

*** 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
• Resolution (WxH in pixel)	160 x 64
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	8 function keys, 4 with LEDs
— 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 ² t	0.5 A ² ·s
Processor	

Processor type	ARM
Memory	
Type of memory	Flash / RAM
Memory available for user data	1 000 kbyte
Type of output	
Info LED	Yes
Power LED	No
Error LED	No
Time of day	
Clock	
<ul style="list-style-type: none"> • Type • Hardware clock (real-time clock) • Software clock • retentive • synchronizable 	<ul style="list-style-type: none"> Software clock, no battery backup No Yes No No
Interfaces	
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"> • Transmission rate, max. 	12 Mbit/s
USB port	1 x USB
Multimedia Card slot	1x MultiMediaCard slot
Special interfaces	No
Industrial Ethernet	
<ul style="list-style-type: none"> • Industrial Ethernet interface 	No
Degree and class of protection	
Front	IP65, NEMA 4x, NEMA 12 (when installed)
IP (at the front)	IP65
IP (rear)	IP20
Standards, approvals, certificates	
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
Marine approval	
<ul style="list-style-type: none"> • Germanischer Lloyd (GL) • American Bureau of Shipping (ABS) • Bureau Veritas (BV) • Det Norske Veritas (DNV) • Lloyds Register of Shipping (LRS) • Nippon Kaiji Kyokai (Class NK) 	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes Yes

• Polski Rejestr Statkow (PRS)	No
Use in hazardous areas	
• EX zone 2	Yes
• EX zone 22	Yes
• FM Class I Division 2	Yes
Ambient conditions	
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	90 %
Operating systems	
Operating system	Windows CE
Configuration	
Configuration software	
• Configuration tool	WinCC flexible Compact Version 2004 or higher (to be ordered separately)
• 2. Configuration kit	WinCC flexible Compact
— Version	Version 2004
— Configuration tool	WinCC flexible
— Type	Compact
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
• Message length (in characters)	80
• Number of process values per message	8
• Acknowledgment groups	
— Number of acknowledgement groups	Yes
• Message indicator	No
• acoustic feedback	No
• First/last value	Yes
Recipe administration	
• 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
• Number of bars per chart	5
• Limit value lines	Yes
• alphanumeric fields	1 000
• alphanumeric fields per image	30
• numerical fields	1 000

• numerical fields per image	30
• Password fields	0
• Number of analog indicators per image	0
• visible switches per image	0
• hidden switches per image	0
• Number of status switches per image	0
• Selector switches per image	0
• Decade switches per image	0
• Signal lamps per image	0
Attributes for dynamic objects	
• Angle of rotation	No
Lists	
• 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
Security	
• Number of user groups	50
• Number of user rights	32
• Password export/import	Yes
Logging through printer	
• Recording/Printing	Alarms, report (shift report), hardcopy
Transfer (upload/download)	
• Transfer of configuration	MPI/PROFIBUS DP, serial, USB, by means of external storage medium, automatic transfer recognition
Process coupling	
• 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
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
Expandability/openness	
• Open Platform Program	No
Peripherals/Options	
Peripherals	Printer
• Multimedia Card	Yes
Dimensions	
Width of the housing front	150 mm
Height of housing front	186 mm
Overall depth	38.5 mm
Weights	
Weight (without packaging)	0.5 kg
Other	
free hotline	Yes
Warranty period	1 y

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