

SIMATIC OP 73/OP 77A/OP 77B

Graphics with small dimensions



Powered by
WinCC flexible

simatic hmi PANELS

The SIMATIC Panels of the 70 Series are the low-cost starter devices in the range of operator panels with graphical capability. They are ideally suited to small-scale HMI tasks.

SIMATIC OP 73

Operator panel with 3" graphics display (160 x 48 pixels)

SIMATIC OP 77A/OP 77B

Operator panel with 4.5" graphics display (160 x 64 pixels)

SIEMENS

More display – More interfaces – More functionality

Pixel-graphics display

The pixel-graphics display can be used for the graphical display of the processes using, for example, bit-maps or bar charts. The font size can be varied to achieve excellent readability even at a distance. Graphics can be used instead of text for labeling the function keys. This makes intuitive operator interfaces possible and saves on translation overhead.

Connection to controller

The OP 73 and OP 77A can be connected to SIMATIC S7-200/-300/-400. A variant, the OP 73micro, has also been specially designed for SIMATIC S7-200. The OP 77B features drivers for interfacing to a range of different controllers. The necessary interfaces are already onboard.

Configuring - easy with SIMATIC WinCC flexible

SIMATIC OP 73/OP 77A and OP 77B are members of a complete and integrated SIMATIC HMI family of panels that can be configured with the engineering software SIMATIC WinCC flexible. Even the low-cost WinCC flexible Compact package can be used.

The operator panels have powerful features based on the innovative engineering tool WinCC flexible, e.g. analog messages (OP 77B only), message system, 5 online languages, Asian languages and much more.

WinCC flexible can be used with the OP 77B to freely configure reports and edit recipe data records in advance. Screens can be created quickly thanks to a comprehensive graphics library with off-the-shelf picture objects.

Existing OP3/OP7 projects can be ported in WinCC flexible to OP 73/OP 77 projects. In this way, existing engineering work is retained.

highlights

- 3" or 4.5" pixel-graphics display, allows bitmap and bar chart presentation
 - Compact, space-saving design (installation cut-out as for OP3 or OP7)
 - MPI and PROFIBUS DP (1.5 Mbit/s) onboard
 - 5 online languages, including Asian and Cyrillic characters
 - Graphical labeling of softkeys
 - New powerful functions, e.g. comprehensive message system with freely-definable message classes
 - Configuring from SIMATIC WinCC flexible Compact
- For OP 77B, additionally:
- Multi Media Card (MMC) slot memory cards for recipes and project backup
 - USB interface for printers and project download
 - MPI and PROFIBUS DP (12 Mbit/s) onboard
 - Freely scalable character size

For OP 77B, additionally:

Simple data handling

Using a generally available Multi Media Card (MMC), the memory available for recipe data and project backup can be expanded significantly for the OP 77B. The recipes can be stored in standard format (CSV) for further processing in the PC using, for example, MS Excel. Backup and restore functions for the complete OP project enable simple device replacement, e.g. in the event of service work.

New communications options

The Operator Panel OP 77B has a USB interface for connecting a printer or downloading a project. The project can also be loaded onto the operator panel via the RS 232 interface or from a central location over the MPI or PROFIBUS DP network. The remote configuration download, for example via modem or using the SIMATIC TeleService, ensures cost and time savings during service work.


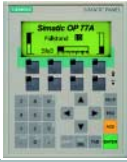



Multiple interfaces on OP 77B



Side view of the OP 77B with Multi Media Card (MMC)




