higher
• WinCC Professional (TIA Portal)	Yes; V14 SP1 HSP and higher
<b>Languages</b>	
<b>Online languages</b>	
• Number of online/runtime languages	32
<b>Project languages</b>	
• Languages per project	32
<b>Functionality under WinCC (TIA Portal)</b>	
Libraries	Yes
Applications/options	

• Web browser	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
<b>Message system</b>	
• Number of alarm classes	32
• Bit messages	
— Number of bit messages	6 000
• Analog messages	
— 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	1 024
— Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes
<b>Recipe management</b>	
• Number of recipes	500
• Data records per recipe	1 000
• Entries per data record	2 000
• Size of internal recipe memory	4 Mbyte
• Recipe memory expandable	Yes
<b>Variables</b>	
• Number of variables per device	4 096
• Number of variables per screen	400
• Limit values	Yes

• Multiplexing	Yes
• Structures	Yes
• Arrays	Yes
<b>Images</b>	
• Number of configurable images	750
• 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
<b>Image objects</b>	
• 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 display	Yes
• Icons	Yes
• Geometric objects	Yes
<b>Complex image objects</b>	
• 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
• 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	50 000
• 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
Transfer (upload/download)	
• MPI/PROFIBUS DP	Yes
• USB	Yes
• Ethernet	Yes
• using external storage medium	Yes
Process coupling	



• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
• SINUMERIK	Yes; With SINUMERIK option package as from WinCC V15 or higher
• SIMOTION	Yes
• 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	Yes

<b>Service tools/configuration aids</b>	
• Backup/Restore manually	Yes
• Backup/Restore automatically	Yes
• Simulation	Yes
• Device switchover	Yes

<b>Peripherals/Options</b>	
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB
SIMATIC HMI CF memory card Compact Flash Card	No
USB memory	Yes
SIMATIC IPC USB Flashdrive (USB stick)	Yes; Up to 16 GB
SIMATIC HMI USB stick	Yes; Up to 8 GB
Network camera	Yes

<b>Mechanics/material</b>	
Enclosure material (front)	
• Plastic	No
• Aluminum	No
• Stainless steel	Yes

<b>Dimensions</b>	
Width of the housing front	483 mm

Height of housing front	337 mm
Mounting cutout, width	465 mm
Mounting cutout, height	319 mm
Overall depth	73 mm

#### Weights

Weight without packaging	7.9 kg
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**last modified:** 09/11/2020