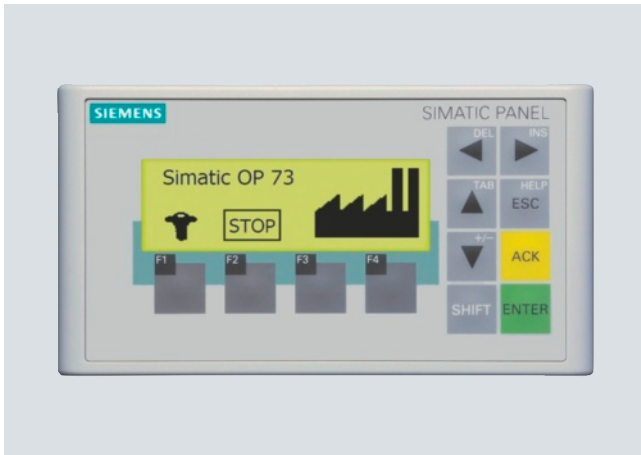


Overview



- Operator Panel for operator control and monitoring functions of machines and plants
- Graphics in a new dimension: Small and smart
- Full graphics 3" LCD, monochrome
- 8 system keys, 4 freely programmable function keys
- All interfaces are on-board (e.g. MPI, PROFIBUS DP)
- SIMATIC OP 73 is the successor to the OP3 operator panel

Benefits

- High-contrast display for good readability
- Large keys for high operational safety
- Simple handling and configuring
- Integral component of Totally Integrated Automation (TIA): Increases productivity, minimizes the engineering outlay, reduces lifecycle costs
- Service-friendly through maintenance-free design (no battery) and high service life of the backlighting
- Graphic library is available completely with ready-to-use display objects
- Can be used worldwide:
 - 32 languages can be configured (including Asiatic and Cyrillic character sets)
 - Up to 5 languages are selectable online
 - Language-dependent texts and graphics

Application

The OP 73 operator panel can be used wherever the operator control and monitoring of machines and systems is performed directly on site – in manufacturing, process and building automation. They may be used in all kinds of industries and applications.

Compatibility with OP3

- Same installation cutout as the OP3
- Transfer of the OP3 configurations from ProTool/Lite, ProTool to WinCC flexible

Migration guide with description of the major changes to OP3 or ProTool

Design

- 3" LCD, 160 x 48 pixels, monochrome
- 8 system keys, 4 user-configurable function keys
- Numerical and alphanumeric input option via cursor keys
- Compact design with low mounting depth
- Rugged plastic housing
- The front is resistant to various oils, greases and standard detergents
- Plug-type terminals for a 24 V DC power supply
- RS 485 interface for process connections (MPI, PROFIBUS DP up to 1.5 Mbit/s) and for configuration download

Operator panels

Panels – 70 series

SIMATIC OP 73

Function

- Input/output fields for displaying and changing process parameters
- Function keys for direct triggering of functions and actions. Up to 16 functions can be configured simultaneously on function keys.
- Graphics can be used as icons instead of text to "label" function keys or buttons. They can also be used as simple on-screen graphics. In the configuration tool, a library is available containing an extensive range of graphics and a wide variety of objects. All editors with an OLE interface can be used as graphic editors (such as PaintShop, Designer or CorelDraw).
- Fixed texts for labeling function keys, process images and process values in different font sizes
- Bars are used for the graphical display of dynamic values
- Language selection during runtime
 - 5 online languages, 32 configuration languages incl. Asian and Cyrillic character sets
 - Language-dependent texts and graphics
- User administration (security)
 - Authentication with user ID and password
 - User-group-specific rights
- Signaling system
 - Discrete alarms
 - Analog alarms
 - Freely definable message classes (e.g., status/fault messages) for definition of acknowledgment response and display of message events
 - Message history
- Help texts for process images, messages and variables
- Arithmetic functions
- Limit value monitoring for reliable process control of inputs and outputs
- Indicator light for machine and plant status indication
- Scheduler for global function execution
- Template concept; Creation of screen templates (picture elements configured in the template appear in every screen)
- Simple maintenance and configuration thanks to:
 - backup and restoration of configuration, operating system and firmware on a PC using ProSave
 - configuration download via MPI/PROFIBUS DP or serially via RS485
 - individual contrast settings
 - no batteries are necessary

Configuring

Configuration is performed using the SIMATIC WinCC flexible Compact, Standard or Advanced engineering software, Version 2004 SP1 plus HSP or higher, or with the SIMATIC WinCC (TIA Portal) Comfort or Professional engineering software, V11 or higher.

