



SIMATIC HMI MTP700 Unified Comfort Panel hygienic, neutral design, IP69, stainless steel, hygienic design, 7" widescreen TFT display, 16 million colors, touch operation, blue FDA-compliant gasket, increased impact protection with splinter protection display front according to directives DIN EN 1672-2, FDA 21 CFR 177.2006, PROFINET interface, configurable as of WinCC Unified Comfort V17, contains open-source software, which is provided free of charge see enclosed Blu-Ray

| General information                                                   |                                 |
|-----------------------------------------------------------------------|---------------------------------|
| Product type designation                                              | MTP700 Unified Comfort Hygienic |
| 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                                                              |                                 |
| • Numeric keyboard                                                    | Yes; Onscreen keyboard          |
| • alphanumeric keyboard                                               | Yes; Onscreen keyboard          |
| Touch operation                                                       |                                 |
| • Design as touch screen                                              | Yes                             |
| • Design as multi-touch screen                                        | Yes                             |
| • Monitor keyboard                                                    | Yes                             |
| 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)                                     | 0.45 A                          |
| Current consumption, max.                                             | 1 A                             |
| Starting current inrush I <sup>2</sup> t                              | 0.5 A <sup>2</sup> ·s           |
| Storage                                                               |                                 |
| Flash                                                                 | Yes                             |

|                                                         |                                                |
|---------------------------------------------------------|------------------------------------------------|
| RAM                                                     | Yes                                            |
| <b>Type of output</b>                                   |                                                |
| Acoustics                                               |                                                |
| • Buzzer                                                | Yes                                            |
| • Speaker                                               | No                                             |
| <b>Time of day</b>                                      |                                                |
| <b>Clock</b>                                            |                                                |
| • 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 3.0                                     |
| Number of SD card slots                                 | 2                                              |
| <b>Industrial Ethernet</b>                              |                                                |
| • Industrial Ethernet status LED                        | 2                                              |
| • Number of ports of the integrated switch              | 2                                              |
| <b>Protocols</b>                                        |                                                |
| PROFINET                                                | Yes                                            |
| Supports protocol for PROFINET IO                       | No                                             |
| <b>Protocols (Ethernet)</b>                             |                                                |
| • TCP/IP                                                | Yes                                            |
| • DHCP                                                  | Yes                                            |
| • SNMP                                                  | Yes                                            |
| • DCP                                                   | Yes                                            |
| • LLDP                                                  | Yes                                            |
| <b>WEB characteristics</b>                              |                                                |
| • HTTP                                                  | Yes                                            |
| • HTTPS                                                 | Yes                                            |
| • HTML                                                  | Yes                                            |
| • XML                                                   | Yes                                            |
| • CSS                                                   | Yes                                            |
| • JavaScript                                            | Yes                                            |
| <b>Redundancy mode</b>                                  |                                                |
| <b>Media redundancy</b>                                 |                                                |
| — MRP                                                   | Yes                                            |
| <b>EMC</b>                                              |                                                |
| <b>Emission of radio interference acc. to EN 55 011</b> |                                                |
| • 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)                                       | IP69                                           |
| IP (rear)                                               | IP20                                           |
| NEMA (front)                                            |                                                |
| • Enclosure Type 4x at the front                        | No; in preparation                             |
| • Enclosure Type 12 at the front                        | No; in preparation                             |
| <b>Standards, approvals, certificates</b>               |                                                |
| CE mark                                                 | Yes; CE marking / EC Declaration of Conformity |
| UKCA mark                                               | Yes                                            |
| cULus                                                   | Yes                                            |
| FM approval                                             | No                                             |
| RCM (formerly C-TICK)                                   | Yes                                            |
| KC approval                                             | No; in preparation                             |
| EAC (formerly Gost-R)                                   | Yes                                            |
| CCC                                                     | No; in preparation                             |

