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## Data sheet 6AV6642-0BC01-1AX1

*** spare part *** more information under SIMATIC news entry ID: 109486162. SIMATIC TP 177B 6" DP blue mode STN display MPI/PROFIBUS DP protocol RS485/RS422/USB interface printer interface slot for MMC configurable with WinCC flexible 2005



| | |
|---|---|
| **General information** | |
| Product type designation | TP177B 6" DP Blue Mode |
| Customer-specific configuration | Yes |
| **Display** | |
| Design of display | STN |
| Screen diagonal | 5.7 in |
| Color display | No |
| Number of colors | 4; Blue levels |
| Resolution (pixels) | |
| ● Horizontal image resolution | 320 pixel |
| ● Vertical image resolution | 240 pixel |
| Backlighting | |
| ● MTBF backlighting (at 25 °C) | 50 000 h |
| **Control elements** | |
| Control elements | Touch screen |
| Keyboard fonts | |
| ● System keys | Yes |
| ● Numeric keyboard | Yes |
| ● alphanumeric keyboard | Yes |
| ● hexadecimal keyboard | Yes |
| ● Multi-key operation | No |
| Touch operation | |
| ● Design as touch screen | Yes; analog, resistive |
| Connection type | |
| ● Type of connection for mouse/keyboard/barcode reader | USB / USB / USB |
| **Installation type/mounting** | |
| Mounting position | vertical |
| maximum permissible angle of inclination without external ventilation | 35° |
| **Supply voltage** | |
| Type of supply voltage | DC |
| **Input current** | |
| Current consumption (rated value) | 0.24 A |
| Starting current inrush I²t | 0.5 A²·s |
| **Processor** | |
| Processor type | ARM, 200 MHz |
| **Memory** | |
| Type of memory | Flash / RAM |
| Memory available for user data | 2 048 kbyte |
| **Time of day** | |


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| Clock | |
| ● Type | Hardware clock, synchronizable, no battery backup |
| ● retentive | No |
| ● synchronizable | Yes |
| **Interfaces** | |
| Interfaces/bus type | RS 232 optional, 1x RS 422, 1x RS 485 (max. 12 Mbit/s) |
| Number of industrial Ethernet interfaces | 0 |
| Number of RS 485 interfaces | 1 |
| Number of RS 422 interfaces | 1 |
| Number of USB interfaces | 1; Up to 1 GB |
| PC card slot | No |
| CF card slot | No |
| Multimedia card/SD card slot | combined, from E-status 016 in connection with WinCC flexible 2008 SP1, MMC max. 128 MB / SD max. 512 MB |
| With software interfaces | No |
| **Protocols** | |
| Supports protocol for PROFINET IO | No |
| PROFIsafe | No |
| PROFIBUS | Yes |
| EtherNet/IP | Yes |
| Protocols (Ethernet) | |
| ● TCP/IP | Yes |
| Protocols (terminal link) | |
| ● Sm@rtServer | Yes |
| Further protocols | |
| ● MODBUS | Yes |
| **Degree and class of protection** | |
| IP (at the front) | IP65 |
| IP (rear) | IP20 |
| NEMA (front) | NEMA 4x, NEMA 12 (when installed) |
| **Standards, approvals, certificates** | |
| CE mark | Yes |
| UL approval | Yes |
| cULus | Yes |
| EAC (formerly Gost-R) | No |
| Suitable for safety functions | No |
| Use in hazardous areas | |
| ● ATEX Zone 2 | No; certificate no longer available as of 1 October 2020 |
| ● ATEX Zone 22 | No; certificate no longer available as of 1 October 2020 |
| ● FM Class I Division 2 | Yes |
| Marine approval | |
| ● Germanischer Lloyd (GL) | Yes; only valid up to and including the HW release (see MLFB release notes in SIOS)! |
| ● American Bureau of Shipping (ABS) | Yes; only valid up to and including the HW release (see MLFB release notes in SIOS)! |
| ● Bureau Veritas (BV) | Yes; only valid up to and including the HW release (see MLFB release notes in SIOS)! |
| ● Det Norske Veritas (DNV) | Yes; only valid up to and including the HW release (see MLFB release notes in SIOS)! |
| ● Lloyds Register of Shipping (LRS) | Yes; only valid up to and including the HW release (see MLFB release notes in SIOS)! |
| ● Polski Rejestr Statkow (PRS) | No; only valid up to and including the HW release (see MLFB release notes in SIOS)! |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● min. | 0 °C |
| ● max. | 50 °C |
| Ambient temperature during storage/transportation | |
| ● min. | -20 °C |
| ● max. | 60 °C |
| Relative humidity | |
| ● Operation, max. | 90 % |