For more information about engineering software, see HMI software/engineering software SIMATIC WinCC flexible/WinCC (TIA Portal).

Integration

The OP 73 can be connected to:

- SIMATIC S7-200/-300/-400
- SIMATIC WinAC Software/Slot PLC

Note:

For further information, see "System interfaces".

Technical specifications

Product type designation	6AV6 641-0AA11-0AX0 OP 73
Display	
Size	3"
Display type	STN, black/white
Resolution (pixels)	
• Resolution (WxH in pixel)	160 x 48
Backlighting	
• MTBF backlighting (at 25 °C)	about 100,000 hours
Control elements	
Control elements	Membrane keyboard
Function keys, programmable	4 function keys
Connection for mouse/keyboard/barcode reader	- / - / -
Keyboard	
• System keys	8
• Numeric/alphabetical input	Yes / Yes
Supply voltage	
Input voltage	
• permissible range	+20.4 V to +28.8 V DC
• Supply voltage	24 V DC
Input current	
Rated current	0.1 A
Processor	
Processor	ARM
Memory	
Type	Flash
Usable memory for user data	256 KB usable memory for user data
Time of day	
Clock	
• Type	Software clock, no battery backup
Ambient conditions	
Operating temperature	
• Operation (vertical installation)	0 °C to +50 °C
• Operation (max. tilt angle)	0 °C to +40 °C
Storage/transport temperature	
• Transport, storage	-20 °C to +60 °C
Relative humidity	
• max. relative humidity	90 %
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	+/- 80 °

Technical specifications (continued)

Product type designation	6AV6 641-0AA11-0AX0 OP 73
Degree and class of protection	
Front	IP65, NEMA 4x, (when installed)
Rear	IP20
Standards, approvals, certificates	
Certifications	CE, GL, ABS, BV, DNV, LRS, UL, CSA, cULus, C-TICK, NEMA 4x
Operating systems	
Operating system	LINUX
Configuration	
Configuration software	
• Configuration tool	see "Configuration software" from page 2/3
Functionality under WinCC flexible/WinCC (TIA Portal)	
Task planner	Yes
Help system	Yes
Status/control	Not possible
With alarm logging system (incl. buffer and acknowledgment)	
• Number of messages	500
• Bit messages	Yes
• Analog messages	Yes
• Message buffer	Ring buffer (n x 256 entries), non-retentive
Number of process images	
• Process images	500
• Variables	1 000
• Limit values	Yes
• Multiplexing	Yes
Image elements	
• Text objects	1,000 text elements
• Graphic object	Bit maps, icons, icon (full-screen)
• dynamic objects	Bar graphs

Product type designation	6AV6 641-0AA11-0AX0 OP 73
Lists	
• Text lists	150
• Graphic list	0
• Libraries	Yes
Security	
• Number of user groups	50
• Passwords exportable	Yes
• Number of user rights	32
Recording	
• Recording/Printing	-
Fonts	
• Keyboard fonts	US American (English)
Languages	
• Configuration languages	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP / ROK, NL, N, PL, P, RUS, S, CZ / SK, TR, H
• Character sets	WinCC flexible Standard, symbol languages
Transfer (upload/download)	
• Transfer of configuration	MPI/PROFIBUS DP, serial, automatic transfer recognition
Process coupling	
• Connection to controller	see "System interfaces" from page 2/178
Expandability/openness	
• Open Platform Program	No
Dimensions and weight	
Dimensions	
• Front of enclosure (W x H)	154 mm x 84 mm
• Mounting cutout/device depth (W x H)	138 mm x 68 mm / 28.5 mm device depth
Weight	
• Weight	0.25 kg

