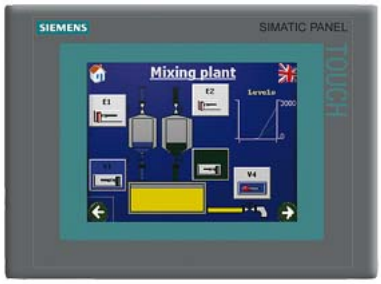
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Data sheet 6AV6643-0AA01-1AX0

*** spare part *** SIMATIC TP 277 6" touch panel 5.7" TFT display 4 MB configuration memory, configurable with WinCC flexible 2005 Standard



General information	
Product type designation	TP277
Customer-specific configuration	Yes
Display	
Design of display	TFT
Screen diagonal	5.7 in
Color display	Yes
Number of colors	256
Resolution (pixels)	
● Horizontal image resolution	320 pixel
● Vertical image resolution	240 pixel
Backlighting	
● MTBF backlighting (at 25 °C)	60 000 h
Control elements	
Control elements	Touch screen
Keyboard	
● Function keys	
— Number of function keys	0
— Number of function keys with LEDs	0
● System keys	No
— Number of system keys	0
● Numeric keyboard	Yes
● alphanumeric keyboard	Yes
● hexadecimal keyboard	Yes
Touch operation	
● Design as touch screen	Yes; analog, resistive
Connection type	
● Type of connection for mouse/keyboard/barcode reader	USB / USB / USB
Installation type/mounting	
Mounting position	vertical
Supply voltage	
Type of supply voltage	DC
Processor	
Processor type	RISC 32 bit
Storage	
Type of memory	Flash / RAM
Memory available for user data	4 Mbyte
Capacity of main memory, max.	64 Mbyte
Time of day	

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Clock	
● Type	Software clock, synchronizable, no battery backup
● retentive	No
● synchronizable	Yes
Interfaces	
Interfaces/bus type	1x RS 422, 1x RS 485, 1x Ethernet (RJ45)
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	1
Number of RS 422 interfaces	1
Number of USB interfaces	1; Up to 1 GB
Multimedia card/SD card slot	1x Multimedia Card slot, up to 128 MB
With software interfaces	No
Protocols	
Supports protocol for PROFINET IO	Yes
PROFIsafe	No
PROFIBUS	Yes
EtherNet/IP	No
Protocols (Ethernet)	
● TCP/IP	Yes
Further protocols	
● MODBUS	Yes
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	NEMA 4x (when installed)
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
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
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.	80 %
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 Standard Version 2005 SP1 or higher (to be ordered separately)
● STEP 7 Basic (TIA Portal)	No
● STEP 7 Professional (TIA Portal)	No
● WinCC flexible Compact	No
● WinCC flexible Standard	Yes
● WinCC flexible Advanced	Yes
● WinCC Basic (TIA Portal)	No
● WinCC Comfort (TIA Portal)	Yes

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● WinCC Advanced (TIA Portal)	Yes
● WinCC Professional (TIA Portal)	Yes
Languages	
Online languages	
● Number of online/runtime languages	16
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	80
Message system	
● Number of alarm classes	32
● Number of messages	4 000
● Bit messages	Yes
— Number of bit messages	4 000
● Analog messages	Yes
— Number of analog messages	4 000
● System messages HMI	Yes
● System messages PLC	Yes
● System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...)	Yes
● Lines	1
● Number of characters per message	80
● Number of process values per message	8
● Acknowledgment groups	
— Number of acknowledgement groups	Yes
● Message indicator	Yes
● First/last value	Yes
Recipe management	
● Number of recipes	300
● Data records per recipe	500
● Entries per data record	1 000
● Recipe memory	64 KB integrated Flash, expandable (using optional memory card)
Variables	
● Number of variables per device	2 048
● Number of variables per screen	200
● Number of variables	1 000
● Type Date & Time	2 048
● Limit values	Yes
● Multiplexing	Yes
● Structures	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	10 000 text elements
● Number of I/O fields per image	200
● Number of date/time fields	200
● Return	Yes
● Graphics object	Bit maps, icons, vector graphics
— Icons	1 000
Complex image objects	
● Status/control	With SIMATIC S7
● dynamic objects	Diagrams, bar graphs, sliders, analog display, invisible buttons

