SIEMENS

## Data sheet 6AV2128-3KB70-0AX0



SIMATIC HMI MTP1000 Unified Comfort Panel hygienic, neutral design IP69, stainless steel, hygienic design, 10.1" 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 | MTP1000 Unified Comfort |
| **Display** | |
| Design of display | TFT |
| Screen diagonal | 10.1 in |
| Display width | 217 mm |
| Display height | 135.6 mm |
| Number of colors | 16 777 216 |
| Resolution (pixels) | |
| ● Horizontal image resolution | 1 280 pixel |
| ● Vertical image resolution | 800 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) | 0.5 A |
| Current consumption, max. | 1.1 A |
| Starting current inrush I²t | 0.5 A²·s |
| **Storage** | |
| Flash | Yes |


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|---|---|
| RAM | Yes |
| **Type of output** | |
| Acoustics | |
| ● Buzzer | Yes |
| ● Speaker | No |
| **Time of day** | |
| Clock | |
| ● Hardware clock (real-time) | Yes |
| ● Software clock | Yes |
| ● retentive | Yes; Back-up duration typically 6 weeks |
| ● synchronizable | Yes |
| **Interfaces** | |
| Number of industrial Ethernet interfaces | 2; 2 ports (switch) + independent port |
| Number of RS 485 interfaces | 1; RS 422 / 485 combined |
| Number of RS 422 interfaces | 0; together with RS 485 |
| Number of USB interfaces | 4; USB 3.1 Gen. 1 (type A) |
| Number of SD card slots | 2 |
| Industrial Ethernet | |
| ● Industrial Ethernet status LED | 2 |
| ● Number of ports of the integrated switch | 2 |
| **Protocols** | |
| PROFINET | Yes |
| Supports protocol for PROFINET IO | No |
| Protocols (Ethernet) | |
| ● TCP/IP | Yes |
| ● DHCP | Yes |
| ● SNMP | Yes |
| ● DCP | Yes |
| ● LLDP | Yes |
| WEB characteristics | |
| ● HTTP | Yes |
| ● HTTPS | Yes |
| ● HTML | Yes |
| ● XML | Yes |
| ● CSS | Yes |
| ● Java VM | 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) | IP69 |
| IP (rear) | IP20 |
| NEMA (front) | |
| ● Enclosure Type 4x at the front | No; in preparation |
| ● Enclosure Type 12 at the front | No; in preparation |
| **Standards, approvals, certificates** | |
| 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 |


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|---|---|
| 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 | 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) | Yes |
| Process value default (input) possible | Yes |
| Recipe management | Yes |
| Configuration software | |
| ● WinCC Unified Comfort Engineering (TIA Portal) | Yes |
| ● WinCC Unified PC Engineering (TIA Portal) | Yes |
| **Languages** | |
| Online languages | |
| ● Number of online/runtime languages | 32 |
| Project languages | |
| ● Languages per project | 32 |
| **Functionality under WinCC Unified** | |
| Libraries | Yes |
| Applications/options | |


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|---|---|
| ● 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 |


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|---|---|
| ● 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 | Yes; as of WinCC Unified V17 |
| 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 |


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|---|---|
| ● 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 |
| **Accessories** | |
| Further accessories are available | No; Service Pack available soon |
| **Mechanics/material** | |
| Enclosure material (front) | |
| ● Plastic | Yes; shatter protection film |
| ● Stainless steel | Yes |
| **Dimensions** | |
| Width of the housing front | 292 mm |
| Height of housing front | 217 mm |
| Mounting cutout, width | 264 mm |
| Mounting cutout, height | 189 mm |
| mounting depth | 67 mm |
| **Weights** | |
| Weight (without packaging) | 2.65 kg |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-33-02-01 |
| 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**


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| EMV | For use in hazardous locations | | | | |
|---|---|---|---|---|---|
| | | CCC-Ex | | | |

| other | Food, Pharmaceutical, Medical | |
|---|---|---|
| | Miscellaneous | Special Test Certific-ate |

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