|                                                    |                       |
|----------------------------------------------------|-----------------------|
| Use in hazardous areas                             |                       |
| • ATEX Zone 2                                      | Yes                   |
| • ATEX Zone 22                                     | Yes                   |
| • IECEx Zone 2                                     | Yes                   |
| • IECEx Zone 22                                    | Yes                   |
| • cULus Class I Zone 1                             | No                    |
| • cULus Class I Zone 2, Division 2                 | Yes                   |
| • cULus Class II Division 2                        | Yes                   |
| • FM Class I Division 2                            | No                    |
| • FM Class II Division 2                           | No                    |
| Marine approval                                    |                       |
| • Germanischer Lloyd (GL)                          | No                    |
| • American Bureau of Shipping (ABS)                | No                    |
| • Bureau Veritas (BV)                              | No                    |
| • Det Norske Veritas (DNV)                         | No                    |
| • Korean Register of Shipping (KRS)                | No                    |
| • Lloyds Register of Shipping (LRS)                | No                    |
| • Nippon Kaiji Kyokai (Class NK)                   | No                    |
| • Polski Rejestr Statkow (PRS)                     | No                    |
| • Chinese Classification Society (CCS)             | No                    |
| 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                                      |                       |
| Message indicator                                  | Yes                   |
| Alarm system (incl. buffer and acknowledgment)     | Yes                   |
| Process value display (output)                     | No                    |
| 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                                        | No                               |
| • Unified Collaboration                                      | No                               |
| 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                               |
| Message system                                               |                                  |
| • 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                                          | No                               |
| • 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                              |
| Variables                                                    |                                  |
| • Number of variables per device                             | 8 000                            |
| • Number of variables per screen                             | 600                              |
| • Limit values                                               | Yes                              |
| • Structures                                                 | Yes                              |
| • Arrays                                                     | Yes                              |
| Images                                                       |                                  |
| • 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                          |
| Complex image objects                  |                              |
| • 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                          |
| Lists                                  |                              |
| • 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                          |
| Archiving                              |                              |
| • Number of archives per device        | 50                           |
| • Number of entries per archive        | 500 000                      |
| • Message archive                      | Yes                          |
| • Process value archive                | Yes                          |
| • Archiving methods                    |                              |
| — Sequential archive                   | Yes                          |
| — Short-term archive                   | Yes                          |
| • Memory location                      |                              |
| — Memory card                          | Yes                          |
| — USB memory                           | Yes                          |
| — Ethernet                             | No                           |
| Security                               |                              |
| • Number of roles                      | 50                           |
| • Number of function rights            | 0; V16                       |
| • Number of users                      | 200                          |
| • Password export/import               | Yes                          |
| • Central user administration          | No                           |
| Transfer (upload/download)             |                              |
| • 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!                                | No                           |
| • SIMOTION                             | No                           |
| • OPC UA Client                        | Yes                          |
| • OPC UA Server                        | Yes                          |
| • Software Controller/Open Controller  | Yes                          |
| Service tools/configuration aids       |                              |

|                                |     |
|--------------------------------|-----|
| • 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) |                              |
| • Plastic                  | Yes; shatter protection film |
| • Stainless steel          | Yes                          |

#### Dimensions

|                            |          |
|----------------------------|----------|
| Width of the housing front | 225.6 mm |
| Height of housing front    | 169.6 mm |
| Mounting cutout, width     | 198.3 mm |
| Mounting cutout, height    | 142.1 mm |
| mounting depth             | 66.3 mm  |

#### Weights

|                            |        |
|----------------------------|--------|
| Weight (without packaging) | 1.9 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



[Miscellaneous](#)



[China RoHS](#)

##### General Product Approval

EMV



EG-Konf.



RCM



EG-Konf.



##### EMV

For use in hazardous locations



[CCC-Ex](#)



other

Food, Pharmaceutical, Medical



[Miscellaneous](#)

[Special Test Certificate](#)

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