SIEMENS

Data sheet 6AV6641-0BA11-0AX1



SIMATIC Operator Panel OP 77A LC display backlit, 4.5" display graphics-capable, MPI-/PROFIBUS-DP interface to 1.5 MB, configurable from WinCC flexible 2004 Compact HSP contains open source software, which is provided free of charge. see enclosed CD

General information	
Customer-specific configuration	No
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	Yes

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— Number of function keys	8
— Number of function keys with LEDs	4
• System keys	Yes
— Number of system keys	23
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes
• Multi-key operation	Yes
Touch operation	
• Design as touch screen	No
Connection type	
• Type of 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^2t	0.5 $A^2 \cdot s$
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	
• Type	Software clock, no battery backup
• 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

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Number of USB interfaces	0
PC card slot	No
CF card slot	No
Multimedia card/SD card slot	No
Industrial Ethernet	
• Industrial Ethernet interface	No
Protocols	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	Yes
Protocols (Ethernet)	
• TCP/IP	No
Further protocols	
• EtherNet/IP	No
• MODBUS	No
• other bus systems	Yes
Degree and class of protection	
IP (at the front)	IP65
NEMA (front)	NEMA 4x, NEMA 12 (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 (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	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• FM Class I Division 2	Yes
Ambient conditions	
Ambient temperature during operation	

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

Operating systems	
pre-installed operating system	LINUX

Configuration	
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	No
Configuration software	
• Configuration tool	WinCC flexible Compact Version 2004 SP 1 and higher; HSP OP 77 (to be ordered separately)
• STEP 7 Basic (TIA Portal)	No
• STEP 7 Professional (TIA Portal)	No
• WinCC flexible Compact	Yes
• WinCC flexible Standard	Yes
• WinCC flexible Advanced	Yes
• WinCC Basic (TIA Portal)	No
• WinCC Comfort (TIA Portal)	Yes
• WinCC Advanced (TIA Portal)	Yes
• WinCC Professional (TIA Portal)	Yes

Languages	
Online languages	
• Number of online/runtime languages	5
Project languages	
• Languages per project	32

Functionality under WinCC (TIA Portal)	
Libraries	Yes
Task planner	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

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— Number of bit messages	1 000
• Analog messages	Yes
— Number of analog messages	1 000
• 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
Recipe management	
• 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

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• 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
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
• 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

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• 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

Peripherals/Options	
Additional software components loadable	Yes

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: 04/25/2018

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