



SIMATIC HMI MTP700, Unified Comfort Panel, touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16, contains open-source software, which is provided free of charge see enclosed DVD

General information	
Product type designation	MTP700 Unified Comfort
Display	
Design of display	TFT
Screen diagonal	7 in
Display width	152.4 mm
Display height	91.4 mm
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C
• Backlight dimmable	Yes; 5-100 %
Control elements	
Keyboard fonts	
• Numeric keyboard	Yes; Onscreen keyboard
• alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
• Design as touch screen	Yes
• Design as multi-touch screen	Yes
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)	0.45 A
Current consumption, max.	1 A
Starting current inrush I _{2t}	0.5 A ² ·s
Memory	
Flash	Yes
RAM	Yes
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	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 USB interfaces	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2
Industrial Ethernet	
• Industrial Ethernet status LED	2
• Number of ports of the integrated switch	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
Redundancy mode	
Media redundancy	
— MRP	Yes
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 4x at the front	Yes
• Enclosure Type 12 at the front	No
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• cULus Class II Division 2	Yes
• FM Class I Division 2	No; Available soon
• FM Class II Division 2	No
Marine approval	
• Germanischer Lloyd (GL)	No; included in DNV
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes

• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
• Chinese Classification Society (CCS)	Yes

Ambient conditions

Suited for indoor use	Yes
Suited for outdoor use	No

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
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Operating systems

proprietary	Yes
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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	
• WinCC Unified Comfort Engineering (TIA Portal)	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes

Languages

Online languages	
• Number of online/runtime languages	32
Project languages	
• Languages per project	32

Functionality under WinCC Unified

Libraries	Yes
Applications/options	
• Writer	Yes
• Calc	Yes
• Web browser	Yes
• PDF Viewer	Yes
• Media Player	Yes
• SIMATIC WinCC Sm@rtServer	Yes
• SIMATIC WinCC Audit	Yes
• Unified Collaboration	Yes
Number of Visual Basic Scripts	No
JavaScript	Yes
Task planner	
• time-controlled	Yes
• task-controlled	Yes
Help system	
• Number of characters per info text	70
• Number of message texts per message	10
functionality under WinCC Unified / alarm system / header	
• Number of alarm classes	32
• Bit messages	
— Number of bit messages	9 000

• Analog messages — Number of analog messages • S7 alarm number procedure • System messages HMI • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) • Number of characters per message • Number of process values per message • Acknowledgment groups • Message indicator • Message buffer — Circulating buffer — retentive — maintenance-free	300 Yes Yes Yes 512 10 Yes No Yes; Configured as alarm archive Yes Yes Yes
Parameter set management (recipes)	
• Number of parameter set types • Parameter sets per parameter set type • Entries per parameter set • Size of internal parameter set memory • Parameter set memory expandable	750 2 000 1 000 12 Mbyte Yes
functionality under WinCC Unified / variables / header	
• Number of variables per device • Number of variables per screen • Limit values • Structures • Arrays	8 000 600 Yes Yes Yes
Funktionalität unter WinCC Unified / Bilder / Überschrift	
• Number of configurable images • Faceplate	1 200 Yes
Image objects	
• Number of objects per image • Picture window • Text fields • I/O fields • Graphic I/O fields (graphics list) • Symbolic I/O fields (text list) • Scalable Vector Graphics (SVG) • Date/time fields • Checkbox • Option button • Switches • Buttons • Graphic display • Icons • Custom web display • Geometric objects	800 Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
functionality under WinCC Unified / complex screen objects / header	
• Number of complex objects per screen • Alarm view • Trend view • User view • Status/control • Parameter set display • HTML browser • Bar graphs • Sliders • Pointer instruments • Analog/digital clock	40 Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes
functionality under WinCC Unified / lists / header	
• Number of text lists per project • Number of entries per text list • Number of graphics lists per project • Number of entries per graphics list	750 750 750 750
functionality under WinCC Unified / archiving / header	

• Number of archives per device • Number of entries per archive • Message archive • Process value archive • type of archiving / for WinCC Unified — Sequential archive — Short-term archive • storage location / of archiving / for WinCC Unified — Memory card — storage location / of archiving / for WinCC Unified / USB mass storage — Ethernet	50 500 000 Yes Yes Yes Yes Yes Yes No
Security	
• Number of roles • Number of function rights • Number of users • Password export/import • Central user administration	50 0; V16 200 Yes Yes; as of WinCC V17
functionality under WinCC Unified / transfer (upload/download) / header	
• USB • Ethernet • using external storage medium	No Yes Yes; as of WinCC Unified V17
Process coupling	
• S7-1200 • S7-1500 • S7-200 • S7-300/400 • Number of S7 connections • LOGO! • SIMOTION • OPC UA Client • OPC UA Server • Software Controller/Open Controller	Yes Yes No Yes 16 No No Yes Yes Yes
functionality under WinCC Unified / service tools/configuration tools / header	
• Backup/Restore manually • Backup/Restore automatically • Simulation • Device switchover	Yes Yes Yes Yes
Peripherals/Options	
Peripherals Printer SIMATIC HMI MM memory card: Multi Media Card SIMATIC HMI SD memory card: Secure Digital memory card SIMATIC HMI CF memory card Compact Flash Card USB memory SIMATIC IPC USB Flashdrive (USB stick) SIMATIC HMI USB stick Network camera	Printer, barcode reader Yes No Yes No Yes Yes Yes No
Mechanics/material	
Enclosure material (front) • Aluminum	Yes
Dimensions	
Width of the housing front Height of housing front Mounting cutout, width Mounting cutout, height Overall depth	214 mm 158 mm 197 mm 141 mm 64 mm
Weights	
Weight (without packaging)	1.4 kg
last modified:	1/13/2023 