

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 OP 177B 6" PN/DP STN 256 color display Touch and Key MPI/PROFIBUS DP protocol RS 485/RS 422/USB interface Ethernet 10/100 interface Printer interface Slot for MMC configurable with WinCC flexible 2005



Figure similar

General information	
Product type designation	OP 177B 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 and membrane keyboard
Keyboard fonts	

<ul style="list-style-type: none"> <li>• Membrane keyboard <ul style="list-style-type: none"> <li>— user-definable label membrane keys</li> </ul> </li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Function keys <ul style="list-style-type: none"> <li>— Number of function keys</li> <li>— Number of function keys with LEDs</li> </ul> </li> </ul>	32 26
<ul style="list-style-type: none"> <li>• System keys <ul style="list-style-type: none"> <li>— Number of configurable system keys</li> </ul> </li> </ul>	Yes 32
• Numeric keyboard	Yes
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes
• Multi-key operation	Yes
<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>• Type of 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>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>	
<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	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, as of E version 016 in conjunction with WinCC flexible 2008 SP1
With software interfaces	No

### Protocols

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

### Degree and class of protection

IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	NEMA 4x, NEMA 12 (when installed)

### Standards, approvals, certificates

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

### Ambient conditions

<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 %

### Operating systems

pre-installed operating system	Windows CE
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### 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

<b>Online languages</b>	
• Number of online/runtime languages	5
<b>Project languages</b>	
• Languages per project	32

### Functionality under WinCC (TIA Portal)

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 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	Yes; 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
— alphanumerical 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
<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	No
• 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	243 mm
Height of housing front	212 mm
Mounting cutout, width	229 mm
Mounting cutout, height	196 mm
Overall depth	45 mm
<b>Weights</b>	
Weight (without packaging)	1 kg
<b>Other</b>	
free hotline	Yes
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