

SIPLUS HMI TP700 COMFORT FOR medial stress with conformal coating  
based on 6AV2124-0GC01-0AX0



Figure similar

| General information                            |                        |
|------------------------------------------------|------------------------|
| Product type designation                       | TP700 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)                 | 80 000 h               |
| • Backlight dimmable                           | Yes; 0-100 %           |
| Control elements                               |                        |
| Keyboard fonts                                 |                        |
| • Function keys                                |                        |
| — Number of function keys                      | 0                      |
| — Number of function keys with LEDs            | 0                      |
| • Keys with LED                                | No                     |
| • System keys                                  | No                     |
| • Numeric keyboard                             | Yes; Onscreen keyboard |
| • alphanumeric keyboard                        | Yes; Onscreen keyboard |
| Touch operation                                |                        |
| • Design as touch screen                       | Yes                    |
| Expansions for operator control of the process |                        |
| • DP direct LEDs (LEDs as S7 output I/O)       |                        |
| — F1...Fx                                      | 0                      |
| • Direct keys (keys as S7 input I/O)           |                        |
| — F1...Fx                                      | 0                      |
| • Direct keys (touch buttons as S7 input I/O)  | 32                     |
| Installation type/mounting                     |                        |
| Mounting position                              | vertical               |
| Wall mounting/direct mounting                  | No                     |
| Mounting in portrait format possible           | Yes                    |
| Mounting in landscape format possible          | Yes                    |

|                                                                       |                                         |
|-----------------------------------------------------------------------|-----------------------------------------|
| maximum permissible angle of inclination without external ventilation | 35°                                     |
| <b>Supply voltage</b>                                                 |                                         |
| 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                                  |
| <b>Input current</b>                                                  |                                         |
| Current consumption (rated value)                                     | 0.5 A                                   |
| Starting current inrush I <sub>st</sub>                               | 0.5 A <sup>2</sup> ·s                   |
| <b>Power</b>                                                          |                                         |
| Active power input, typ.                                              | 12 W                                    |
| <b>Memory</b>                                                         |                                         |
| Flash                                                                 | Yes                                     |
| RAM                                                                   | Yes                                     |
| Memory available for user data                                        | 12 Mbyte                                |
| <b>Type of output</b>                                                 |                                         |
| Info LED                                                              | No                                      |
| Power LED                                                             | No                                      |
| Error LED                                                             | No                                      |
| Acoustics                                                             |                                         |
| • Buzzer                                                              | No                                      |
| • Speaker                                                             | Yes                                     |
| <b>Time of day</b>                                                    |                                         |
| Clock                                                                 |                                         |
| • Hardware clock (real-time)                                          | Yes                                     |
| • Software clock                                                      | No                                      |
| • retentive                                                           | Yes; Back-up duration typically 6 weeks |
| • synchronizable                                                      | Yes                                     |
| <b>Interfaces</b>                                                     |                                         |
| Number of industrial Ethernet interfaces                              | 2                                       |
| Number of RS 485 interfaces                                           | 1; RS 422 / 485 combined                |
| Number of RS 422 interfaces                                           | 1                                       |
| Number of RS 232 interfaces                                           | 0                                       |
| Number of USB interfaces                                              | 2; USB 2.0                              |
| • USB Mini B                                                          | 1; 5-pole                               |
| Number of 20 mA interfaces (TTY)                                      | 0                                       |
| Number of parallel interfaces                                         | 0                                       |
| Number of other interfaces                                            | 0                                       |
| Number of SD card slots                                               | 2                                       |
| With software interfaces                                              | No                                      |
| <b>Industrial Ethernet</b>                                            |                                         |
| • Industrial Ethernet status LED                                      | 2                                       |
| • Number of ports of the integrated switch                            | 2                                       |
| <b>Protocols</b>                                                      |                                         |
| PROFINET                                                              | Yes                                     |
| Supports protocol for PROFINET IO                                     | Yes                                     |
| IRT                                                                   | Yes; As of WinCC V12                    |
| PROFIBUS                                                              | Yes                                     |
| EtherNet/IP                                                           | Yes                                     |
| MPI                                                                   | Yes                                     |
| <b>Protocols (Ethernet)</b>                                           |                                         |
| • TCP/IP                                                              | Yes                                     |
| • DHCP                                                                | Yes                                     |
| • SNMP                                                                | Yes                                     |
| • DCP                                                                 | Yes                                     |
| • LLDP                                                                | Yes                                     |

