



Figure similar

\*\*\* spare part \*\*\* more information under SIMATIC news entry ID: 109486162.  
 SIMATIC OP 177B 6" DP blue mode STN display touch and key MPI/PROFIBUS  
 DP protocol RS485/RS422/USB interface printer interface slot for MMC  
 configurable with WinCC flexible 2005

General information	
Product type designation	OP177B 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 and membrane keyboard
Keyboard fonts	
• Membrane keyboard	
— user-definable label membrane keys	Yes
• Function keys	
— Number of function keys	32
— Number of function keys with LEDs	26
• System keys	Yes
— Number of configurable system keys	32
• Numeric keyboard	Yes
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes
• Multi-key operation	Yes
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>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>	
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
<b>Interfaces</b>	
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, as of E version 016 in conjunction with WinCC flexible 2008 SP1
With software interfaces	No
<b>Protocols</b>	
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
<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>	
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
<b>Ambient conditions</b>	
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

<b>Relative humidity</b>	
• Operation, max.	90 %
<b>Operating systems</b>	
pre-installed operating system	Windows CE
<b>configuration / header</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
• 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

**Weights**

Weight (without packaging)	1 kg
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**Other**

free hotline	Yes
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**Classifications**

	Version	Classification
eClass	14	27-33-02-01
eClass	12	27-33-02-01
eClass	9.1	27-33-02-01
eClass	9	27-33-02-01
eClass	8	27-24-23-02
eClass	7.1	27-24-23-02
eClass	6	27-24-23-02
ETIM	9	EC001412
ETIM	8	EC001412
ETIM	7	EC001412
IDEA	4	6607
UNSPSC	15	43-21-15-06

**Approvals / Certificates**

**General Product Approval**

[Manufacturer Declaration](#)



[KC](#)



EMV	For use in hazardous locations	Radio Equipment Type Approval Certificate	Marine / Shipping
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[FM](#)

[Miscellaneous](#)



**Marine / Shipping**



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