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— Number of objects per project	1 000
— Number of curve diagrams per image	10
● Methods	Trend / profile
● Bar graphs	
— Number of bars per chart	10
● Sliders	
— Number of slides per image	10
● Pointer instruments	
— Number of analog indicators per image	10
● Limit value lines	Yes
● Number of alphanumerical fields	300
— alphanumeric fields per image	200
● Number of numerical fields	2 048
— numerical fields per image	200
● Number of password fields	2 048
● Number of visible switches per project	200
— visible switches per image	200
— hidden switches per image	200
● Number of status switches per project	200
— Number of status switches per image	200
● Number of selector switches per project	200
— Selector switches per image	200
● Number of decade switches per project	200
— Decade switches per image	200
● Number of signal lamps per project	200
— Signal lamps per image	200
Attributes for dynamic objects	
● Color change	Yes
● X/Y movement	Yes
● Hide	Yes
Lists	
● Number of text lists per project	500
● Number of text lists per image	200
● Number of entries per text list	256
● Number of graphics lists per project	400
● Number of graphic lists per image	200
● Number of entries per graphics list	256
Archiving	
● Number of archives per device	20
● Number of measuring points per project	20
● Number of entries per archive	10 000
● Message archive	Yes
● Process value archive	Yes
● Archiving methods	
— Sequential archive	Yes
— Short-term archive	Yes
● Memory location	MultiMediaCard
— Ethernet	Yes
● Data storage format	
— CSV	Yes
● Online evaluation	
— using trend curves	Yes
Filters	
● cyclic	Yes
● Tolerance	Yes
● Change	Yes
Security	
● Number of user groups	50
● Number of user rights	32

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● Password export/import	Yes
Logging through printer	
● Recording/Printing	Alarms, report (shift report), color print, hardcopy
Transfer (upload/download)	
● Transfer of configuration	MPI/PROFIBUS DP, USB, Ethernet, automatic transfer recognition
Process coupling	
● Connection to controller	S5, S7-200, S7- 300/400, TI 505, SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multilink), Modicon (Modbus), see section on "System interfaces"
● S7-1200	Yes
● S7-200	Yes
— PPI (point-to-point)	Yes
— PPI network	Yes
— MPI	Yes
— PROFIBUS DP	Yes
— Ethernet	Yes
● S7-300/400	Yes
— MPI	Yes
— PROFIBUS DP	Yes
— PROFINET	Yes
● 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)	Yes
● Telemecanique (Uni-Telway)	Yes
● OMRON (Host Link)	Yes
● Modicon (Modbus RTU)	Yes
● GE-Fanuc (SNP)	Yes
Functions	
● TAB sequence	Yes
● Calculating functions	Yes
● Animate	Yes
Service tools/configuration aids	
● Clean screen	Yes
● Touch calibration	Yes
● Backup/Restore manually	Yes
● Simulation	Yes
● Device switchover	Yes
● Delta transfer	Yes
Expandability/openness	
● Open Platform Program	Yes
Peripherals/Options	
Peripherals	Printer, barcode reader
SIMATIC HMI MM memory card: Multi Media Card	Yes
Additional software components loadable	Yes
Dimensions	
Width of the housing front	212 mm
Height of housing front	156 mm
Mounting cutout, width	197 mm
Mounting cutout, height	141 mm
mounting depth	45 mm
Weights	
Weight (without packaging)	0.78 kg

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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					EMV
Manufacturer Declaration	CE EG-Konf.	RCM	RCM	EAC	RCM

For use in hazardous locations			Radio Equipment Type Approval Certificate	Maritime application	
FM	ATEX	FM	Miscellaneous	ABS	DNV

Maritime application		
NK / Nippon Kaiji Kyokai	PRS	RMRS

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