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| **Operating systems** | |
| pre-installed operating system | Windows CE |
| **configuration / header** | |
| 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 | |
| ● Configuration tool | WinCC flexible Compact Version 2005 or higher (to be ordered separately) |
| ● STEP 7 Basic (TIA Portal) | No |
| ● STEP 7 Professional (TIA Portal) | No |
| ● WinCC flexible Compact | Yes |
| ● WinCC flexible Standard | Yes |
| ● WinCC flexible Advanced | Yes |
| ● WinCC Basic (TIA Portal) | No |
| ● WinCC Comfort (TIA Portal) | Yes |
| ● WinCC Advanced (TIA Portal) | Yes |
| ● WinCC Professional (TIA Portal) | Yes |
| **Languages** | |
| Online languages | |
| ● Number of online/runtime languages | 5 |
| Project languages | |
| ● Languages per project | 32 |
| **Functionality under WinCC (TIA Portal)** | |
| Libraries | Yes |
| Task planner | Yes |
| Help system | Yes |
| ● Number of characters per info text | 70 |
| Message system | |
| ● Number of alarm classes | 32 |
| ● Number of messages | 2 000 |
| ● Bit messages | Yes |
| — Number of bit messages | 2 000 |
| ● Analog messages | Yes |
| — Number of analog messages | 50 |
| ● Telegram message procedure Alarm S | No |
| ● System messages HMI | Yes |
| ● System messages PLC | Yes |
| ● System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... ) | No |
| ● Lines | 1 |
| ● Number of characters per message | 80 |
| ● Number of process values per message | 8 |
| ● Acknowledgment groups | |
| — Number of acknowledgement groups | 99 |
| ● Message indicator | Yes |
| ● acoustic feedback | No |
| ● First/last value | Yes |
| Recipe management | |
| ● Number of recipes | 100 |
| ● Data records per recipe | 200 |
| ● Entries per data record | 200 |
| ● Recipe memory | 32 KB integrated Flash, expandable |
| Variables | |
| ● Number of variables per device | 1 000 |
| ● Number of variables per screen | 50 |
| ● Number of variables | 1 000 |
| ● Initial values | 1 000 |
| ● Type Date & Time | 1 000 |
| ● Limit values | Yes |


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|---|---|
| ● Multiplexing | Yes |
| ● Structures | No |
| Images | |
| ● Number of configurable images | 500 |
| ● Permanent window/default | Yes |
| ● Start screen configurable | Yes |
| ● Image selection by PLC | Yes |
| ● Image number in the PLC | Yes |
| Image objects | |
| ● Text objects | 2 500 text elements |
| ● Number of I/O fields per image | 50 |
| ● Number of date/time fields | 30 |
| ● Index of screen context | No |
| ● Return | Yes |
| ● Graphics object | Bit maps, icons, icon (full-screen), vector graphics |
| — Icons | 500 |
| — Icon (full screen) | 50 |
| Complex image objects | |
| ● Status/control | With SIMATIC S7 |
| ● dynamic objects | Diagrams, bar graphs, sliders, analog display, invisible buttons |
| — Number of objects per project | 500 |
| — Number of curve diagrams per image | 5 |
| ● Methods | Trend |
| ● Bar graphs | |
| — Number of bars per chart | 5 |
| ● Sliders | |
| — Number of slides per image | 0 |
| ● Pointer instruments | |
| — Number of analog indicators per image | 0 |
| ● Limit value lines | Yes |
| ● Number of alphanumerical fields | 1 000 |
| — alphanumeric fields per image | 100 |
| ● Number of numerical fields | 1 000 |
| — numerical fields per image | 100 |
| ● Number of password fields | 1 000 |
| ● Number of visible switches per project | 1 000 |
| — visible switches per image | 100 |
| — hidden switches per image | 100 |
| ● Number of status switches per project | 1 000 |
| — Number of status switches per image | 100 |
| ● Number of selector switches per project | 1 000 |
| — Selector switches per image | 100 |
| ● Number of decade switches per project | 0 |
| — Decade switches per image | 0 |
| ● Number of signal lamps per project | 1 000 |
| — Signal lamps per image | 100 |
| Attributes for dynamic objects | |
| ● Color change | Yes |
| ● X/Y movement | Yes |
| ● Hide | Yes |
| ● Angle of rotation | No |
| Lists | |
| ● Number of text lists per project | 300 |
| ● Number of text lists per image | 10 |
| ● Number of entries per text list | 30 |
| ● Number of graphics lists per project | 100 |
| ● Number of graphic lists per image | 10 |
| ● Number of entries per graphics list | 30 |
| Security | |
| ● Number of user groups | 50 |
| ● Number of user rights | 32 |


