

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 Operator Panel OP 77B LC display backlit, 4.5" display graphics-capable, MPI/PROFIBUS DP interface up to 12 MB, printer/USB interface, slot for MMC, configurable with WinCC flexible 2004 Compact

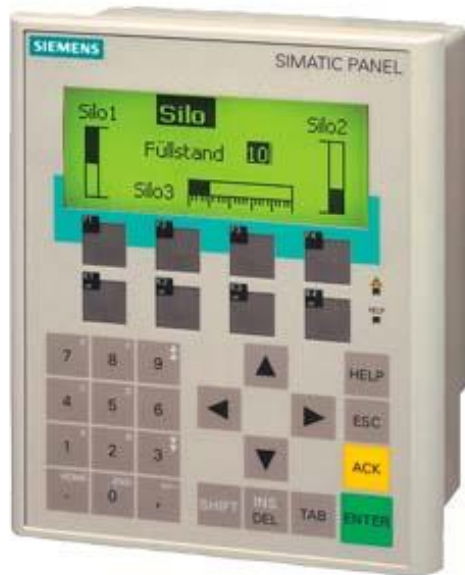


Figure similar

General information	
Product type designation	OP 77B
Customer-specific configuration	No
Display	
Design of display	STN
Screen diagonal	4.5 in
Color display	No
Number of colors	2; Black/white
Resolution (pixels)	
• Horizontal image resolution	160 Pixel
• Vertical image resolution	64 Pixel
Backlighting	
• MTBF backlighting (at 25 °C)	100 000 h
Control elements	
Control elements	Membrane keyboard
Keyboard fonts	

• Membrane keyboard	Yes
— user-definable label membrane keys	Yes
• Function keys	Yes
— Number of function keys	8
— Number of function keys with LEDs	4
• System keys	Yes
— Number of system keys	23
• Numeric keyboard	Yes
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes
• Multi-key operation	Yes
<b>Touch operation</b>	
• Design as touch screen	No
<b>Connection type</b>	
• Type of connection for mouse/keyboard/barcode reader	- / - / -
<b>Installation type/mounting</b>	
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	80°
<b>Supply voltage</b>	
Type of supply voltage	DC
<b>Input current</b>	
Current consumption (rated value)	0.2 A
Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s
<b>Processor</b>	
Processor type	ARM
<b>Memory</b>	
Type of memory	Flash / RAM
Memory available for user data	1 000 kbyte
<b>Type of output</b>	
Info LED	Yes
Power LED	No
Error LED	No
<b>Time of day</b>	
<b>Clock</b>	
• Type	Software clock, no battery backup
• retentive	No
• synchronizable	No

Interfaces	
Interfaces/bus type	1x RS 232, 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
Multimedia card/SD card slot	combined

Protocols	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	Yes
Protocols (Ethernet)	
• TCP/IP	No
Further protocols	
• EtherNet/IP	No
• MODBUS	No
• other bus systems	Yes

Degree and class of protection	
IP (at the front)	IP65
NEMA (front)	NEMA 4x, NEMA 12 (when installed)
IP (rear)	IP20

Standards, approvals, certificates	
Certifications	CE, GL, ABS, BV, DNV, LRS, FM Class I Div. 2, UL, CSA, cULus, EX-Zone 2 (in Vorbereitung), EX-Zone 22 (in Vorbereitung), C-TICK, NEMA 4x, NEMA 12
cULus	Yes
EAC (formerly Gost-R)	No
Suitable for safety functions	No
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• FM Class I Division 2	Yes
Marine approval	
• 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
• Nippon Kaiji Kyokai (Class NK)	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 %

<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>	
• Configuration tool	WinCC flexible Compact Version 2004 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	320
<b>Message system</b>	
• Number of alarm classes	32
• Number of messages	1 000

• Bit messages	Yes
— Number of bit messages	1 000
• Analog messages	Yes
— Number of analog messages	1 000
• Telegram message procedure Alarm S	Yes
• System messages HMI	Yes
• System messages PLC	Yes
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	No
• Number of characters per message	80
• Number of process values per message	8
• Acknowledgment groups	Yes
• Message indicator	No
• 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	30
• Limit values	Yes
• Multiplexing	Yes
<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	30
• Number of date/time fields	0
• Index of screen context	No
• Return	Yes
• Graphics object	Bit maps, icons, icon (full-screen)
— Icons	1 000
— Icon (full screen)	100
<b>Complex image objects</b>	