An overview of the technology

			
	OP 73	OP 77A	OP 77B
Display	LCD	LCD	LCD
• Size	3"	4,5"	4,5"
• Resolution (W x H in pixels)	160 x 48	160 x 64	160 x 64
• Colors	Monochrome (yellow-green)	Monochrome (yellow-green)	Monochrome (yellow-green)
• MTBF background lighting (at 25°C)	approx. 100,000 hours	approx. 100,000 hours	approx. 100,000 hours
Operator controls	Membrane keyboard	Membrane keyboard	Membrane keyboard
• Function keys, programmable	4	8 (4 with LEDs)	8 (4 with LEDs)
• System keys	8	23	23
• Numeric input / alpha input	Yes / yes ¹⁾ (via cursor)	Yes / yes ¹⁾	Yes / yes ¹⁾
Memory	Flash / RAM	Flash / RAM	Flash / RAM
• Available memory for user data	256 KB	256 KB	1 MB
Interfaces	1 x RS 485	1 x RS 485	1 x RS 232, 1 x RS 422 / RS 485, 1 x USB
• Multi Media Card (MMC)	-	-	1 x MMC card slot
Printer	-	-	Yes, via USB (up to 100 mA)
Connection to controller	S7-200/300/400 (OP 73micro specially for S7-200)	S7-200/300/400	S7-200, S7-300/400, S5, 505, WinAC, Allen Bradley, Mitsubishi, Modicon, Omron, GE Fanuc, other non-Siemens controllers
Power supply	24 V DC (+18 to +30 V DC)	24 V DC (+18 to +30 V DC)	24 V DC (+18 to +30 V DC)
• Rated current	0.2 A	0.2 A	0.2 A
Clock	Software clock, synchronized ²⁾	Software clock, synchronized ²⁾	Software clock, synchronized ²⁾
Degree of protection (front/rear)	IP65 (installed) / IP20	IP65 (installed) / IP20	IP65 (installed) / IP20
Certification	Available soon FM, cULus, CE, C-Tick, NEMA 4, shipbuilding	Available soon FM, cULus, CE, C-Tick, NEMA 4, EX Zone 2/22, shipbuilding	FM, cULus, CE, C-Tick, EX Zone 2/22, available soon: shipbuilding
Dimensions			
• Front panel W x H (mm)	154 x 84	150 x 186	150 x 186
• Installation cutout W x H (mm)	138 x 68	135 x 171	135 x 171
Weight	0.3 kg	0.5 kg	0.5 kg
Ambient conditions			
• Mounting position	Vertical	Vertical	Vertical
– Max. permissible angle of inclination without forced ventilation	± 90°	± 90°	± 90°
• Temperature			
– Operation (vertical installation)	0 °C to +50 °C	0 °C to +50 °C	0 °C to +50 °C
– Operation (max. angle of inclination)	0 °C to +40 °C	0 °C to +40 °C	0 °C to +40 °C
– Transportation and storage	-20 °C to +70 °C	-20 °C to +70 °C	-20 °C to +70 °C
• Relative humidity, max.	95 %	95 %	95 %

1) Only English font can be displayed

2) No battery back-up

An overview of the functionality

			
	OP 73	OP 77A	OP 77B
Functionality	The total of all configured elements is limited by the memory size.		
Message system			
• Number of messages	500	1.000	1.000
• Message length (lines x characters)	1 x 80	1 x 80	1 x 80
• Number of process values per message	8	8	8
• Message buffer ¹⁾	Circulating buffer, 256 entries each	Circulating buffer, 256 entries each	Circulating buffer, 256 entries each
Recipes	-	-	100
• Data records per recipe	-	-	200
• Entries per data record	-	-	200
• Recipe memory	-	-	32 KB integral flash, expandable ²⁾
Process screens	500	500	1000
• Text objects	2.500	2.500	2.500
• Variables / fields per screen	20 / 20	30 / 30	30 / 30
• Graphics objects	500	1.000	1.000
• Dynamic objects	Bar charts	Bar charts	Bar charts
Variables	1.000	1.000	1.000
User-oriented access protection (password protection)	User-group-specific rights (up to 32 rights)	User-group-specific rights (up to 32 rights)	User-group-specific rights (up to 32 rights)
Print functions	-	-	Hard copy, messages, reports
Online languages	5	5	5
Character set	Logographic languages; WinCC flexible Standard	Logographic languages; WinCC flexible Standard	Tahoma, logographic languages; freely scalable / PT Standard
Help system	yes	yes	yes
Task planner (scheduler)	-	yes	yes
Configuring tool	from SIMATIC WinCC flexible 2004 Compact	from SIMATIC WinCC flexible 2004 Compact	from SIMATIC WinCC flexible 2004 Compact
• Transfer of the configuration	MPI / PROFIBUS DP	MPI / PROFIBUS DP	Serial / MPI / PROFIBUS DP / USB

1) No battery back-up

2) Using optional MMC

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