Operator panels

Panels – 70 series

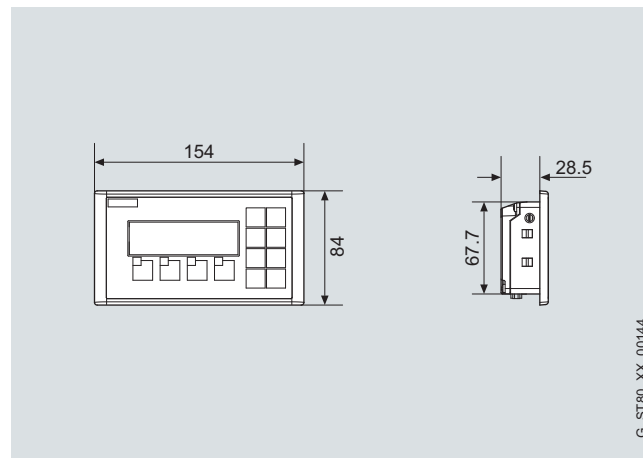
SIMATIC OP 73

Ordering data	Order No.
SIMATIC OP 73 Operator Panel with 3" display, monochrome, including mounting accessories	6AV6 641-0AA11-0AX0
Configuration with SIMATIC WinCC flexible or with SIMATIC WinCC (TIA Portal)	see HMI Software
Documentation (to be ordered separately) User Manual WinCC flexible Compact/Standard/Advanced <ul style="list-style-type: none"> German English French Italian Spanish 	6AV6 691-1AB01-3AA0 6AV6 691-1AB01-3AB0 6AV6 691-1AB01-3AC0 6AV6 691-1AB01-3AD0 6AV6 691-1AB01-3AE0
User Manual WinCC flexible Communication <ul style="list-style-type: none"> German English French Italian Spanish 	6AV6 691-1CA01-3AA0 6AV6 691-1CA01-3AB0 6AV6 691-1CA01-3AC0 6AV6 691-1CA01-3AD0 6AV6 691-1CA01-3AE0
SIMATIC HMI Manual Collection B Electronic documentation, on DVD 5 languages (English, French, German, Italian and Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI	6AV6 691-1SA01-0AX0
Accessories	see HMI accessories

B: Subject to export regulations: AL: N and ECCN: EAR99S

Dimensional drawings

All specifications in mm. Panel cutout see technical specifications.



SIMATIC OP73

More information

Additional information is available on the Internet at:

www.siemens.com/simatic-panels

Note:

Do you require a specific modification or extension to the products described here? Under "Customized products", you can find information about additional and generally available products for the sector, and about the possibilities for customized modification and adaptation.

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Overview



- Compact Operator Panel for operator control and monitoring of machines and plants
- Graphics in a new dimension – small and smart
- Pixel-graphics 4.5" LC display, monochrome
- 23 system keys, 8 freely-configurable and freely-inscribable function keys (4 with LEDs)
- All interfaces (e.g. MPI, PROFIBUS DP) are onboard interfaces
- Together with OP 77B, successor of the successful OP7

Benefits

- High-contrast display for good readability
- Large keys for high operational safety
- Simple handling and configuring
- Integral component of Totally Integrated Automation (TIA): Increases productivity, minimizes the engineering outlay, reduces the lifecycle costs
- Reduction in service and startup costs thanks to maintenance-free design (no battery) and long service life of the backlighting
- Can be used worldwide:
 - 32 languages can be configured (including Asiatic and Cyrillic character sets)
 - Up to 5 languages are selectable online
 - Language-dependent texts and graphics
- Graphic library is available completely with ready-to-use display objects

Application

OP 77A Operator Panels can be used wherever machines and systems are controlled and monitored locally - in production, process and building automation alike. They are used in all types of sectors and applications.

