

\*\*\* 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 I <sub>t</sub>                                | 0.5 A <sup>2</sup> ·s  |
| Processor   |                        |
| Processor type  | ARM, 200 MHz           |

| Memory  |  |
|---|--|
| Type of memory  | Flash / RAM  |
| Memory available for user data  | 2 048 kbyte  |
| Time of day   |  |
| Clock   |  |
| <ul style="list-style-type: none"> <li>Type</li> </ul>                              | Hardware clock, synchronizable, no battery backup  |
| <ul style="list-style-type: none"> <li>retentive</li> </ul>                         | No   |
| <ul style="list-style-type: none"> <li>synchronizable</li> </ul>                    | 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)  |  |
| <ul style="list-style-type: none"> <li>TCP/IP</li> </ul>                            | Yes  |
| Protocols (terminal link)   |  |
| <ul style="list-style-type: none"> <li>Sm@rtServer</li> </ul>                       | Yes  |
| Further protocols   |  |
| <ul style="list-style-type: none"> <li>MODBUS</li> </ul>                            | Yes  |
| <ul style="list-style-type: none"> <li>other bus systems</li> </ul>                 | Yes  |
| Degree and class of protection  |  |
| 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  |  |
| <ul style="list-style-type: none"> <li>ATEX Zone 2</li> </ul>                       | No; certificate no longer available as of 1 October 2020   |
| <ul style="list-style-type: none"> <li>ATEX Zone 22</li> </ul>                      | No; certificate no longer available as of 1 October 2020   |
| <ul style="list-style-type: none"> <li>FM Class I Division 2</li> </ul>             | Yes  |
| Marine approval   |  |
| <ul style="list-style-type: none"> <li>Germanischer Lloyd (GL)</li> </ul>           | Yes  |
| <ul style="list-style-type: none"> <li>American Bureau of Shipping (ABS)</li> </ul> | Yes  |
| <ul style="list-style-type: none"> <li>Bureau Veritas (BV)</li> </ul>               | Yes  |
| <ul style="list-style-type: none"> <li>Det Norske Veritas (DNV)</li> </ul>          | Yes  |
| <ul style="list-style-type: none"> <li>Lloyds Register of Shipping (LRS)</li> </ul> | Yes  |
| <ul style="list-style-type: none"> <li>Polski Rejestr Statkow (PRS)</li> </ul>      | No   |
| Ambient conditions  |  |
| Ambient temperature during operation  |  |
| <ul style="list-style-type: none"> <li>min.</li> </ul>                              | 0 °C   |
| <ul style="list-style-type: none"> <li>max.</li> </ul>                              | 50 °C  |
| Ambient temperature during storage/transportation                                   |  |
| <ul style="list-style-type: none"> <li>min.</li> </ul>                              | -20 °C   |
| <ul style="list-style-type: none"> <li>max.</li> </ul>                              | 60 °C  |
| Relative humidity   |  |

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|--|--|
| • Operation, max.  | 90 %   |
| <b>Operating systems</b>                                     |  |
| pre-installed operating system                               | Windows CE   |
| <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>                                |  |
| • 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  |
| <b>Languages</b>   |  |
| <b>Online languages</b>                                      |  |
| • Number of online/runtime languages                         | 5  |
| <b>Project languages</b>                                     |  |
| • Languages per project                                      | 32   |
| <b>Functionality under WinCC (TIA Portal)</b>                |  |
| Libraries  | Yes  |
| Task planner   | Yes  |
| Help system  | Yes  |
| • Number of characters per info text                         | 70   |
| <b>Message system</b>  |  |
| • 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  |
| <b>Recipe management</b>                                     |  |
| • Number of recipes  | 100  |
| • Data records per recipe                                    | 200  |
| • Entries per data record                                    | 200  |
| • Recipe memory  | 32 KB integrated Flash, expandable                                       |
| <b>Variables</b>   |  |
| • 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  |
| • Multiplexing                            | Yes  |
| • Structures                              | No   |
| <b>Images</b>                             |  |
| • Number of configurable images           | 500  |
| • Permanent window/default                | Yes  |
| • Start screen configurable               | Yes  |
| • Image selection by PLC                  | Yes  |
| • Image number in the PLC                 | Yes  |
| <b>Image objects</b>                      |  |
| • 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   |
| <b>Complex image objects</b>              |  |
| • 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  |
| <b>Attributes for dynamic objects</b>     |  |
| • Color change                            | Yes  |
| • X/Y movement                            | Yes  |
| • Hide                                    | Yes  |
| • Angle of rotation                       | No   |
| <b>Lists</b>                              |  |
| • 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  |
| <b>Security</b>                         |   |
| • Number of user groups                 | 50  |
| • Number of user rights                 | 32  |
| • Password export/import                | Yes   |
| <b>Data carrier support</b>             |   |
| • PC card                               | No  |
| • CF card                               | No  |
| <b>Logging through printer</b>          |   |
| • Recording/Printing                    | Alarms, report (shift report), hardcopy   |
| <b>Transfer (upload/download)</b>       |   |
| • Transfer of configuration             | MPI/PROFIBUS DP, serial, USB, by means of external storage medium, automatic transfer recognition   |
| <b>Process coupling</b>                 |   |
| • 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   |
| <b>Functions</b>                        |   |
| • Key repeat                            | No  |
| • TAB sequence                          | Yes   |
| • Calculating functions                 | Yes   |
| • Animate                               | Yes   |
| • Menu tree editor                      | Yes   |
| • Unit switchover                       | No  |
| <b>Service tools/configuration aids</b> |   |
| • Clean screen                          | Yes   |
| • Touch calibration                     | Yes   |
| • Backup/Restore manually               | Yes   |
| • Simulation                            | Yes   |
| • Device switchover                     | Yes   |
| • Delta transfer                        | Yes   |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Monitoring function for battery and memory</li> <li>• Trace (operation archive)</li> </ul> | No   |
| <b>Expandability/openness</b>   |  |
| <ul style="list-style-type: none"> <li>• Open Platform Program</li> </ul>   | Yes  |
| <b>Peripherals/Options</b>  |  |
| Peripherals   | Printer  |
| SIMATIC HMI MM memory card: Multi Media Card  | Yes  |
| Additional software components loadable   | Yes  |
| <b>Dimensions</b>   |  |
| Width of the housing front  | 212 mm   |
| Height of housing front   | 156 mm   |
| Mounting cutout, width  | 198 mm   |
| Mounting cutout, height   | 142 mm   |
| Overall depth   | 44 mm  |
| <b>Weights</b>  |  |
| Weight (without packaging)  | 0.8 kg   |
| <b>Other</b>  |  |
| free hotline  | Yes  |
| <b>last modified:</b>   | 3/2/2021  |