

\*\*\* SPARE PART\*\*\* SIMATIC OPERATOR PANEL OP77B BACKLIT  
 LC DISPLAY, 4.5" DISPL. W. GRAPHICS CAPABIL MPI-  
 /PROFIBUS-DP INTERFACE UPTO 12 MB, PRINTER/USB  
 INTERFACE, SLOT FOR MMC CARD, FOR CONFIGURATION OF  
 WINCC FLEXIBLE 2004 COMPACT

Display	
Design of display	STN
Screen diagonal	4.5 in
Number of colors	2
Color type	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	
— user-definable label membrane keys	Yes
• Function keys	Yes
— Number of function keys	8
— Number of function keys with LEDs	4
• Numeric/alphabetical input	Yes / Yes
— hexadecimal keyboard	Yes
• Multi-key operation	Yes
Connection type	
• Connection for mouse/keyboard/barcode reader	- / - / -
Installation type/mounting	
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	80°
Input current	
Current consumption (rated value)	0.2 A
Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s
Processor	

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>	
<ul style="list-style-type: none"> <li>Type</li> </ul>	Software clock, no battery backup
<ul style="list-style-type: none"> <li>retentive</li> </ul>	No
<ul style="list-style-type: none"> <li>synchronizable</li> </ul>	No
<b>Interfaces</b>	
Interfaces/bus type	1 x RS232, 1 x RS422, 1 x RS485 (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
Multimedia card/SD card slot	1x MultiMediaCard slot
<b>Industrial Ethernet</b>	
<ul style="list-style-type: none"> <li>Industrial Ethernet interface</li> </ul>	No
<b>Degree and class of protection</b>	
Front	IP65, NEMA 4x, NEMA 12 (when installed)
IP (at the front)	IP65
IP (rear)	IP20
<b>Standards, approvals, certificates</b>	
Certifications	CE, GL, ABS, BV, DNV, LRS, FM Class I Div. 2, UL, CSA, cULus, EX-Zone 2/22, C-TICK, NEMA 4x, NEMA 12
cULus	Yes
EAC (formerly Gost-R)	No
<b>Marine approval</b>	
<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>Nippon Kaiji Kyokai (Class NK)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Polski Rejestr Statkow (PRS)</li> </ul>	No
<b>Use in hazardous areas</b>	
<ul style="list-style-type: none"> <li>FM Class I Division 2</li> </ul>	Yes

- EX zone 2 Yes
- EX zone 22 Yes

## Ambient conditions

### Ambient temperature during storage/transportation

- min. -20 °C
- max. 60 °C

### Relative humidity

- Operation, max. 90 %

## Operating systems

pre-installed operating system Windows CE

## Configuration

### Configuration software

- Configuration tool WinCC flexible Compact Version 2004 or higher (to be ordered separately)

## Languages

### Online languages

- Number of online/runtime languages 5

### Project languages

- Languages per project 32

## Functionality under WinCC (TIA Portal)

Libraries Yes

Help system Yes

- Number of characters per info text 320

### Message system

- Number of alarm classes 32
- Number of messages 1 000
- Bit messages Yes
  - Number of bit messages 1 000
- Analog messages Yes
- 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

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	30
• Limit values	Yes
• Multiplexing	Yes
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
Image objects	
• 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
Complex image objects	
• dynamic objects	Bar graphs
• Bar graphs	
— Number of bars per chart	5
• Pointer instruments	
— Number of analog indicators per image	0
• Limit value lines	Yes
• Number of alphanumerical fields	1 000
— alphanumeric fields per image	30
• Number of numerical fields	1 000
— numerical fields per image	30
• Number of password fields	0
• Number of visible switches per project	
— visible switches per image	0
— hidden switches per image	0
• Number of status switches per project	

— Number of status switches per image	0
• Number of selector switches per project	
— Selector switches per image	0
• Number of decade switches per project	
— Decade switches per image	0
• Number of signal lamps per project	
— Signal lamps per image	0
<b>Attributes for dynamic objects</b>	
• Angle of rotation	No
<b>Lists</b>	
• Number of text lists per project	300
• Number of graphics lists per project	0
• Number of graphic lists per image	0
• Number of entries per graphics list	0
<b>Security</b>	
• Number of user groups	50
• Number of user rights	32
• Password export/import	Yes
<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, 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	Yes
— PPI (point-to-point)	Yes
— PPI network	Yes
— MPI	Yes
— PROFIBUS DP	Yes
• S7-300/400	Yes
— MPI	Yes
— PROFIBUS DP	Yes
— PROFINET	No
• S5	Yes
— 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)	No
• OMRON (LINK/Multilink)	Yes
• Modicon (Modbus)	Yes
• GE-Fanuc (SNP)	Yes
<b>Functions</b>	
• Key repeat	Yes
• TAB sequence	Yes
• Calculating functions	Yes
• Animate	Yes
• Menu tree editor	Yes
• Unit switchover	No
<b>Service tools/configuration aids</b>	
• 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
<b>Dimensions</b>	
Width of the housing front	150 mm
Height of housing front	186 mm
Overall depth	38.5 mm
<b>Weights</b>	
Weight (without packaging)	0.5 kg
<b>Other</b>	
free hotline	Yes
Warranty period	1 y
<b>last modified:</b>	04/28/2017