Compatibility with OP7

- Same panel cutout as OP7
- Importing of OP7 configurations from ProTool/Lite, ProTool and ProTool/Pro to WinCC flexible

Migration manual with description of most important differences from OP7 or ProTool

Design

- 4.5" LCD, 160 x 64 pixels, monochrome
- 23 system keys, 8 freely-configurable and freely-inscribable function keys (4 with LEDs)
- Numeric and alphanumeric input facilities
- Compact design with shallow installation depth
- Rugged plastic housing
- The front is resistant to various oils, greases and standard detergents
- Plug-type terminals for connection of a 24 V DC power supply
- RS 485 interface for process links (MPI, PROFIBUS DP up to 1.5 Mbit/s) and for downloading the configuration

Operator panels

Panels – 70 series

SIMATIC OP 77A

Function

- Permanent window and template concept for creating screen templates
- Input/output fields for displaying and changing process parameters
- Function keys are used for directly actuating functions and actions. Up to 16 functions can be configured simultaneously on function keys.
- Graphics can be used as icons instead of text to "label" function keys or buttons. They can also be used as simple on-screen graphics. In the configuration tool, a library is available containing an extensive range of graphics and a wide variety of objects. All editors with an OLE interface can be used as graphic editors (such as PaintShop, Designer or CorelDraw).
- Fixed texts for labeling function keys, process images and process values in any character size
- Bars are used for the graphical display of dynamic values
- Display selection from the PLC supports operator prompting from the PLC
- Language selection during runtime
 - 5 online languages, 32 configuration languages incl. Asian and Cyrillic character sets
 - Language-dependent texts and graphics
- User administration (security) according to the requirements of various sectors
 - Authentication with user ID and password
 - User-group-specific rights
- Signaling system
 - Freely definable message classes (e.g., status/fault messages) for definition of acknowledgment response and display of message events
 - Message history
- Recipe management
- Help texts for process images, messages and variables
- Arithmetic functions
- Limit value monitoring for reliable process control of inputs and outputs
- Indicator light for machine and plant status indication
- Scheduler for cyclic function execution
- Template concept; Picture elements configured in the template appear in every picture
- Simple maintenance and configuration thanks to:
 - Backup and restoration of the configuration, operating system, data records and firmware on a PC using ProSave
 - Configuration download/upload via MPI/PROFIBUS DP and serially via RS 485
 - Individual contrast settings
 - No batteries are necessary

Configuration

Configuration is performed using the SIMATIC WinCC flexible Compact, Standard or Advanced configuration software, Version 2004 SP1 plus HSP or higher, or with the SIMATIC WinCC (TIA Portal) Comfort or Professional engineering software, V11 or higher.

For more information about engineering software, see HMI software/engineering software SIMATIC WinCC flexible/WinCC (TIA Portal).

Integration

The OP 77A can be connected to:

- SIMATIC S7-200/-300/-400
- SIMATIC WinAC Software/Slot PLC
- Non-Siemens controllers:
 - Allen Bradley
 - Mitsubishi
 - Modicon
 - Omron

Note:

For further information, see "System interfaces".

Technical specifications

Product type designation	6AV6 641-0BA11-0AX1 OP 77A
Display	
Size	4.5"
Display type	STN, black/white
Resolution (pixels)	
• Resolution (WxH in pixel)	160 x 64
Backlighting	
• MTBF backlighting (at 25 °C)	about 100,000 hours
Control elements	
Control elements	Membrane keyboard
Function keys, programmable	8 function keys, 4 with LEDs
Connection for mouse/keyboard/barcode reader	- / - / -
Keyboard	
• System keys	23
• Numeric/alphabetical input	Yes / Yes
Supply voltage	
Input voltage	
• permissible range	+20.4 V to +28.8 V DC
• Supply voltage	24 V DC
Input current	
Rated current	0.2 A
Processor	
Processor	ARM
Memory	
Type	Flash / RAM
Usable memory for user data	256 KB usable memory for user data
Type of output	
LED colors	Green
Time of day	
Clock	
• Type	Software clock, no battery backup
Interfaces	
USB port	No
PC card slot	No
CF card slot	No
Multi Media Card slot	No
Industrial Ethernet	
• Industrial Ethernet interface	No

Technical specifications (continued)

