

\*\*\* SPARE PART\*\*\* SIMATIC OPERATOR PANEL OP77A BACKLIT LC DISPLAY, 4.5" DISPL. W. GRAPHICS CAPABIL MPI-/PROFIBUS-DP INTERFACE UP TO 1,5MB, FOR CONFIGURATION WINCC FLEXIBLE 2004 COMPACT HSP UPWARDS; CONTAINS OPEN-SOURCE-SW, WHICH IS PROVIDED FREE OF CHARGE. FOR DETAILS SEE ENCLOSED CD

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	
— Number of function keys	8
— Number of function keys with LEDs	4
• System keys	
— Number of system keys	23
• alphanumeric keyboard	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
Memory	
Type of memory	Flash / RAM
Memory available for user data	256 kbyte
Type of output	
Info LED	Yes
Power LED	No
Error LED	No
Time of day	
Clock	
<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
Interfaces	
Interfaces/bus type	1 x RS422, 1 x RS485 (max. 1.5 Mbit/s)
Number of RS 485 interfaces	1
<ul style="list-style-type: none"> <li>Transmission rate, max.</li> </ul>	1.5 Mbit/s
Number of USB interfaces	0
PC card slot	No
CF card slot	No
Multimedia card/SD card slot	No
Industrial Ethernet	
<ul style="list-style-type: none"> <li>Industrial Ethernet interface</li> </ul>	No
Degree and class of protection	
IP (at the front)	IP65
NEMA (front)	NEMA 4x (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 2/22, C-TICK, NEMA 4x
cULus	Yes
EAC (formerly Gost-R)	No
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

• Det Norske Veritas (DNV)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
• Polski Rejestr Statkow (PRS)	No
<b>Use in hazardous areas</b>	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• FM Class I Division 2	Yes
<b>Ambient conditions</b>	
<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	LINUX
<b>Configuration</b>	
<b>Configuration software</b>	
• Configuration tool	WinCC flexible Compact Version 2004 SP 1 and higher; HSP OP 77 (to be ordered separately)
<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	0
• Telegram message procedure Alarm S	No
• 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	5
• Data records per recipe	20
• Entries per data record	20
• Recipe memory	32 KB integrated Flash
<b>Variables</b>	
• Number of variables per device	1 000
• Number of variables per screen	30
• 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	1,000 text elements
• Number of I/O fields per image	30
• Index of screen context	No
• Return	Yes
• Graphics object	Bit maps, icons, icon (full-screen)
— Icons	1
— Icon (full screen)	1
<b>Complex image objects</b>	
• Status/control	Not possible
• dynamic objects	Bar graphs
• Bar graphs	
— Number of bars per chart	5
• 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
<b>Attributes for dynamic objects</b>	
• Color change	No
• X/Y movement	No
• Hide	Yes
• Angle of rotation	No
<b>Lists</b>	
• Number of text lists per project	300
• Number of graphics lists per project	0
<b>Security</b>	
• Number of user groups	50
• Number of user rights	32
• Password export/import	Yes
<b>Transfer (upload/download)</b>	
• Transfer of configuration	MPI/PROFIBUS DP, serial, automatic transfer recognition
<b>Process coupling</b>	
• Connection to controller	S7-200, S7- 300/400, Win AC see section on "System interfaces"
• S7-200	Yes
— PPI (point-to-point)	Yes
— PPI network	Yes
— MPI	Yes
— PROFIBUS DP	Yes
— Ethernet	No
• S7-300/400	Yes
— MPI	Yes
— PROFIBUS DP	Yes
— PROFINET	No
• S5	No
— serial	No
— PROFIBUS DP	No
• TI 505	No
• Allen Bradley (DF1)	No
• Allen Bradley (DF485)	No
• Mitsubishi (FX)	No
• Mitsubishi (MP4)	No
• Telemecanique (ADJUST)	No
• Telemecanique (Uni-Telway)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus)	No
• GE-Fanuc (SNP)	No

Functions	
• Key repeat	Yes
• TAB sequence	Yes
• Calculating functions	Yes
• Animate	No
• Menu tree editor	No
• Unit switchover	No
Service tools/configuration aids	
• Clean screen	No
• Touch calibration	No
• Backup/Restore manually	Yes
• Simulation	No
• Device switchover	Yes
• Delta transfer	No
• Monitoring function for battery and memory	No
• Trace (operation archive)	No
Expandability/openness	
• Open Platform Program	No

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
<b>last modified:</b>	08/12/2017