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|---|---|
| ● Password export/import | Yes |
| Data carrier support | |
| ● PC card | No |
| ● CF card | No |
| Logging through printer | |
| ● Recording/Printing | Alarms, report (shift report), hardcopy |
| Transfer (upload/download) | |
| ● Transfer of configuration | MPI/PROFIBUS DP, serial, USB, by means of external storage medium, automatic transfer recognition |
| Process coupling | |
| ● Connection to controller | S5, S7-200, S7- 300/400, Win AC, SINUMERIK, SIMOTION, Allen Bradley (DF1), Mitsubishi (FX), Telemecanique (ADJUST), Modicon (Modbus), for further non-Siemens drivers, see section on "System interfaces" |
| ● S7-1200 | Yes |
| ● S7-1500 | No |
| ● S7-200 | Yes |
| — PPI (point-to-point) | Yes |
| — PPI network | No |
| — MPI | Yes |
| — PROFIBUS DP | Yes |
| — Ethernet | No |
| ● S7-300/400 | Yes |
| — MPI | Yes |
| — PROFIBUS DP | Yes |
| — PROFINET | No |
| ● S5 | Yes; only PROFIBUS DP |
| — serial | No |
| — PROFIBUS DP | Yes |
| ● TI 505 | No |
| ● Allen Bradley (DF1) | Yes |
| ● Allen Bradley (DF485) | Yes |
| ● Mitsubishi (FX) | Yes |
| ● Telemecanique (ADJUST) | No |
| ● Telemecanique (Uni-Telway) | Yes; Only in combination with WinCC flexible |
| ● OMRON (LINK/Multilink) | Yes |
| ● Modicon (Modbus) | Yes |
| Functions | |
| ● Key repeat | No |
| ● TAB sequence | Yes |
| ● Calculating functions | Yes |
| ● Animate | Yes |
| ● Menu tree editor | Yes |
| ● Unit switchover | No |
| Service tools/configuration aids | |
| ● Clean screen | Yes |
| ● Touch calibration | Yes |
| ● Backup/Restore manually | Yes |
| ● Simulation | Yes |
| ● Device switchover | Yes |
| ● Delta transfer | Yes |
| ● Monitoring function for battery and memory | No |
| ● Trace (operation archive) | No |
| Expandability/openness | |
| ● Open Platform Program | Yes |
| **Peripherals/Options** | |
| Peripherals | Printer |
| SIMATIC HMI MM memory card: Multi Media Card | Yes |
| Additional software components loadable | Yes |
| **Dimensions** | |
| Width of the housing front | 212 mm |
| Height of housing front | 156 mm |


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|---|---|
| Mounting cutout, width | 198 mm |
| Mounting cutout, height | 142 mm |
| Overall depth | 44 mm |

**Weights**

| | |
|---|---|
| Weight (without packaging) | 0.8 kg |

**Other**

| | |
|---|---|
| free hotline | Yes |

**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 | 9 | EC001412 |
| ETIM | 8 | EC001412 |
| ETIM | 7 | EC001412 |
| IDEA | 4 | 6607 |
| UNSPSC | 15 | 43-21-15-06 |

**Approvals / Certificates**

**General Product Approval**

Manufacturer Declaration

EG-Konf.

UL

KC

RCM

**EMV**

RCM

**For use in hazardous locations**

ATEX

UL

FM

**Radio Equipment Type Approval Certificate**

Miscellaneous

**Marine / Shipping**

ABS

DNV

**Marine / Shipping**

NK / Nippon Kaiji Kyokai

PRS

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