Product type designation	6AV6 641-0BA11-0AX1 OP 77A
Ambient conditions	
Operating temperature	
• Operation (vertical installation)	0 °C to +50 °C
• Operation (max. tilt angle)	0 °C to +40 °C
Storage/transport temperature	
• Transport, storage	-20 °C to +60 °C
Relative humidity	
• max. relative humidity	90 %
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	+/- 80 °
Degree and class of protection	
Front	IP65, NEMA 4x, NEMA 12 (when installed)
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
Operating systems	
Operating system	LINUX
Configuration	
Configuration software	
• Configuration tool	see "Configuration overview" from page 2/3
Functionality under WinCC flexible/WinCC (TIA Portal)	
Task planner	Yes
Help system	Yes
Status/control	Not possible
With alarm logging system (incl. buffer and acknowledgment)	
• Number of messages	1 000
• Bit messages	Yes
• Analog messages	Yes
• Message buffer	Ring buffer (n x 256 entries), non-retentive
Recipes	
• Recipes	5
• Data records per recipe	20
• Entries per data record	20
• Recipe memory	32 KB integrated Flash

Product type designation	6AV6 641-0BA11-0AX1 OP 77A
Number of process images	
• Process images	500
• Variables	1 000
• Limit values	Yes
• Multiplexing	Yes
Image elements	
• Text objects	1,000 text elements
• Graphic object	Bit maps, icons, icon (full-screen)
• dynamic objects	Bar graphs
Lists	
• Text lists	300
• Graphic list	0
• Libraries	Yes
Security	
• Number of user groups	50
• Passwords exportable	Yes
• Number of user rights	32
Recording	
• Recording/Printing	-
Fonts	
• Keyboard fonts	US American (English)
Languages	
• Configuration languages	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP / ROK, NL, N, PL, P, RUS, S, CZ / SK, TR, H
• Character sets	WinCC flexible Standard, symbol languages
Transfer (upload/download)	
• Transfer of configuration	MPI/PROFIBUS DP, serial, automatic transfer recognition
Process coupling	
• Connection to controller	see "System interfaces" from page 2/178
Expandability/openness	
• Open Platform Program	No
Dimensions and weight	
Dimensions	
• Front of enclosure (W x H)	150 mm x 186 mm
• Mounting cutout/device depth (W x H)	135 mm x 171 mm / 38.5 mm device depth
Weight	
• Weight	0.5 kg

Operator panels

Panels – 70 series

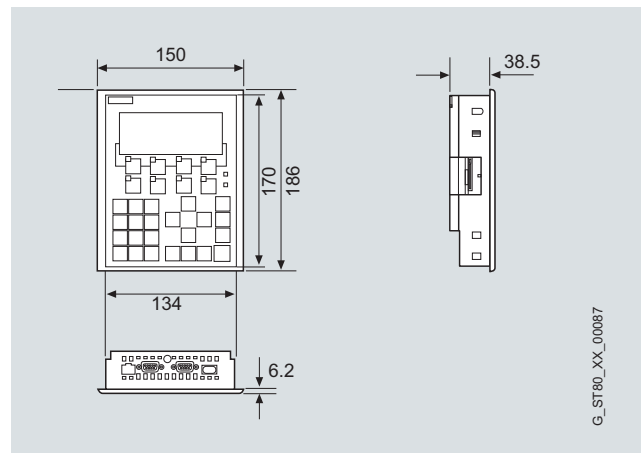
SIMATIC OP 77A

Ordering data	Order No.
SIMATIC OP 77A Operator Panel with 4.5" display, monochrome, including mounting accessories	6AV6 641-0BA11-0AX1
Configuration with SIMATIC WinCC flexible or with SIMATIC WinCC (TIA Portal)	see HMI Software
Documentation (to be ordered separately) User Manual WinCC flexible Compact/Standard/Advanced <ul style="list-style-type: none"> • German • English • French • Italian • Spanish 	6AV6 691-1AB01-3AA0 6AV6 691-1AB01-3AB0 6AV6 691-1AB01-3AC0 6AV6 691-1AB01-3AD0 6AV6 691-1AB01-3AE0
User Manual WinCC flexible Communication <ul style="list-style-type: none"> • German • English • French • Italian • Spanish 	6AV6 691-1CA01-3AA0 6AV6 691-1CA01-3AB0 6AV6 691-1CA01-3AC0 6AV6 691-1CA01-3AD0 6AV6 691-1CA01-3AE0
SIMATIC HMI Manual Collection B Electronic documentation, on DVD 5 languages (English, French, German, Italian and Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI	6AV6 691-1SA01-0AX0
Accessories	see HMI accessories

B: Subject to export regulations: AL: N and ECCN: EAR99S

Dimensional drawings

All specifications in mm. Panel cutout see technical specifications.



