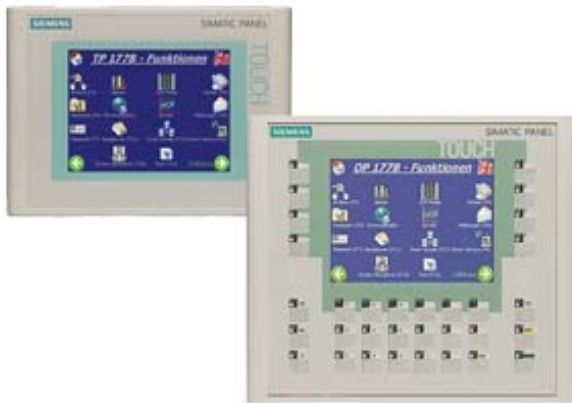


The new part, as of 01.01.2015, is blocked for delivery. Spare part can continue to be purchased as required, but price may deviate from new part. Further information under SIMATIC current entry ID: 109486162. For questions, the familiar contact persons are available to you. SIMATIC TP 177B 6" PN/DP STN 256 color display MPI/PROFIBUS DP protocol RS 485/RS 422/USB interface Ethernet 10/100 interface Printer interface Slot for MMC configurable with WinCC flexible 2005



| General information             |                  |
|---------------------------------|------------------|
| Product type designation        | TP 177B 6" PN/DP |
| Customer-specific configuration | Yes              |
| Display                         |                  |
| Design of display               | STN              |
| Screen diagonal                 | 5.7 in           |
| Color display                   | Yes              |
| Number of colors                | 256              |
| 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   |
| <b>Touch operation</b>  |  |
| • Design as touch screen  | Yes; analog, resistive   |
| <b>Connection type</b>  |  |
| • Type of connection for mouse/keyboard/barcode reader                | USB / USB / USB  |
| <b>Installation type/mounting</b>                                     |  |
| Mounting position   | vertical   |
| maximum permissible angle of inclination without external ventilation | 35°  |
| <b>Supply voltage</b>   |  |
| Type of supply voltage  | DC   |
| <b>Input current</b>  |  |
| Current consumption (rated value)                                     | 0.24 A   |
| Starting current inrush I <sup>2</sup> t                              | 0.5 A <sup>2</sup> ·s  |
| <b>Processor</b>  |  |
| Processor type  | ARM, 200 MHz   |
| <b>Memory</b>   |  |
| Type of memory  | Flash / RAM  |
| Memory available for user data  | 2 048 kbyte  |
| <b>Time of day</b>  |  |
| <b>Clock</b>  |  |
| • Type  | Hardware clock, synchronizable, no battery backup  |
| • retentive   | No   |
| • synchronizable  | Yes  |
| <b>Interfaces</b>   |  |
| Interfaces/bus type   | RS 232 optional, 1x RS 422, 1x RS 485, 1x Ethernet (RJ45) (max. 12 Mbit/s)                               |
| Number of industrial Ethernet interfaces                              | 1  |
| 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   |
| <b>Protocols</b>  |  |

|  |                                   |
|--|-----------------------------------|
| Supports protocol for PROFINET IO                        | Yes                               |
| PROFIsafe  | No                                |
| PROFIBUS   | Yes                               |
| <b>Protocols (Ethernet)</b>                              |                                   |
| • TCP/IP   | Yes                               |
| <b>Protocols (terminal link)</b>                         |                                   |
| • Sm@rtServer  | Yes                               |
| <b>Further protocols</b>                                 |                                   |
| • EtherNet/IP  | Yes                               |
| • MODBUS   | Yes                               |
| • other bus systems                                      | Yes                               |
| <b>Degree and class of protection</b>                    |                                   |
| IP (at the front)  | IP65                              |
| IP (rear)  | IP20                              |
| NEMA (front)   | NEMA 4x, NEMA 12 (when installed) |
| <b>Standards, approvals, certificates</b>                |                                   |
| cULus  | Yes                               |
| EAC (formerly Gost-R)                                    | No                                |
| Suitable for safety functions                            | No                                |
| <b>Use in hazardous areas</b>                            |                                   |
| • ATEX Zone 2  | Yes                               |
| • ATEX Zone 22   | Yes                               |
| • FM Class I Division 2                                  | Yes                               |
| <b>Marine approval</b>                                   |                                   |
| • Germanischer Lloyd (GL)                                | Yes                               |
| • American Bureau of Shipping (ABS)                      | Yes                               |
| • Bureau Veritas (BV)                                    | Yes                               |
| • Det Norske Veritas (DNV)                               | Yes                               |
| • Lloyds Register of Shipping (LRS)                      | Yes                               |
| • Polski Rejestr Statkow (PRS)                           | No                                |
| <b>Ambient conditions</b>                                |                                   |
| <b>Ambient temperature during operation</b>              |                                   |
| • min.   | 0 °C                              |
| • max.   | 50 °C                             |
| <b>Ambient temperature during storage/transportation</b> |                                   |
| • min.   | -20 °C                            |
| • max.   | 60 °C                             |
| <b>Relative humidity</b>                                 |                                   |
| • Operation, max.  | 90 %                              |
| <b>Operating systems</b>                                 |                                   |
| pre-installed operating system                           | Windows CE                        |

| 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   |  |
| • 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 messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | 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 alphanumeric 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), color print, hardcopy   |
| <b>Transfer (upload/download)</b> |  |
| • Transfer of configuration       | MPI/PROFIBUS DP, serial, USB, Ethernet, by means of external storage medium, automatic transfer recognition  |
| <b>Process coupling</b>           |  |
| • Connection to controller        | S5, S7-200, S7-300/400, Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Mitsubishi (FX), Telemecanique (ADJUST), Modicon (Modbus), further non-Siemens drivers, see chapter "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                        | Yes  |
| • S7-300/400                      | Yes  |
| — MPI                             | Yes  |
| — PROFIBUS DP                     | Yes  |
| — PROFINET                        | Yes  |
| • 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   |

| 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 |
| 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        |
| <b>last modified:</b> | 12/05/2019 |