

\*\*\* 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
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	
— user-definable label membrane keys	Yes
• Function keys	Yes
— Number of function keys	8
— Number of function keys with LEDs	4
• System keys	
— Number of system keys	23
• Numeric keyboard	Yes
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes
• Multi-key operation	Yes
Connection type	
• Type of 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
<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>	
Clock	
• Type	Software clock, no battery backup
• retentive	No
• synchronizable	No
<b>Interfaces</b>	
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	1x MultiMediaCard slot
<b>Degree and class of protection</b>	
IP (at the front)	IP65
NEMA (front)	NEMA 4x, NEMA 12 (when installed)
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>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
• Nippon Kaiji Kyokai (Class NK)	Yes
• Polski Rejestr Statkow (PRS)	No

### Ambient conditions

#### Ambient temperature during storage/transportation

• min.	-20 °C
• max.	60 °C

#### Relative humidity

• Operation, max.	90 %
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### Operating systems

pre-installed operating system	Windows CE
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### Configuration

#### Configuration software

• Configuration tool	WinCC flexible Compact Version 2004 or higher (to be ordered separately)
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### 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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Help system	Yes
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• Number of characters per info text	320
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#### 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
<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>	
• 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

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