

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



General information	
Customer-specific configuration	No
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	
— Number of function keys	8
— Number of function keys with LEDs	4
• Keys with LED	Yes
• Numeric/alphabetical input	Yes / Yes
— hexadecimal keyboard	Yes
• Multi-key operation	Yes
Touch operation	
• Design as touch screen	No
Connection type	
• Connection for mouse/keyboard/barcode reader	- / - / -
Installation type/mounting	
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	80°
Supply voltage	
Type of supply voltage	DC
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
Type of output	
Info LED	Yes
Power LED	No
Error LED	No
Time of day	
Clock	
• Type	Software clock, no battery backup
• Hardware clock (real-time clock)	No
• Software clock	Yes
• retentive	No
• synchronizable	No
Interfaces	
Interfaces/bus type	1 x RS422, 1 x RS485 (max. 1.5 Mbit/s)
Number of RS 485 interfaces	1

• Transmission rate, max.	1.5 Mbit/s
USB port	No
PC card slot	No
CF card slot	No
Multimedia Card slot	No
Special interfaces	No
Industrial Ethernet	
• 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 (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

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

Use in hazardous areas	
• EX zone 2	Yes
• EX zone 22	Yes
• FM Class I Division 2	Yes

Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	90 %

Operating systems

Operating system	LINUX
Configuration	
Configuration software	
<ul style="list-style-type: none"> • STEP 7 Basic (TIA Portal) • STEP 7 Professional (TIA Portal) • WinCC flexible Compact • WinCC flexible Standard • WinCC flexible Advanced • WinCC Basic (TIA Portal) • WinCC Comfort (TIA Portal) • WinCC Advanced (TIA Portal) • WinCC Professional (TIA Portal) • Configuration tool • 2. Configuration kit <ul style="list-style-type: none"> — Version — Configuration tool — Type 	<ul style="list-style-type: none"> No No Yes Yes Yes No Yes Yes Yes WinCC flexible Compact Version 2004 SP 1 and higher; HSP OP 77 (to be ordered separately) WinCC flexible Compact Version 2004 SP 1; HSP OP 77 WinCC flexible Compact
Languages	
Online languages	
<ul style="list-style-type: none"> • Number of online/runtime languages 	5
Project languages	
<ul style="list-style-type: none"> • Languages per project 	32
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Task planner	Yes
Help system	Yes
<ul style="list-style-type: none"> • Number of characters per info text 	320
Message system	
<ul style="list-style-type: none"> • Number of alarm classes • Number of messages • Bit messages <ul style="list-style-type: none"> — Number of bit messages • Analog messages <ul style="list-style-type: none"> — Number of analog messages • Telegram message procedure Alarm S • System messages HMI • System messages PLC • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) • Message length (in characters) 	<ul style="list-style-type: none"> 32 1 000 Yes 1 000 Yes 1 000 No Yes Yes No 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	5
• Data records per recipe	20
• Entries per data record	20
• Recipe memory	32 KB integrated Flash
Variables	
• Number of variables per device	1 000
• Number of variables per screen	30
• Limit values	Yes
• Multiplexing	Yes
• Structures	No
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	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
Complex image objects	
• Status/control	Not possible
• 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
Attributes for dynamic objects	

• Color change	No
• X/Y movement	No
• Hide	Yes
• Angle of rotation	No
Lists	
• Number of text lists per project	300
• Number of graphics lists per project	0
Security	
• Number of user groups	50
• Number of user rights	32
• Password export/import	Yes
Transfer (upload/download)	
• Transfer of configuration	MPI/PROFIBUS DP, serial, automatic transfer recognition
Process coupling	
• 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
• 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
Mounting cutout, width	135 mm
Mounting cutout, height	171 mm
Overall depth	38.5 mm

Weights	
Weight (without packaging)	0.5 kg

Other	
free hotline	Yes
Warranty period	1 y

last modified: 08.08.2015