|                                                                     |                                                                                                                                                                                                                 |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>WEB characteristics</b>                                          |                                                                                                                                                                                                                 |
| • HTTP                                                              | Yes                                                                                                                                                                                                             |
| • HTTPS                                                             | No                                                                                                                                                                                                              |
| • HTML                                                              | Yes                                                                                                                                                                                                             |
| • XML                                                               | No                                                                                                                                                                                                              |
| • CSS                                                               | Yes                                                                                                                                                                                                             |
| • Active X                                                          | No                                                                                                                                                                                                              |
| • JavaScript                                                        | Yes                                                                                                                                                                                                             |
| • Java VM                                                           | No                                                                                                                                                                                                              |
| <b>Redundancy mode</b>                                              |                                                                                                                                                                                                                 |
| <b>Media redundancy</b>                                             |                                                                                                                                                                                                                 |
| — MRP                                                               | Yes; As of WinCC V12                                                                                                                                                                                            |
| <b>Further protocols</b>                                            |                                                                                                                                                                                                                 |
| • CAN                                                               | No                                                                                                                                                                                                              |
| • MODBUS                                                            | Yes                                                                                                                                                                                                             |
| <b>Interrupts/diagnostics/status information</b>                    |                                                                                                                                                                                                                 |
| <b>Diagnoses</b>                                                    |                                                                                                                                                                                                                 |
| • Diagnostic information readable                                   | Yes; S7 controller                                                                                                                                                                                              |
| <b>EMC</b>                                                          |                                                                                                                                                                                                                 |
| <b>Emission of radio interference acc. to EN 55 011</b>             |                                                                                                                                                                                                                 |
| • 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>                               |                                                                                                                                                                                                                 |
| <b>NEMA (front)</b>                                                 |                                                                                                                                                                                                                 |
| • Enclosure Type 4 at the front                                     | Yes                                                                                                                                                                                                             |
| • Enclosure Type 4x at the front                                    | Yes                                                                                                                                                                                                             |
| <b>Ambient conditions</b>                                           |                                                                                                                                                                                                                 |
| Suited for indoor use                                               | Yes                                                                                                                                                                                                             |
| Suited for outdoor use                                              | No                                                                                                                                                                                                              |
| <b>Ambient temperature during operation</b>                         |                                                                                                                                                                                                                 |
| <b>Operation (vertical installation)</b>                            |                                                                                                                                                                                                                 |
| — For vertical installation, min.                                   | 0 °C; = Tmin                                                                                                                                                                                                    |
| — For vertical installation, max.                                   | 50 °C; = Tmax                                                                                                                                                                                                   |
| <b>Operation (max. tilt angle)</b>                                  |                                                                                                                                                                                                                 |
| — At maximum tilt angle, min.                                       | 0 °C; = Tmin                                                                                                                                                                                                    |
| — At maximum tilt angle, min.                                       | 40 °C; = Tmax                                                                                                                                                                                                   |
| <b>Operation (vertical installation, portrait format)</b>           |                                                                                                                                                                                                                 |
| — For vertical installation, min.                                   | 0 °C; = Tmin                                                                                                                                                                                                    |
| — For vertical installation, max.                                   | 40 °C; = Tmax                                                                                                                                                                                                   |
| <b>Operation (max. tilt angle, portrait format)</b>                 |                                                                                                                                                                                                                 |
| — At maximum tilt angle, min.                                       | 0 °C; = Tmin                                                                                                                                                                                                    |
| — At maximum tilt angle, min.                                       | 35 °C; = Tmax                                                                                                                                                                                                   |
| <b>Ambient temperature during storage/transportation</b>            |                                                                                                                                                                                                                 |
| • min.                                                              | -20 °C                                                                                                                                                                                                          |
| • max.                                                              | 60 °C                                                                                                                                                                                                           |
| <b>Altitude during operation relating to sea level</b>              |                                                                                                                                                                                                                 |
| • Installation altitude above sea level, max.                       | 5 000 m                                                                                                                                                                                                         |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m) |
| <b>Relative humidity</b>                                            |                                                                                                                                                                                                                 |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)                                                                                                                             |
| <b>Resistance</b>                                                   |                                                                                                                                                                                                                 |
| <b>Coolants and lubricants</b>                                      |                                                                                                                                                                                                                 |
| — Resistant to commercially available coolants and lubricants       | Yes; Incl. diesel and oil droplets in the air                                                                                                                                                                   |
| <b>Use in stationary industrial systems</b>                         |                                                                                                                                                                                                                 |
| — to biologically active substances according to                    | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of                                                                                                                                           |