OP 77A

More information

Additional information is available on the Internet at:

www.siemens.com/simatic-panels

Note:

Do you require a specific modification or extension to the products described here? Under "Customized products", you can find information about additional and generally available products for the sector, and about the possibilities for customized modification and adaptation.

Overview



- Compact Operator Panel for operator control and monitoring of machines and plants
- Graphics in a new dimension – small and smart
- Pixel-graphics 4,5" LCD, monochrome
- 23 system keys, 8 freely-configurable and freely-inscribable function keys (4 with LEDs)
- All interfaces (e.g. MPI, PROFIBUS DP) are onboard interfaces
- Non-Siemens PLCs can be connected using easy-to-use drivers
- Combined with OP 77A successor of the successful OP 7

Benefits

- High-contrast display for good legibility
- Large keys for improved operational reliability
- Easy to handle and configure
- Integral component of Totally Integrated Automation (TIA): Increased productivity, minimum engineering overhead, reduction in life-cycle costs
- Reduction of service and commissioning costs through:
 - Remote downloading of the configuration with automatic transfer recognition even via WAN (Wide Area Network)
 - Maintenance-free design (no battery) and long service life of the backlighting
- Can be used worldwide:
 - 32 languages can be configured (incl. Asian and Cyrillic character sets)
 - Up to 5 languages can be switched online
 - Language-dependent texts and graphics
- Graphic library available with off-the-shelf picture objects
- Standard hardware and software interfaces for increasing flexibility:
 - Optional SD Card, can be used for recipe data sets and for backup of configuration/system data
- Integrated printer port (USB)

Application

OP 77B Operator Panels can be used wherever machines and systems are controlled and monitored locally - in production, process and building automation alike. They may be used in all kinds of industries and applications.

Compatibility with OP7

- Same panel cutout as OP7
- Importing of OP7 configurations from ProTool/Lite, ProTool and ProTool/Pro to WinCC flexible

Migration manual with description of most important differences from OP7 or ProTool

Design

- 4.5" LC display, 160 x 64 pixels, monochromatic
- 23 system keys, 8 freely-configurable and freely-inscribable function keys (4 with LEDs)
- Numeric and alphanumeric input options
- Compact design with low mounting depth
- Rugged plastic enclosure
- The front is resistant to various oils, greases and standard detergents
- Plug-in terminals for 24 V DC power supply
- Interfaces:
 - RS 485/422 interface for process connections (MPI, PROFIBUS DP up to 12 Mbit/s)
 - RS 232 interface for process connections
 - USB printer interface
- Slot for Multi Media Card
- Slot for SD Card

Operator panels

Panels – 70 series

SIMATIC OP 77B

Function

- Permanent window and template concept for creating screen templates
- Input/output fields for displaying and changing process parameters
- Function keys for directly actuating functions and actions. Up to 16 functions can be configured simultaneously on function keys. They can be used directly as PROFIBUS DP input I/Os.
- Graphics can be used as icons instead of text to "label" function keys or buttons. They can also be used as simple on-screen graphics. In the configuration tool, a library is available containing an extensive range of graphics and a wide variety of objects. All editors with an OLE interface can be used as graphic editors (such as PaintShop, Designer or CorelDraw).
- Fixed texts for labeling function keys, process images and process values in any character size
- Bars are used for the graphical display of dynamic values
- Display selection from the PLC supports operator prompting from the PLC
- Language selection during runtime
 - 5 online languages, 32 configuration languages incl. Asian and Cyrillic character sets
 - Language-dependent texts and graphics
- User administration (security) according to the requirements of the various sectors
 - Authentication with user ID and password
 - User-group-specific rights
- Signaling system
 - Analog alarms
 - Bit messages as well as the Alarm S message frame procedure for SIMATIC S7
 - Freely definable message classes (e. g. status/fault messages) for definition of acknowledgment response and display of message events
 - Message history
- Recipe management
 - With additional data storage (on optional multi-media card)
 - Storage of recipe data in standard Windows format (CSV)
 - External processing using standard tools such as Excel and Access is possible
- Help texts for process images, messages and variables
- Arithmetic functions
- Limit value monitoring for reliable process control of inputs and outputs
- Indicator light for machine and plant status indication
- Scheduler (timer) for cyclic function execution
- Print hard copy, messages and user-configurable reports
- Template concept
Picture elements configured in the template appear in every picture

