



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 <sup>2</sup> t                              | 0.5 A²·s               |
| Memory                                                                |                        |
| Flash                                                                 | Yes                    |
| RAM                                                                   | Yes                    |
| Type of output                                                        |                        |

|                                                  |                                         |
|--------------------------------------------------|-----------------------------------------|
| 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>        |                                         |
| 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                          | 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                   |
| <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 / header</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                    |
| <b>Functionality under WinCC Unified</b>                 |                       |
| Libraries                                                | Yes                   |
| <b>Applications/options</b>                              |                       |
| • 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                   |
| <b>Task planner</b>                                      |                       |
| • time-controlled                                        | Yes                   |
| • task-controlled                                        | Yes                   |
| <b>Help system</b>                                       |                       |
| • 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 messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)    | 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                              |
| 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                                                    | 0; V16                       |
| • 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!                                                                        | No                           |
| • 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     | 197 mm |
| Mounting cutout, height    | 141 mm |
| Overall depth              | 64 mm  |
| <b>Weights</b>             |        |
| Weight (without packaging) | 1.4 kg |

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