|                                                                                                                         |                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EN 60721-3-3                                                                                                            | fauna); Class 3B3 on request                                                                                                                                                        |
| — to chemically active substances according to EN 60721-3-3                                                             | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                            |
| — to mechanically active substances according to EN 60721-3-3                                                           | Yes; Class 3S4 incl. sand, dust, *                                                                                                                                                  |
| <b>Use on ships/at sea</b>                                                                                              |                                                                                                                                                                                     |
| — to biologically active substances according to EN 60721-3-6                                                           | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request                                                                                                       |
| — to chemically active substances according to EN 60721-3-6                                                             | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                            |
| — to mechanically active substances according to EN 60721-3-6                                                           | Yes; Class 6S3 incl. sand, dust; *                                                                                                                                                  |
| <b>Usage in industrial process technology</b>                                                                           |                                                                                                                                                                                     |
| — Against chemically active substances acc. to EN 60654-4                                                               | Yes; Class 3 (excluding trichlorethylene)                                                                                                                                           |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04                            | Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) |
| <b>Remark</b>                                                                                                           |                                                                                                                                                                                     |
| — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04             | * The supplied plug covers must remain in place over the unused interfaces during operation!                                                                                        |
| <b>Conformal coating</b>                                                                                                |                                                                                                                                                                                     |
| • Coatings for printed circuit board assemblies acc. to EN 61086                                                        | Yes; Class 2 for high reliability                                                                                                                                                   |
| • Protection against fouling acc. to EN 60664-3                                                                         | Yes; Type 1 protection                                                                                                                                                              |
| • Military testing according to MIL-I-46058C, Amendment 7                                                               | Yes; Discoloration of coating possible during service life                                                                                                                          |
| • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | Yes; Conformal coating, Class A                                                                                                                                                     |
| <b>Operating systems</b>                                                                                                |                                                                                                                                                                                     |
| proprietary                                                                                                             | No                                                                                                                                                                                  |
| <b>pre-installed operating system</b>                                                                                   |                                                                                                                                                                                     |
| • Windows CE                                                                                                            | Yes                                                                                                                                                                                 |
| <b>Configuration</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>                                                                                           |                                                                                                                                                                                     |
| • 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)                                                                                            | Yes; from V11                                                                                                                                                                       |
| • WinCC Advanced (TIA Portal)                                                                                           | Yes; from V11                                                                                                                                                                       |
| • WinCC Professional (TIA Portal)                                                                                       | Yes; from V11                                                                                                                                                                       |
| <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 (TIA Portal)</b>                                                                           |                                                                                                                                                                                     |
| Libraries                                                                                                               | Yes                                                                                                                                                                                 |
| <b>Applications/options</b>                                                                                             |                                                                                                                                                                                     |
| • Web browser                                                                                                           | Yes                                                                                                                                                                                 |
| • Pocket Word                                                                                                           | Yes                                                                                                                                                                                 |

|                                                                  |         |
|------------------------------------------------------------------|---------|
| • Pocket Excel                                                   | Yes     |
| • PDF Viewer                                                     | Yes     |
| • Media Player                                                   | Yes     |
| • SIMATIC WinCC Sm@rtServer                                      | Yes     |
| • SIMATIC WinCC Audit                                            | Yes     |
| Number of Visual Basic Scripts                                   | Yes     |
| Task planner                                                     |         |
| • time-controlled                                                | Yes     |
| • task-controlled                                                | Yes     |
| Help system                                                      |         |
| • Number of characters per info text                             | 70      |
| <b>Message system</b>                                            |         |
| • Number of alarm classes                                        | 32      |
| • Bit messages                                                   |         |
| — Number of bit messages                                         | 4 000   |
| • Analog messages                                                |         |
| — Number of analog messages                                      | 200     |
| • S7 alarm number procedure                                      | Yes     |
| • System messages HMI                                            | Yes     |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes     |
| • Number of characters per message                               | 80      |
| • Number of process values per message                           | 8       |
| • Acknowledgment groups                                          | Yes     |
| • Message indicator                                              | Yes     |
| • Message buffer                                                 |         |
| — Number of entries                                              | 1 024   |
| — Circulating buffer                                             | Yes     |
| — retentive                                                      | Yes     |
| — maintenance-free                                               | Yes     |
| <b>Recipe management</b>                                         |         |
| • Number of recipes                                              | 300     |
| • Data records per recipe                                        | 500     |
| • Entries per data record                                        | 1 000   |
| • Size of internal recipe memory                                 | 2 Mbyte |
| • Recipe memory expandable                                       | Yes     |
| <b>Variables</b>                                                 |         |
| • Number of variables per device                                 | 2 048   |
| • Number of variables per screen                                 | 400     |
| • Limit values                                                   | Yes     |
| • Multiplexing                                                   | Yes     |
| • Structures                                                     | Yes     |
| • Arrays                                                         | Yes     |
| <b>Images</b>                                                    |         |
| • Number of configurable images                                  | 500     |
| • Permanent window/default                                       | Yes     |
| • Global image                                                   | Yes     |
| • Image selection by PLC                                         | Yes     |
| • Image number in the PLC                                        | Yes     |
| <b>Image objects</b>                                             |         |
| • Number of objects per image                                    | 400     |
| • Text fields                                                    | Yes     |
| • I/O fields                                                     | Yes     |
| • Graphic I/O fields (graphics list)                             | Yes     |
| • Symbolic I/O fields (text list)                                | Yes     |
| • Date/time fields                                               | Yes     |
| • Switches                                                       | Yes     |
| • Buttons                                                        | Yes     |
| • Graphic display                                                | Yes     |

