SIEMENS

Data sheet



SIMATIC HMI, TP400 Basic Keyless; Basic Panel, neutral design, touch operation, 4" 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	TP400 Basic Keyless	
Display		
Design of display	TFT widescreen display, LED backlighting	
Screen diagonal	4.3 in	
Display width	95 mm	
Display height	53.9 mm	
Number of colors	65 536	
Resolution (pixels)		
 Horizontal image resolution 	480 pixel	
Vertical image resolution	272 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	
 Design as multi-touch screen 	No	
 Monitor keyboard 	Yes	
Installation type/mounting		
Wall mounting/direct mounting	No	
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		

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Current consumption (rated value)	125 mA
Starting current inrush I²t	0.2 A ² ·s
Processor	
Processor type	ARM
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
Type of output	
Acoustics	
Buzzer	Yes
• Speaker	No
	INO
Time of day	
Clock	
Hardware clock (real-time)	Yes
Software clock	Yes
• retentive	Yes
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
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	
PROFIBUS	No No
	No Yea
EtherNet/IP	Yes
MPI	No
Protocols (Ethernet)	V
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	No
• HTML	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	
	Voo
Limit class A, for use in industrial areas Limit class B, for use in regidential areas	Yes
Limit class B, for use in residential areas	No
Degree and class of protection	
IP (at the front)	IP65

17.1	
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
EAC (formerly Gost-R)	Yes
Use in hazardous areas	
ATEX Zone 2	No
ATEX Zone 22	No
cULus Class I Zone 1	No
 cULus Class I Zone 2, Division 2 	No
 FM Class I Division 2 	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 %
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)
0.750.70 () (.714.0 ())	
 STEP 7 Professional (TIA Portal) 	Yes; via integrated WinCC Basic (TIA Portal)
STEP / Professional (TIA Portal)WinCC flexible Compact	Yes; via integrated WinCC Basic (TIA Portal) No
• • • • • • • • • • • • • • • • • • • •	
WinCC flexible Compact	No
WinCC flexible CompactWinCC flexible Standard	No No
WinCC flexible CompactWinCC flexible StandardWinCC flexible Advanced	No No No
 WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) 	No No No Yes
 WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) WinCC Comfort (TIA Portal) 	No No No Yes Yes
 WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) WinCC Comfort (TIA Portal) WinCC Advanced (TIA Portal) WinCC Professional (TIA Portal) 	No No No Yes Yes Yes
WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) WinCC Comfort (TIA Portal) WinCC Advanced (TIA Portal) WinCC Professional (TIA Portal)	No No No Yes Yes Yes
WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) WinCC Comfort (TIA Portal) WinCC Advanced (TIA Portal) WinCC Professional (TIA Portal) Languages Online languages	No No No Yes Yes Yes Yes
WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) WinCC Comfort (TIA Portal) WinCC Advanced (TIA Portal) WinCC Professional (TIA Portal) Languages Online languages Number of online/runtime languages	No No No Yes Yes Yes
WinCC flexible Compact WinCC flexible Standard WinCC flexible Advanced WinCC Basic (TIA Portal) WinCC Comfort (TIA Portal) WinCC Advanced (TIA Portal) WinCC Professional (TIA Portal) Languages Online languages	No No No Yes Yes Yes Yes

Functionality under WinCC (TIA Portal)	
Libraries	Yes
Number of Visual Basic Scripts	No
Task planner	Yes
• time-controlled	No
• task-controlled	Yes
Help system	Yes
Number of characters per info text	500
Message system	
 Number of alarm classes 	32
Bit messages	
 Number of bit messages 	1 000
 Analog messages 	
 Number of analog messages 	25
 S7 alarm number procedure 	No
 System messages HMI 	Yes
 System event, more (SIMATIC S7, SINUMERIK, SIMOTION,) 	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
 Number of characters per message 	80
 Number of process values per message 	8
 Acknowledgment groups 	Yes
Message indicator	Yes
Message buffer	
Number of entries	256
Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe management	50
Number of recipes	50
Data records per recipe	100
Entries per data record Size of internal region magnetic	100
Size of internal recipe memory Degine memory expandable	256 kbyte
Recipe memory expandable Variables	No
Variables	900
Number of variables per device Number of variables per screen	800
Number of variables per screen Limit values	100 Vos
Limit values Multiploving	Yes
Multiplexing Structures	Yes No
Structures Arrays	Yes
• Arrays	100
Images ■ Number of configurable images	100
Permanent window/default	Yes
Global image	Yes
Image selection by PLC	Yes
Image selection by PLC Image number in the PLC	Yes
Image objects	
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
- Maini view	100

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
Media Player	No
PDF display	No
IP camera display	No
Bar graphs	Yes
• Sliders	No
Pointer instruments	No
Analog/digital clock	No
Archiving	
Number of archives per device	2
Number of entries per archive	10 000
	Yes
Message archive Process value archive	Yes
	1 53
Archiving methods Convential prohius	Voc
— Sequential archive	Yes
— Short-term archive	Yes
Memory location	
— Memory card	No
— USB memory	Yes
— Ethernet	No
Data storage format	
— CSV	Yes
— TXT	No
— RDB	No
Security	
•	
Number of user groups	50
,	50 Yes; Possible via ProSave
Number of user groups	
Number of user groupsPassword export/import	Yes; Possible via ProSave
 Number of user groups Password export/import SIMATIC Logon Character sets	Yes; Possible via ProSave
Number of user groupsPassword export/importSIMATIC Logon	Yes; Possible via ProSave
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English	Yes; Possible via ProSave No
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts 	Yes; Possible via ProSave No
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts US English Transfer (upload/download)	Yes; Possible via ProSave No Yes
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP	Yes; Possible via ProSave No Yes
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet	Yes; Possible via ProSave No Yes No No No No Yes
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium	Yes; Possible via ProSave No Yes No No
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling ST-1200	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes
Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling S7-1200 S7-1500	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC 	Yes; Possible via ProSave No Yes No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION 	Yes; Possible via ProSave No Yes No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) 	Yes; Possible via ProSave No Yes No No No Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
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 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC SIMOTION Allen Bradley (EtherNet/IP) Allen Bradley (DF1) Mitsubishi (MC TCP/IP) Mitsubishi (FX) OMRON (FINS TCP) OMRON (LINK/Multilink) Modicon (Modbus TCP/IP) 	Yes; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y
 Number of user groups Password export/import SIMATIC Logon Character sets Keyboard fonts — US English Transfer (upload/download) MPI/PROFIBUS DP USB Ethernet using external storage medium Process coupling \$7-1200 \$7-1500 \$7-200 \$7-300/400 LOGO! WinAC 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; Possible via ProSave No Yes No No No Yes Yes; Backup/restore Yes Yes Yes Yes Yes Yes Yes Yes Yes Y

 Backup/Restore automatically 	No
Simulation	Yes
 Device switchover 	Yes
Peripherals/Options	
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory card	No
USB memory	Yes; USB storage medium can be connected
Mechanics/material	
Enclosure material (front)	
Plastic	Yes
 Aluminum 	No
Stainless steel	No
Dimensions	
Width of the housing front	141 mm
Height of housing front	116 mm
Mounting cutout, width	123 mm
Mounting cutout, height	99 mm
Overall depth	33 mm

last modified: 10/8/2021 🖸