SIEMENS

Data sheet 6AV6641-0CA01-0AX1



Figure similar

*** spare part *** SIMATIC Operator Panel OP 77B LC display backlit, 4.5 display graphics-capable, MPI/PROFIBUS DP interface up to 12 MB, printer/USB interface, slot for MMC, configurable with WinCC flexible 2004 Compact

General information	
Product type designation	OP 77B
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	
● Membrane keyboard	
— user-definable label membrane keys	Yes
● Function keys	Yes
— Number of function keys	8
— Number of function keys with LEDs	4
● System keys	Yes
— Number of system keys	23
● Numeric keyboard	Yes
● alphanumeric keyboard	Yes
● hexadecimal keyboard	Yes
● Multi-key operation	Yes
Touch operation	
● Design as touch screen	No; without
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	

© Copyright Hmitop

Current consumption (rated value)	0.2 A
Starting current inrush I²t	0.5 A²·s
Processor	
Processor type	ARM
Storage	
Type of memory	Flash / RAM
Memory available for user data	1 000 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	1x RS 232, 1x RS 422, 1x RS 485 (max. 12 Mbit/s)
Number of industrial Ethernet interfaces	0
Number of RS 485 interfaces	1
Number of RS 422 interfaces	1
Number of USB interfaces	1
Multimedia card/SD card slot	combined
With software interfaces	No
Protocols	
Supports protocol for PROFINET IO	No
PROFIsafe	No
PROFIBUS	Yes
EtherNet/IP	No
Protocols (Ethernet)	
● TCP/IP	No
Further protocols	
● MODBUS	Yes
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	NEMA 4x, NEMA 12 (when installed)
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
EAC (formerly Gost-R)	No
Suitable for safety functions	No
Use in hazardous areas	
● ATEX Zone 2	No; certificate no longer available as of 1 October 2020
● ATEX Zone 22	No; certificate no longer available as of 1 October 2020
● FM Class I Division 2	Yes
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
Ambient conditions	
Ambient temperature during operation	
● min.	0 °C

© Copyright Hmitop

● 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	Windows CE
Configuration	
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes
Process value default (input) possible	Yes
Recipe management	Yes
Configuration software	
● Configuration tool	WinCC flexible Compact Version 2004 or higher (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
— Number of bit messages	1 000
● Analog messages	Yes
— Number of analog messages	1 000
● Telegram message procedure Alarm S	Yes
● System messages HMI	Yes
● System messages PLC	Yes
● System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...)	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	100
● Data records per recipe	200
● Entries per data record	200
● Recipe memory	32 KB integrated Flash, expandable
Variables	

© Copyright Hmitop

● Number of variables per device	1 000
● Number of variables per screen	30
● Limit values	Yes
● Multiplexing	Yes
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	2 500 text elements
● Number of I/O fields per image	30
● Number of date/time fields	0
● Index of screen context	No
● Return	Yes
● Graphics object	Bit maps, icons, icon (full-screen)
— Icons	1 000
— Icon (full screen)	100
Complex image objects	
● dynamic objects	Bar graphs
● Bar graphs	
— Number of bars per chart	5
● Pointer instruments	
— Number of analog indicators per image	0
● 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
● Number of password fields	0
● Number of visible switches per project	
— visible switches per image	0
— hidden switches per image	0
● Number of status switches per project	
— Number of status switches per image	0
● Number of selector switches per project	
— Selector switches per image	0
● Number of decade switches per project	
— Decade switches per image	0
● Number of signal lamps per project	
— Signal lamps per image	0
Attributes for dynamic objects	
● Color change	Yes
● 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
● Number of graphic lists per image	0
● Number of entries per graphics list	0
Security	
● Number of user groups	50
● Number of user rights	32
● Password export/import	Yes
Logging through printer	
● Recording/Printing	Alarms, report (shift report), hardcopy
Transfer (upload/download)	

© Copyright Hmitop

● Transfer of configuration	MPI/PROFIBUS DP, serial, USB, by means of external storage medium, automatic transfer recognition
Process coupling	
● Connection to controller	S5, S7-200, S7-300/400, TI 505, Win AC, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), OMRON (LINK/Multilink), Modicon (Modbus), further non-Siemens drivers, see chapter "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	Yes
— serial	Yes
— PROFIBUS DP	Yes
● TI 505	Yes
● Allen Bradley (DF1)	Yes
● Allen Bradley (DF485)	Yes
● Mitsubishi (FX)	Yes
● Mitsubishi (MP4)	Yes
● Telemecanique (ADJUST)	No
● Telemecanique (Uni-Telway)	Yes; Only in combination with WinCC flexible
● OMRON (Host Link)	Yes
● Modicon (Modbus RTU)	Yes
● GE-Fanuc (SNP)	Yes
Functions	
● Key repeat	Yes
● TAB sequence	Yes
● Calculating functions	Yes
● Animate	Yes
● Menu tree editor	Yes
● Unit switchover	No
Service tools/configuration aids	
● Clean screen	No
● Touch calibration	No
● Backup/Restore manually	Yes
● Simulation	Yes
● Device switchover	Yes
● Delta transfer	Yes
● Monitoring function for battery and memory	No
● Trace (operation archive)	No
Expandability/openness	
● Open Platform Program	No
Peripherals/Options	
Peripherals	Printer
SIMATIC HMI MM memory card: Multi Media Card	Yes
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
mounting depth	38.5 mm
Weights	
Weight (without packaging)	0.5 kg

© Copyright Hmitop

Other	
free hotline	Yes

Classifications

	Version	Classification
eClass	16	27-33-02-01
eClass	14	27-33-02-01
eClass	12	27-33-02-01
eClass	9.1	27-33-02-01
eClass	9	27-33-02-01
eClass	8	27-24-23-02
eClass	7.1	27-24-23-02
eClass	6	27-24-23-02
ETIM	10	EC001412
ETIM	9	EC001412
ETIM	8	EC001412
ETIM	7	EC001412
IDEA	4	6607
UNSPSC	15	43-21-15-06

Approvals / Certificates

General Product Approval

Manufacturer Declaration










General Product Approval	EMV	For use in hazardous locations			Maritime application
				FM	

Maritime application

NK / Nippon Kaiji Kyokai





last modified: 4/4/2025

© Copyright Hmitop