|                                        |                |
|----------------------------------------|----------------|
| • Icons                                | Yes            |
| • Geometric objects                    | Yes            |
| Complex image objects                  |                |
| • Number of complex objects per screen | 20             |
| • Alarm view                           | Yes            |
| • Trend view                           | Yes            |
| • User view                            | Yes            |
| • Status/control                       | Yes            |
| • Sm@rtClient view                     | Yes            |
| • Recipe view                          | Yes            |
| • f(x) trend view                      | Yes            |
| • System diagnostics view              | Yes            |
| • Media Player                         | Yes            |
| • Bar graphs                           | Yes            |
| • Sliders                              | Yes            |
| • Pointer instruments                  | Yes            |
| • Analog/digital clock                 | Yes            |
| Lists                                  |                |
| • Number of text lists per project     | 500            |
| • Number of entries per text list      | 500            |
| • Number of graphics lists per project | 500            |
| • Number of entries per graphics list  | 500            |
| Archiving                              |                |
| • Number of archives per device        | 50             |
| • Number of entries per archive        | 20 000         |
| • 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                             | Yes            |
| • Data storage format                  |                |
| — CSV                                  | Yes            |
| — TXT                                  | Yes            |
| — RDB                                  | Yes            |
| Security                               |                |
| • Number of user groups                | 50             |
| • Number of user rights                | 32             |
| • Number of users                      | 50             |
| • Password export/import               | Yes            |
| • SIMATIC Logon                        | Yes            |
| Logging through printer                |                |
| • Alarms                               | Yes            |
| • Report (shift log)                   | Yes            |
| • Hardcopy                             | Yes            |
| • Electronic print to file             | Yes; PDF, HTML |
| Character sets                         |                |
| • Keyboard fonts                       |                |
| — US English                           | Yes            |
| Transfer (upload/download)             |                |
| • MPI/PROFIBUS DP                      | Yes            |
| • USB                                  | Yes            |
| • Ethernet                             | Yes            |
| • using external storage medium        | No             |
| Process coupling                       |                |

|                                                        |                                    |
|--------------------------------------------------------|------------------------------------|
| • S7-1200                                              | Yes                                |
| • S7-1500                                              | Yes                                |
| • S7-200                                               | Yes                                |
| • S7-300/400                                           | Yes                                |
| • LOGO!                                                | Yes                                |
| • WinAC                                                | Yes                                |
| • SINUMERIK                                            | Yes; with SINUMERIK option package |
| • SIMOTION                                             | No; With WinCC, subsequent version |
| • Allen Bradley (EtherNet/IP)                          | Yes                                |
| • Allen Bradley (DF1)                                  | Yes                                |
| • Mitsubishi (MC TCP/IP)                               | Yes                                |
| • Mitsubishi (FX)                                      | Yes                                |
| • OMRON (FINS TCP)                                     | No                                 |
| • OMRON (LINK/Multilink)                               | Yes                                |
| • Modicon (Modbus TCP/IP)                              | Yes                                |
| • Modicon (Modbus)                                     | Yes                                |
| <b>Service tools/configuration aids</b>                |                                    |
| • Backup/Restore manually                              | Yes                                |
| • Backup/Restore automatically                         | Yes                                |
| • Simulation                                           | Yes                                |
| • Device switchover                                    | Yes                                |
| <b>Peripherals/Options</b>                             |                                    |
| Printer                                                | Yes                                |
| SIMATIC HMI MM memory card: Multi Media Card           | Yes                                |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes                                |
| USB memory                                             | Yes                                |
| <b>Mechanics/material</b>                              |                                    |
| Enclosure material (front)                             |                                    |
| • Plastic                                              | No                                 |
| • Aluminum                                             | Yes                                |
| • Stainless steel                                      | No                                 |
| <b>Dimensions</b>                                      |                                    |
| 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                                          | 63 mm                              |
| <b>Weights</b>                                         |                                    |
| Weight without packaging                               | 1.4 kg                             |
| Weight incl. packaging                                 | 1.6 kg                             |

**last modified:**

3/2/2021 