- User-friendly maintenance and configuration thanks to:
 - Backup and restoring of the configuration, operating system, data records and firmware on the optional Multi Media Card
 - Backup and restoration of the configuration, operating system, data records and firmware on a PC using ProSave
 - Configuration download/upload via MPI/PROFIBUS DP/RS 232/USB
 - Automatic transfer identification
 - Individual contrast settings
 - Configuration simulation directly on the configuration computer
 - No batteries are necessary

Configuration

Configuration is performed using the SIMATIC WinCC flexible Compact, Standard or Advanced configuration software, Version 2004 or higher, or with the SIMATIC WinCC Comfort or Professional engineering software, V11 or higher.

For more information about engineering software, see HMI software/engineering software SIMATIC WinCC flexible/WinCC.

Integration

The OP 77B can be connected to:

- SIMATIC S7-200/-300/-400
- SIMATIC WinAC Software/Slot PLC
- SIMATIC S5
- SIMATIC 505
- Non-Siemens controllers:
 - Allen Bradley
 - Mitsubishi
 - LG GLOFA GM
 - Modicon
 - GE-Fanuc
 - Omron

Note:

For further information, see "System interfaces".

Technical specifications

Product type designation	6AV6 641-0CA01-0AX1 OP 77B
Display	
Size	4.5"
Display type	STN, black/white
Resolution (pixels)	
• Resolution (WxH in pixel)	160 x 64
Backlighting	
• MTBF backlighting (at 25 °C)	about 100,000 hours
Control elements	
Control elements	Membrane keyboard
Function keys, programmable	8 function keys, 4 with LEDs
Connection for mouse/keyboard/barcode reader	- / - / -
Keyboard	
• System keys	23
• Numeric/alphabetical input	Yes / Yes
Supply voltage	
Input voltage	
• permissible range	+20.4 V to +28.8 V DC
• Supply voltage	24 V DC
Input current	
Rated current	0.2 A
Processor	
Processor	ARM
Memory	
Type	Flash / RAM
Usable memory for user data	1000 KB usable memory for user data
Type of output	
LED colors	Green
Time of day	
Clock	
• Type	Software clock, no battery backup
Interfaces	
USB port	1 x USB
Multimedia card	combined
Industrial Ethernet	
• Industrial Ethernet interface	No
Ambient conditions	
Operating temperature	
• Operation (vertical installation)	0 °C to +50 °C
• Operation (max. tilt angle)	0 °C to +40 °C
Storage/transport temperature	
• Transport, storage	-20 °C to +60 °C
Relative humidity	
• max. relative humidity	90 %
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	+/- 80 °

Product type designation	6AV6 641-0CA01-0AX1 OP 77B
Degree and class of protection	
Front	IP65, NEMA 4x, NEMA 12 (when installed)
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
Operating systems	
Operating system	Windows CE
Configuration	
Configuration software	
• Configuration tool	see "Configuration overview" from page 2/3
Functionality under WinCC flexible/WinCC (TIA portal)	
Task planner	Yes
Help system	Yes
With alarm logging system (incl. buffer and acknowledgment)	
• Number of messages	1 000
• Bit messages	Yes
• Analog messages	Yes
• Message buffer	Ring buffer (n x 256 entries), non-retentive
Recipes	
• Recipes	100
• Data records per recipe	200
• Entries per data record	200
• Recipe memory	32 KB integrated Flash, expandable
Number of process images	
• Process images	500
• Variables	1 000
• Limit values	Yes
• Multiplexing	Yes
Image elements	
• Text objects	2,500 text elements
• Graphic object	Bit maps, icons, icon (full-screen)
• dynamic objects	Bar graphs
Lists	
• Text lists	300
• Graphic list	0
• Libraries	Yes