<ul style="list-style-type: none"> <li>• dynamic objects</li> </ul>	Bar graphs
<ul style="list-style-type: none"> <li>• Bar graphs <ul style="list-style-type: none"> <li>— Number of bars per chart</li> </ul> </li> </ul>	5
<ul style="list-style-type: none"> <li>• Pointer instruments <ul style="list-style-type: none"> <li>— Number of analog indicators per image</li> </ul> </li> </ul>	0
<ul style="list-style-type: none"> <li>• Limit value lines</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Number of alphanumeric fields <ul style="list-style-type: none"> <li>— alphanumeric fields per image</li> </ul> </li> </ul>	1 000
<ul style="list-style-type: none"> <li>• Number of numerical fields <ul style="list-style-type: none"> <li>— numerical fields per image</li> </ul> </li> </ul>	30
<ul style="list-style-type: none"> <li>• Number of numerical fields <ul style="list-style-type: none"> <li>— numerical fields per image</li> </ul> </li> </ul>	1 000
<ul style="list-style-type: none"> <li>• Number of password fields</li> </ul>	30
<ul style="list-style-type: none"> <li>• Number of visible switches per project <ul style="list-style-type: none"> <li>— visible switches per image</li> <li>— hidden switches per image</li> </ul> </li> </ul>	0
<ul style="list-style-type: none"> <li>• Number of status switches per project <ul style="list-style-type: none"> <li>— Number of status switches per image</li> </ul> </li> </ul>	0
<ul style="list-style-type: none"> <li>• Number of selector switches per project <ul style="list-style-type: none"> <li>— Selector switches per image</li> </ul> </li> </ul>	0
<ul style="list-style-type: none"> <li>• Number of decade switches per project <ul style="list-style-type: none"> <li>— Decade switches per image</li> </ul> </li> </ul>	0
<ul style="list-style-type: none"> <li>• Number of signal lamps per project <ul style="list-style-type: none"> <li>— Signal lamps per image</li> </ul> </li> </ul>	0
<b>Attributes for dynamic objects</b>	
<ul style="list-style-type: none"> <li>• Color change</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• X/Y movement</li> </ul>	No
<ul style="list-style-type: none"> <li>• Hide</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Angle of rotation</li> </ul>	No
<b>Lists</b>	
<ul style="list-style-type: none"> <li>• Number of text lists per project</li> </ul>	300
<ul style="list-style-type: none"> <li>• Number of graphics lists per project</li> </ul>	0
<ul style="list-style-type: none"> <li>• Number of graphic lists per image</li> </ul>	0
<ul style="list-style-type: none"> <li>• Number of entries per graphics list</li> </ul>	0
<b>Security</b>	
<ul style="list-style-type: none"> <li>• Number of user groups</li> </ul>	50
<ul style="list-style-type: none"> <li>• Number of user rights</li> </ul>	32
<ul style="list-style-type: none"> <li>• Password export/import</li> </ul>	Yes
<b>Logging through printer</b>	
<ul style="list-style-type: none"> <li>• Recording/Printing</li> </ul>	Alarms, report (shift report), hardcopy
<b>Transfer (upload/download)</b>	
<ul style="list-style-type: none"> <li>• Transfer of configuration</li> </ul>	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, TI 505, Win AC, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), OMRON (LINK/Multilink), Modicon (Modbus), further non-Siemens drivers, see chapter "System interfaces"
- S7-200
  - PPI (point-to-point) Yes
  - PPI network Yes
  - MPI Yes
  - PROFIBUS DP Yes
  - Ethernet No
- S7-300/400
  - MPI Yes
  - PROFIBUS DP Yes
  - PROFINET No
- S5
  - serial Yes
  - PROFIBUS DP Yes
- TI 505 Yes
- Allen Bradley (DF1) Yes
- Allen Bradley (DF485) Yes
- Mitsubishi (FX) Yes
- Mitsubishi (MP4) Yes
- Telemecanique (ADJUST) No
- Telemecanique (Uni-Telway) Yes; Only in combination with WinCC flexible
- OMRON (LINK/Multilink) Yes
- Modicon (Modbus) Yes
- GE-Fanuc (SNP) Yes

#### Functions

- Key repeat Yes
- TAB sequence Yes
- Calculating functions Yes
- Animate Yes
- Menu tree editor Yes
- Unit switchover No

#### Service tools/configuration aids

- Clean screen No
- Touch calibration No
- 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	No
<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	150 mm
Height of housing front	186 mm
Mounting cutout, width	135 mm
Mounting cutout, height	171 mm
Overall depth	38.5 mm
<b>Weights</b>	
Weight (without packaging)	0.5 kg
<b>Other</b>	
free hotline	Yes
<b>last modified:</b>	05/04/2019