

**Siemens
EcoTech**



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 ² t | 0.5 A ² ·s |
| Memory | |

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| 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 | Yes |
| Standards, approvals, certificates | |
| Siemens Eco Profile (SEP) | Siemens EcoTech |
| CE mark | Yes |
| UKCA mark | Yes |
| cULus | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| EAC (formerly Gost-R) | Yes |
| CCC | Yes |
| Ecological footprint | |
| • environmental product declaration | Yes |
| Global warming potential | |
| — global warming potential, (total) [CO2 eq] | 196 kg |
| — global warming potential, (during production) [CO2 eq] | 41.6 kg |
| — global warming potential, (during operation) [CO2 eq] | 159 kg |
| — global warming potential, (after end of life cycle) | -4.38 kg |

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| [CO2 eq] | |
| 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 | Yes |
| • FM Class II Division 2 | Yes |
| 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 |
| Operating systems | |
| proprietary | Yes |
| 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 |

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| • 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 | 300 |
| • S7 alarm number procedure | Yes |
| • System messages HMI | Yes |
| • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...) | Yes |
| • Number of characters per message | 512 |
| • Number of process values per message | 10 |
| • Acknowledgment groups | Yes |
| • Message indicator | Yes; as dynamic widgets |
| • Message buffer | Yes; Configured as alarm archive |
| — Circulating buffer | Yes |
| — retentive | Yes |
| — maintenance-free | Yes |
| Parameter set management (recipes) | |
| • Number of parameter set types | 750 |
| • Parameter sets per parameter set type | 2 000 |
| • Entries per parameter set | 1 000 |
| • Size of internal parameter set memory | 12 Mbyte |
| • Parameter set memory expandable | Yes |
| functionality under WinCC Unified / variables / header | |
| • Number of variables per device | 8 000 |
| • Number of variables per screen | 600 |
| • Limit values | Yes |
| • Structures | Yes |
| • Arrays | Yes |
| functionality under WinCC Unified / screens / header | |
| • Number of configurable images | 1 200 |
| • Faceplate | Yes |
| Image objects | |
| • Number of objects per image | 800 |
| • Picture window | Yes |
| • Text fields | Yes |
| • I/O fields | Yes |
| • Graphic I/O fields (graphics list) | Yes |
| • Symbolic I/O fields (text list) | Yes |
| • Scalable Vector Graphics (SVG) | Yes |
| • Date/time fields | Yes |
| • Checkbox | Yes |
| • Option button | Yes |
| • Switches | Yes |
| • Buttons | Yes |

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| • Graphic display | Yes |
| • Icons | Yes |
| • Custom web display | Yes |
| • Geometric objects | Yes |
| functionality under WinCC Unified / complex screen objects / header | |
| • Number of complex objects per screen | 40 |
| • Alarm view | Yes |
| • Trend view | Yes |
| • User view | Yes |
| • Status/control | No |
| • Parameter set display | Yes |
| • HTML browser | Yes |
| • Bar graphs | Yes |
| • Sliders | Yes |
| • Pointer instruments | Yes |
| • Analog/digital clock | Yes |
| functionality under WinCC Unified / lists / header | |
| • Number of text lists per project | 750 |
| • Number of entries per text list | 750 |
| • Number of graphics lists per project | 750 |
| • Number of entries per graphics list | 750 |
| functionality under WinCC Unified / archiving / header | |
| • Number of archives per device | 50 |
| • Number of entries per archive | 500 000 |
| • Message archive | Yes |
| • Process value archive | Yes |
| • type of archiving / for WinCC Unified | |
| — Sequential archive | Yes |
| — Short-term archive | Yes |
| • storage location / of archiving / for WinCC Unified | |
| — Memory card | Yes |
| — USB memory | Yes |
| — Ethernet | No |
| Security | |
| • Number of roles | 50 |
| • Number of function rights | 20; number of predefined function rights |
| • Number of users | 200 |
| • Password export/import | Yes |
| • Central user administration | Yes; as of WinCC V17 |
| functionality under WinCC Unified / transfer (upload/download) / header | |
| • USB | No |
| • Ethernet | Yes |
| • using external storage medium | Yes; as of WinCC Unified V17 |
| Process coupling | |
| • S7-1200 | Yes |
| • S7-1500 | Yes |
| • S7-200 | No |
| • S7-300/400 | Yes |
| • Number of S7 connections | 16 |
| • LOGO! | Yes; as of WinCC Unified V20 |
| • SIMOTION | No |
| • OPC UA Client | Yes |
| • OPC UA Server | Yes |
| • Software Controller/Open Controller | Yes |
| functionality under WinCC Unified / service tools/configuration tools / header | |
| • Backup/Restore manually | Yes |
| • Backup/Restore automatically | Yes |
| • Simulation | Yes |
| • Device switchover | Yes |
| Peripherals/Options | |
| Peripherals | Printer, barcode reader |

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| Printer | Yes |
| SIMATIC HMI MM memory card: Multi Media Card | No |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes |
| SIMATIC HMI CF memory card Compact Flash Card | No |
| USB memory | Yes |
| SIMATIC IPC USB Flashdrive (USB stick) | Yes |
| SIMATIC HMI USB stick | Yes |
| Network camera | No |

Mechanics/material

| | |
|----------------------------|-----|
| Enclosure material (front) | |
| • Aluminum | Yes |

Dimensions

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|----------------------------|----------|
| Width of the housing front | 214 mm |
| Height of housing front | 158 mm |
| Mounting cutout, width | 198.3 mm |
| Mounting cutout, height | 142 mm |
| Overall depth | 63.6 mm |

Weights

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|----------------------------|--------|
| Weight (without packaging) | 1.4 kg |
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Classifications

| | Version | Classification |
|--------|---------|----------------|
| eClass | 14 | 27-33-02-01 |
| eClass | 12 | 27-33-02-01 |
| eClass | 9.1 | 27-33-02-01 |
| eClass | 9 | 27-33-02-01 |
| eClass | 8 | 27-24-23-02 |
| eClass | 7.1 | 27-24-23-02 |
| eClass | 6 | 27-24-23-02 |
| ETIM | 10 | EC001412 |
| ETIM | 9 | EC001412 |
| ETIM | 8 | EC001412 |
| ETIM | 7 | EC001412 |

Approvals / Certificates

| | |
|--------------------------|-----|
| General Product Approval | EMV |
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[Miscellaneous](#)



[KC](#)



For use in hazardous locations



[FM](#)

[CCC-Ex](#)

For use in hazardous locations | **Maritime application**



[NK / Nippon Kaiji Kyokai](#)

Maritime application | **Environment**



[CCS \(China Classification Society\)](#)



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