Operator panels

Panels – 70 series

SIMATIC OP 77B

Technical specifications (continued)

Product type designation	6AV6 641-0CA01-0AX1 OP 77B
Security	
• Number of user groups	50
• Passwords exportable	Yes
• Number of user rights	32
Data carrier support	
• Multimedia Card	Yes
Recording	
• Recording/Printing	Alarms, report (shift report), hardcopy
• Printer driver	ESC/P2, PCL3/PCL6
Fonts	
• Keyboard fonts	US American (English)
Languages	
• Configuration languages	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP / ROK, NL, N, PL, P, RUS, S, CZ / SK, TR, H
• Character sets	Tahoma, WinCC flexible Standard, symbol languages, all freely scalable
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	see "System interfaces" from page 2/178
Expandability/openness	
• Open Platform Program	No
I/O	
I/O devices	Printer
Dimensions and weight	
Dimensions	
• Front of enclosure (W x H)	150 mm x 186 mm
• Mounting cutout/device depth (W x H)	135 mm x 171 mm / 38.5 mm device depth
Weight	
• Weight	0.5 kg

Ordering data

Order No.

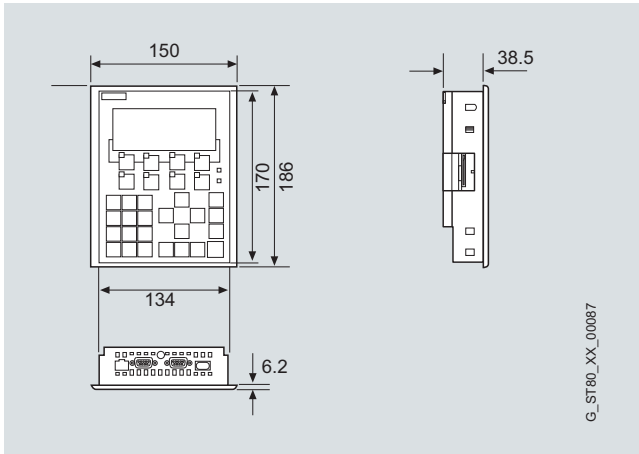
SIMATIC OP 77B	E	6AV6 641-0CA01-0AX1
Operator Panel with 4.5" display, monochrome, including mounting accessories		
Configuration		
with SIMATIC WinCC flexible or with SIMATIC WinCC (TIA Portal)		see HMI Software
Documentation (to be ordered separately)		
User Manual WinCC flexible Compact/Standard/Advanced		6AV6 691-1AB01-3AA0 6AV6 691-1AB01-3AB0 6AV6 691-1AB01-3AC0 6AV6 691-1AB01-3AD0 6AV6 691-1AB01-3AE0
• German		
• English		
• French		
• Italian		
• Spanish		
User Manual WinCC flexible Communication		6AV6 691-1CA01-3AA0 6AV6 691-1CA01-3AB0 6AV6 691-1CA01-3AC0 6AV6 691-1CA01-3AD0 6AV6 691-1CA01-3AE0
• German		
• English		
• French		
• Italian		
• Spanish		
SIMATIC HMI Manual Collection	B	6AV6 691-1SA01-0AX0
Electronic documentation, on DVD		
5 languages (English, French, German, Italian and Spanish); contains: all currently available user manuals, manuals and communi- cation manuals for SIMATIC HMI		
Accessories		see HMI accessories

B: Subject to export regulations: AL: N and ECCN: EAR99S

E: Subject to export regulations: AL: 91999 and ECCN: 5D002ENCU

Dimensional drawings

All specifications in mm. Panel cutout see technical specifications.



OP 77B

More information

Additional information is available on the Internet at:

www.siemens.com/simatic-panels

Note:

Do you require a specific modification or extension to the products described here? Under "Customized products", you can find information about additional and generally available products for the sector, and about the possibilities for customized modification and adaptation.