

SIMATIC TOUCHPANEL TP177B PN/DP STAINLESS STEEL FRONT, DISPLAY COVERED BY MEMBRANE, PROTECTION CLASS FRONT IP66K, STN 265 COLOR-DISPLAY, MPI-/PROFIBUS-DP - PROTOCOL, RS485-/RS422-/USB - INTERFACE, ETHERNET 10/100 INTERFACE, PRINTER-INTERFACE, SLOT FOR MM-CARD



General information	
Customer-specific configuration	No
Display	
Design of display	STN
Screen diagonal	5.7 in
Number of colors	256
Color type	Colors
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/alphabetical input	Yes / Yes
— hexadecimal keyboard	Yes

<ul style="list-style-type: none"> <li>• Multi-key operation</li> </ul>	No
<b>Touch operation</b>	
<ul style="list-style-type: none"> <li>• Design as touch screen</li> </ul>	Yes; analog, resistive
<b>Connection type</b>	
<ul style="list-style-type: none"> <li>• Connection for mouse/keyboard/barcode reader</li> </ul>	USB / USB / USB
<b>Installation type/mounting</b>	
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	35°
<b>Input current</b>	
Current consumption (rated value)	0.24 A
<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>	
<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
<b>Interfaces</b>	
Interfaces/bus type	RS232 optional, 1 x RS422, 1 x RS485, 1 x Ethernet (RJ45) (max. 12 Mbit/s)
Number of RS 485 interfaces	1
<ul style="list-style-type: none"> <li>• Transmission rate, max.</li> </ul>	12 Mbit/s
USB port	1 x USB
PC card slot	No
CF card slot	No
Multimedia card/SD card slot	1x Multimedia Card slot, up to 128 MB
<b>Industrial Ethernet</b>	
<ul style="list-style-type: none"> <li>• Industrial Ethernet interface</li> </ul>	1 x Ethernet (RJ45)
<ul style="list-style-type: none"> <li>• Industrial Ethernet status LED</li> </ul>	1
<b>Protocols</b>	
<b>Protocols (terminal link)</b>	
<ul style="list-style-type: none"> <li>• Sm@rtServer</li> </ul>	Yes
<b>Degree and class of protection</b>	
Front	IP66K, NEMA 4, NEMA 4x, NEMA 12 (when installed)
IP (at the front)	IP66K

IP (rear)	IP20
<b>Standards, approvals, certificates</b>	
Certifications	CE, GL, ABS, BV, DNV, LRS, PRS, FM Class I Div. 2, UL, CSA, cULus, EX-Zone 2/22, Gost-R, C-TICK, NEMA 4, NEMA 4x, NEMA 12
cULus	Yes
EAC (formerly Gost-R)	Yes
<b>Marine approval</b>	
<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>• Nippon Kaiji Kyokai (Class NK)</li> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>No</li> <li>Yes</li> </ul>
<b>Use in hazardous areas</b>	
<ul style="list-style-type: none"> <li>• FM Class I Division 2</li> <li>• EX zone 2</li> <li>• EX zone 22</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
<b>Ambient conditions</b>	
<b>Ambient temperature during storage/transportation</b>	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	<ul style="list-style-type: none"> <li>-20 °C</li> <li>60 °C</li> </ul>
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• Operation, max.</li> </ul>	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>	
<ul style="list-style-type: none"> <li>• STEP 7 Basic (TIA Portal)</li> <li>• STEP 7 Professional (TIA Portal)</li> <li>• WinCC flexible Compact</li> <li>• WinCC flexible Standard</li> <li>• WinCC flexible Advanced</li> <li>• WinCC Basic (TIA Portal)</li> <li>• WinCC Comfort (TIA Portal)</li> </ul>	<ul style="list-style-type: none"> <li>No</li> <li>No</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>No</li> <li>Yes</li> </ul>

• WinCC Advanced (TIA Portal)	Yes
• WinCC Professional (TIA Portal)	Yes
• Configuration tool	WinCC flexible Compact Version 2005 or higher (to be ordered separately)

## 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
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Task planner	Yes
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Help system	Yes
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• Number of characters per info text	70
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### 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	2 000
• System messages HMI	Yes
• System messages PLC	Yes
• 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
<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
• 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
• Monitoring function for battery and memory	Yes
• Trace (operation archive)	No
<b>Expandability/openness</b>	
• Open Platform Program	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	46 mm

#### Weights

Weight (without packaging)	0.9 kg
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#### Other

free hotline	Yes
Warranty period	1 y
<b>last modified:</b>	04/28/2017