

\*\*\* 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 <sup>st</sup>	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> <li>retentive</li> <li>synchronizable</li> </ul>	Hardware clock, synchronizable, no battery backup No 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> <li>other bus systems</li> </ul>	Yes 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	
<ul style="list-style-type: none"> <li>ATEX Zone 2</li> <li>ATEX Zone 22</li> <li>FM Class I Division 2</li> </ul>	No; certificate no longer available as of 1 October 2020 No; certificate no longer available as of 1 October 2020 Yes
Marine approval	
<ul style="list-style-type: none"> <li>Germanischer Lloyd (GL)</li> <li>American Bureau of Shipping (ABS)</li> <li>Bureau Veritas (BV)</li> <li>Det Norske Veritas (DNV)</li> <li>Lloyds Register of Shipping (LRS)</li> <li>Polski Rejestr Statkow (PRS)</li> </ul>	Yes Yes Yes Yes Yes No
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>min.</li> <li>max.</li> </ul>	0 °C 50 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> <li>min.</li> <li>max.</li> </ul>	-20 °C 60 °C
Relative humidity	
<ul style="list-style-type: none"> <li>Operation, max.</li> </ul>	90 %
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
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##### Project languages

• Languages per project	32
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#### 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
• 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
<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

Process coupling	
<ul style="list-style-type: none"> <li>● Connection to controller</li>   <li>● S7-1200</li> <li>● S7-1500</li> <li>● S7-200 <ul style="list-style-type: none"> <li>— PPI (point-to-point)</li> <li>— PPI network</li> <li>— MPI</li> <li>— PROFIBUS DP</li> <li>— Ethernet</li> </ul> </li> <li>● S7-300/400 <ul style="list-style-type: none"> <li>— MPI</li> <li>— PROFIBUS DP</li> <li>— PROFINET</li> </ul> </li> <li>● S5 <ul style="list-style-type: none"> <li>— serial</li> <li>— PROFIBUS DP</li> </ul> </li> <li>● TI 505</li> <li>● Allen Bradley (DF1)</li> <li>● Allen Bradley (DF485)</li> <li>● Mitsubishi (FX)</li> <li>● Telemecanique (ADJUST)</li> <li>● Telemecanique (Uni-Telway)</li> <li>● OMRON (LINK/Multilink)</li> <li>● Modicon (Modbus)</li> </ul>	<p>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"</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes; only PROFIBUS DP</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes; Only in combination with WinCC flexible</p> <p>Yes</p> <p>Yes</p>
Functions	
<ul style="list-style-type: none"> <li>● Key repeat</li> <li>● TAB sequence</li> <li>● Calculating functions</li> <li>● Animate</li> <li>● Menu tree editor</li> <li>● Unit switchover</li> </ul>	<p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p>
Service tools/configuration aids	
<ul style="list-style-type: none"> <li>● Clean screen</li> <li>● Touch calibration</li> <li>● Backup/Restore manually</li> <li>● Simulation</li> <li>● Device switchover</li> <li>● Delta transfer</li> <li>● Monitoring function for battery and memory</li> <li>● Trace (operation archive)</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>No</p>
Expandability/openness	
<ul style="list-style-type: none"> <li>● Open Platform Program</li> </ul>	<p>Yes</p>
Peripherals/Options	
<ul style="list-style-type: none"> <li>Peripherals</li> <li>SIMATIC HMI MM memory card: Multi Media Card</li> <li>Additional software components loadable</li> </ul>	<p>Printer</p> <p>Yes</p> <p>Yes</p>
Dimensions	
<ul style="list-style-type: none"> <li>Width of the housing front</li> <li>Height of housing front</li> <li>Mounting cutout, width</li> <li>Mounting cutout, height</li> <li>Overall depth</li> </ul>	<p>212 mm</p> <p>156 mm</p> <p>198 mm</p> <p>142 mm</p> <p>44 mm</p>
Weights	
<ul style="list-style-type: none"> <li>Weight (without packaging)</li> </ul>	<p>0.8 kg</p>
Other	
<ul style="list-style-type: none"> <li>free hotline</li> </ul>	<p>Yes</p>
<ul style="list-style-type: none"> <li>last modified:</li> </ul>	<p>8/11/2021 </p>