

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



Figure similar

| 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 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 A <sup>2</sup> ·s                   |
| Memory                                                                |                                         |
| Flash                                                                 | Yes                                     |
| RAM                                                                   | Yes                                     |
| Type of output                                                        |                                         |
| Acoustics                                                             |                                         |
| • Buzzer                                                              | Yes                                     |
| • Speaker                                                             | No                                      |
| Time of day                                                           |                                         |
| Clock                                                                 |                                         |
| • Hardware clock (real-time)                                          | Yes                                     |
| • Software clock                                                      | Yes                                     |
| • retentive                                                           | Yes; Back-up duration typically 6 weeks |
| • synchronizable                                                      | Yes                                     |
| Interfaces                                                            |                                         |
| Number of industrial Ethernet interfaces                              | 2; 2 ports (switch) + independent port  |
| Number of RS 485 interfaces                                           | 1; RS 422 / 485 combined                |
| Number of RS 422 interfaces                                           | 0; together with RS 485                 |
| Number of USB interfaces                                              | 4; USB 3.0                              |
| 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  |
| PROFIBUS                          | No  |
| Protocols (Ethernet)              |     |
| • TCP/IP                          | Yes |
| • DHCP                            | Yes |
| • SNMP                            | Yes |
| • DCP                             | Yes |
| • LLDP                            | Yes |
| Redundancy mode                   |     |
| Media redundancy                  |     |
| — MRP                             | Yes |

## EMC

|                                                  |     |
|--------------------------------------------------|-----|
| Emission of radio interference acc. to EN 55 011 |     |
| • Limit class A, for use in industrial areas     | Yes |
| • Limit class B, for use in residential areas    | No  |

## Degree and class of protection

|                                  |      |
|----------------------------------|------|
| IP (at the front)                | IP65 |
| IP (rear)                        | IP20 |
| NEMA (front)                     |      |
| • Enclosure Type 4x at the front | Yes  |
| • Enclosure Type 12 at the front | No   |

## Standards, approvals, certificates

|                                    |                    |
|------------------------------------|--------------------|
| CE mark                            | Yes                |
| cULus                              | Yes                |
| RCM (formerly C-TICK)              | Yes                |
| KC approval                        | No; Available soon |
| EAC (formerly Gost-R)              | Yes                |
| Use in hazardous areas             |                    |
| • ATEX Zone 2                      | No; Available soon |
| • ATEX Zone 22                     | No; Available soon |
| • IECEx Zone 2                     | No; Available soon |
| • IECEx Zone 22                    | No; Available soon |
| • cULus Class I Zone 2, Division 2 | No; Available soon |
| • cULus Class II Division 2        | No                 |
| • FM Class I Division 2            | No; Available soon |
| • FM Class II Division 2           | No                 |
| Marine approval                    |                    |

|                                        |                    |
|----------------------------------------|--------------------|
| • Germanischer Lloyd (GL)              | No; Available soon |
| • American Bureau of Shipping (ABS)    | No; Available soon |
| • Bureau Veritas (BV)                  | No; Available soon |
| • Det Norske Veritas (DNV)             | No; Available soon |
| • Lloyds Register of Shipping (LRS)    | No; Available soon |
| • Nippon Kaiji Kyokai (Class NK)       | No; Available soon |
| • Chinese Classification Society (CCS) | No; Available soon |

#### 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, min.                        | 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, min.                        | 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 |
| 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                              |
| Number of Visual Basic Scripts                                   | No                               |
| JavaScript                                                       | Yes                              |
| 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 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                              |
| 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                              |
| 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                     |
| <b>Lists</b>                                 |                         |
| • 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                     |
| <b>Archiving</b>                             |                         |
| • 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                      |
| <b>Transfer (upload/download)</b>            |                         |
| • USB                                        | No                      |
| • Ethernet                                   | Yes                     |
| • using external storage medium              | No                      |
| <b>Service tools/configuration aids</b>      |                         |
| • Backup/Restore manually                    | Yes                     |
| • Backup/Restore automatically               | Yes                     |
| • Simulation                                 | Yes                     |
| • Device switchover                          | Yes                     |
| <b>Peripherals/Options</b>                   |                         |
| 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  |

#### Weights

|                          |        |
|--------------------------|--------|
| Weight without packaging | 1.4 kg |
|--------------------------|--------|

**last modified:** 06/22/2020