

**Siemens  
EcoTech**



SIMATIC HMI MTP700, Unified Comfort Panel, neutral, 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 <sub>pt</sub>                               | 0.5 A <sup>2</sup> ·s  |

|                                                          |                                         |
|----------------------------------------------------------|-----------------------------------------|
| <b>Memory</b>                                            |                                         |
| Flash                                                    | Yes                                     |
| RAM                                                      | Yes                                     |
| <b>Type of output</b>                                    |                                         |
| Acoustics                                                |                                         |
| • Buzzer                                                 | Yes                                     |
| • Speaker                                                | No                                      |
| <b>Time of day</b>                                       |                                         |
| Clock                                                    |                                         |
| • Hardware clock (real-time)                             | Yes                                     |
| • Software clock                                         | Yes                                     |
| • retentive                                              | Yes; Back-up duration typically 6 weeks |
| • synchronizable                                         | Yes                                     |
| <b>Interfaces</b>                                        |                                         |
| 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                                       |
| <b>Protocols</b>                                         |                                         |
| 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                                     |
| <b>EMC</b>                                               |                                         |
| 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                                      |
| <b>Degree and class of protection</b>                    |                                         |
| IP (at the front)                                        | IP65                                    |
| IP (rear)                                                | IP20                                    |
| NEMA (front)                                             |                                         |
| • Enclosure Type 4x at the front                         | Yes                                     |
| • Enclosure Type 12 at the front                         | Yes                                     |
| <b>Standards, approvals, certificates</b>                |                                         |
| 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) [CO2 eq] | -4.38 kg              |
| <b>Use in hazardous areas</b>                                  |                       |
| • 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                   |
| <b>Marine approval</b>                                         |                       |
| • 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                   |
| <b>Ambient conditions</b>                                      |                       |
| Suited for indoor use                                          | Yes                   |
| Suited for outdoor use                                         | No                    |
| <b>Ambient temperature during operation</b>                    |                       |
| 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                 |
| <b>Ambient temperature during storage/transportation</b>       |                       |
| • min.                                                         | -20 °C                |
| • max.                                                         | 60 °C                 |
| <b>Relative humidity</b>                                       |                       |
| • Operation, max.                                              | 90 %; no condensation |
| <b>Operating systems</b>                                       |                       |
| proprietary                                                    | Yes                   |
| <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>                                  |                       |
| • WinCC Unified Comfort Engineering (TIA Portal)               | Yes                   |
| • WinCC Unified PC Engineering (TIA Portal)                    | Yes                   |
| <b>Languages</b>                                               |                       |
| <b>Online languages</b>                                        |                       |
| • Number of online/runtime languages                           | 32                    |
| <b>Project languages</b>                                       |                       |
| • 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                                  | 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                                      |
| • 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 |
| 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

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

#### Weights

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

#### 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 | For use in hazardous locations |
|--------------------------|-----|--------------------------------|



[Miscellaneous](#)



#### For use in hazardous locations



[FM](#)

[CCC-Ex](#)



#### Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application

Environment

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



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