



SIMATIC HMI, TP700 Basic Keyless; Basic Panel, neutral design, touch operation, 7" TFT display, 65536 colors, PROFINET interface, configurable from WinCC Basic V13/ STEP 7 Basic V13, contains open-source software, which is provided free of charge see enclosed CD

General information	
Product type designation	TP700 Basic Keyless
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	7 in
Display width	154.1 mm
Display height	85.9 mm
Number of colors	65 536
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	20 000 h
• Backlight dimmable	Yes
Control elements	
Keyboard fonts	
• Function keys	No
— 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; Analog-resistive
Installation type/mounting	
Mounting position	Horizontal, 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)	230 mA
Starting current inrush I _t	0.2 A ² ·s

Power	
Active power input, typ.	5.5 W
Processor	
Processor type	ARM
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
Type of output	
Acoustics	
• Buzzer	Yes
• Speaker	No
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	1
Number of RS 485 interfaces	0
Number of RS 422 interfaces	0
Number of RS 232 interfaces	0
Number of USB interfaces	1; Up to 16 GB
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	0
Number of SD card slots	0
With software interfaces	No
Industrial Ethernet	
• Industrial Ethernet status LED	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
IRT	No
PROFIBUS	No
EtherNet/IP	Yes
MPI	No
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	No
• HTML	No
Redundancy mode	
Media redundancy	
— MRP	No
Further protocols	
• CAN	No
• MODBUS	Yes; Modicon (MODBUS TCP/IP)
Interrupts/diagnostics/status information	
Diagnoses	
• Diagnostic information readable	No
EMC	
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
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4 at the front	Yes
• Enclosure Type 4x at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
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	No
• FM Class I Division 2	No
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
• Polski Rejestr Statkow (PRS)	No
Ambient conditions	
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	50 °C
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
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	90 %; no condensation
Operating systems	
proprietary	Yes
pre-installed operating system	
• Windows CE	No
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)	Yes; via integrated WinCC Basic (TIA Portal)

<ul style="list-style-type: none"> • STEP 7 Professional (TIA Portal) 	Yes; via integrated WinCC Basic (TIA Portal)
<ul style="list-style-type: none"> • WinCC flexible Compact 	No
<ul style="list-style-type: none"> • WinCC flexible Standard 	No
<ul style="list-style-type: none"> • WinCC flexible Advanced 	No
<ul style="list-style-type: none"> • WinCC Basic (TIA Portal) 	Yes
<ul style="list-style-type: none"> • WinCC Comfort (TIA Portal) 	Yes
<ul style="list-style-type: none"> • WinCC Advanced (TIA Portal) 	Yes
<ul style="list-style-type: none"> • WinCC Professional (TIA Portal) 	Yes
Languages	
Online languages	
<ul style="list-style-type: none"> • Number of online/runtime languages 	10
Project languages	
<ul style="list-style-type: none"> • Languages per project 	32
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Applications/options	
<ul style="list-style-type: none"> • Web browser 	Yes
Number of Visual Basic Scripts	No
Task planner	Yes
<ul style="list-style-type: none"> • time-controlled 	No
<ul style="list-style-type: none"> • task-controlled 	Yes
Help system	Yes
<ul style="list-style-type: none"> • Number of characters per info text 	500
Message system	
<ul style="list-style-type: none"> • Number of alarm classes 	32
<ul style="list-style-type: none"> • Bit messages <ul style="list-style-type: none"> — Number of bit messages 	1 000
<ul style="list-style-type: none"> • Analog messages <ul style="list-style-type: none"> — Number of analog messages 	25
<ul style="list-style-type: none"> • S7 alarm number procedure 	No
<ul style="list-style-type: none"> • System messages HMI 	Yes
<ul style="list-style-type: none"> • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...) 	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
<ul style="list-style-type: none"> • Number of characters per message 	80
<ul style="list-style-type: none"> • Number of process values per message 	8
<ul style="list-style-type: none"> • Acknowledgment groups 	Yes
<ul style="list-style-type: none"> • Message indicator 	Yes
<ul style="list-style-type: none"> • Message buffer <ul style="list-style-type: none"> — Number of entries 	256
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — Circulating buffer 	Yes
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — retentive 	Yes
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — maintenance-free 	Yes
Recipe management	
<ul style="list-style-type: none"> • Number of recipes 	50
<ul style="list-style-type: none"> • Data records per recipe 	100
<ul style="list-style-type: none"> • Entries per data record 	100
<ul style="list-style-type: none"> • Size of internal recipe memory 	256 kbyte
<ul style="list-style-type: none"> • Recipe memory expandable 	No
Variables	
<ul style="list-style-type: none"> • Number of variables per device 	800
<ul style="list-style-type: none"> • Number of variables per screen 	100
<ul style="list-style-type: none"> • Limit values 	Yes
<ul style="list-style-type: none"> • Multiplexing 	Yes
<ul style="list-style-type: none"> • Structures 	No
<ul style="list-style-type: none"> • Arrays 	Yes
Images	
<ul style="list-style-type: none"> • Number of configurable images 	250
<ul style="list-style-type: none"> • Permanent window/default 	Yes
<ul style="list-style-type: none"> • Global image 	Yes
<ul style="list-style-type: none"> • Pop-up images 	No

• Slide-in images	No
• Image selection by PLC	Yes
• Image number in the PLC	Yes
Image objects	
• Number of objects per image	100
• 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	10
• Alarm view	Yes
• Trend view	Yes
• User view	Yes
• Status/control	No
• Sm@rtClient view	No
• Recipe view	Yes
• f(x) trend view	No
• System diagnostics view	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
• Media Player	No
• HTML browser	Yes
• PDF display	No
• IP camera display	No
• Bar graphs	Yes
• Sliders	No
• Pointer instruments	No
• Analog/digital clock	No
Lists	
• Number of text lists per project	300
• Number of entries per text list	100
• Number of graphics lists per project	100
• Number of entries per graphics list	100
Archiving	
• Number of archives per device	2
• Number of entries per archive	10 000
• Message archive	Yes
• Process value archive	Yes
• Archiving methods	
— Sequential archive	Yes
— Short-term archive	Yes
• Memory location	
— Memory card	No
— USB memory	Yes
— Ethernet	No
• Data storage format	
— CSV	No
— TXT	Yes
— RDB	No
Security	
• Number of user groups	50
• Number of user rights	32
• Number of users	50
• Password export/import	Yes
• SIMATIC Logon	No

Character sets	
<ul style="list-style-type: none"> Keyboard fonts <ul style="list-style-type: none"> — US English 	Yes
Transfer (upload/download)	
<ul style="list-style-type: none"> MPI/PROFIBUS DP USB Ethernet using external storage medium 	No No Yes No
Process coupling	
<ul style="list-style-type: none"> 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) 	Yes Yes Yes Yes Yes Yes Yes; No access to NCK data Yes Yes No Yes No No No Yes No
Service tools/configuration aids	
<ul style="list-style-type: none"> Backup/Restore manually Backup/Restore automatically Simulation Device switchover 	Yes No Yes Yes
Peripherals/Options	
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory card	No
SIMATIC HMI CF memory card Compact Flash Card	No
USB memory	Yes
SIMATIC IPC USB Flashdrive (USB stick)	Yes
SIMATIC HMI USB stick	Yes
Mechanics/material	
Enclosure material (front) <ul style="list-style-type: none"> Plastic Aluminum Stainless steel 	Yes No No
Dimensions	
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	39 mm
Weights	
Weight (without packaging)	780 g
Weight (with packaging)	990 g
last modified:	10/8/2021 