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## Data sheet 6AV2128-3MB27-0BX0

SIMATIC HMI MTP1200 PRO for support arm (expandable, round pipe) and Extension Unit, 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V18, contains open-source software, which is provided free of charge




| | |
|---|---|
| **General information** | |
| Product type designation | MTP1200 Unified Comfort PRO |
| **Display** | |
| Design of display | TFT |
| Screen diagonal | 12.1 in |
| Display width | 261.1 mm |
| Display height | 163.2 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 |
| ● 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 |
| **Installation type/mounting** | |
| Mounting | Support arm |
| Mounting position | vertical |
| Mounting in portrait format possible | No |
| 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) | 0.6 A |
| Current consumption, max. | 1.3 A |
| Starting current inrush I²t | 0.5 A²·s |
| **Power** | |
| Active power input, typ. | 14.4 W |


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| **Processor** | |
| Processor type | X86 |
| **Storage** | |
| Flash | Yes |
| RAM | Yes |
| **Type of output** | |
| Info LED | No |
| Power LED | No |
| Error LED | No |
| 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 |
| Redundancy mode | |
| Media redundancy | |
| — MRP | Yes |
| Further protocols | |
| ● CAN | No |
| **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) | IP65 |
| NEMA (front) | |
| ● Enclosure Type 4 at the front | Yes |
| ● Enclosure Type 4x at the front | Yes |
| ● Enclosure Type 12 at the front | Yes |
| **Standards, approvals, certificates** | |
| CE mark | Yes |
| UKCA mark | Yes |
| cULus | Yes |
| FM approval | Yes |
| RCM (formerly C-TICK) | Yes |


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| 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 | No |
| ● FM Class I Division 2 | Yes |
| ● 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** | |
| Ambient temperature during operation | |
| Operation (vertical installation) | |
| — For vertical installation, min. | 0 °C |
| — For vertical installation, max. | 45 °C |
| Operation (max. tilt angle) | |
| — At maximum tilt angle, min. | 0 °C |
| — At maximum tilt angle, max. | 40 °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 | |
| ● STEP 7 Basic (TIA Portal) | No |
| ● STEP 7 Professional (TIA Portal) | No |
| ● WinCC flexible Compact | No |
| ● WinCC flexible Standard | No |
| ● WinCC flexible Advanced | No |
| ● WinCC Basic (TIA Portal) | No |
| ● WinCC Comfort (TIA Portal) | No |
| ● WinCC Advanced (TIA Portal) | No |
| ● WinCC Professional (TIA Portal) | No |
| ● WinCC Unified Basic Engineering (TIA Portal) | No |
| ● WinCC Unified Comfort Engineering (TIA Portal) | Yes; V18 or higher |
| ● WinCC Unified PC Engineering (TIA Portal) | Yes; V18 or higher |
| **Languages** | |
| Online languages | |
| ● Number of online/runtime languages | 32 |


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|---|---|
| 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 | 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 |
| 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 |


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|---|---|
| ● 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 | Yes |
| ● 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 | 20; number of predefined function rights |
| ● Number of users | 200 |
| ● Password export/import | Yes |
| ● Central user administration | Yes |
| Transfer (upload/download) | |
| ● USB | No |
| ● Ethernet | Yes |
| ● using external storage medium | Yes |
| Process coupling | |
| ● S7-1200 | Yes |
| ● S7-1500 | Yes |
| ● S7-200 | Yes |
| ● S7-300/400 | Yes |
| ● Number of S7 connections | 16 |
| ● LOGO! | Yes; as of WinCC Unified V20 |
| ● WinAC | No |


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|---|---|
| ● SINUMERIK | No |
| ● SIMOTION | No |
| ● Allen Bradley (EtherNet/IP) | Yes |
| ● Allen Bradley (DF1) | Yes |
| ● Mitsubishi (MC TCP/IP) | Yes |
| ● Mitsubishi (FX) | Yes |
| ● OMRON (FINS TCP) | Yes |
| ● OMRON (Host Link) | No |
| ● Modicon (Modbus TCP/IP) | Yes |
| ● Modicon (Modbus RTU) | Yes |
| ● 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 | Yes |
| **Mechanics/material** | |
| Enclosure material (front) | |
| ● Plastic | No |
| ● Aluminum | Yes |
| ● Stainless steel | No |
| **Dimensions** | |
| Width of the housing front | 313 mm |
| Height of housing front | 225 mm; Without basic adapter |
| **Weights** | |
| Weight (without packaging) | 5 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** | |


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Miscellaneous

| General Product Approval | | | | For use in hazardous locations | |
|---|---|---|---|---|---|
| | China RoHS | | | CCC-Ex | |

| For use in hazardous locations | | | |
|---|---|---|---|
| | Miscellaneous | FM | CCC-Ex |

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