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Data sheet 6AV6648-0CE11-3AX0

	spare part SIMATIC HMI Smart 1000 IE V3, Smart Panel, touch operation, 10" widescreen TFT display, 65536 colors, RS-422/485 interface, Ethernet (RJ45) interface, host USB type A, RTC support, with CE certificate, configurable as of WinCC flexible SMART; contains open source software, which is provided free of charge see enclosed CD
General information	
Product type designation	1000 IE V3
Display	
Design of display	TFT
Screen diagonal	10.1 in
Display width	222.7 mm
Display height	125.3 mm
Number of colors	65 536
Resolution (pixels)	
● Horizontal image resolution	1 024 pixel
● Vertical image resolution	600 pixel
Backlighting	
● MTBF backlighting (at 25 °C)	15 000 h
● Backlight dimmable	No
Control elements	
Keyboard	
● Function keys	
— Number of function keys	0
— Number of function keys with LEDs	0
● Keys with LED	No
● System keys	No
● Numeric keyboard	Yes; Onscreen keyboard
● alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
● Design as touch screen	Yes
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption (rated value)	230 mA
Current consumption, max.	370 mA
Starting current inrush I²t	0.1 A²·s
Processor	
Processor type	ARM, 600 MHz
Storage	
Flash	Yes
RAM	Yes
Type of output	
Acoustics	
● Buzzer	Yes

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● Speaker	No
Time of day	
Clock	
● Hardware clock (real-time)	Yes
● Software clock	Yes
● retentive	Yes
● synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	1; together with RS 422
Number of RS 422 interfaces	1; together with RS 485
Number of RS 232 interfaces	0
Number of USB interfaces	1
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	0
Number of SD card slots	0
Industrial Ethernet	
● Industrial Ethernet status LED	2
Protocols	
PROFINET	No
Supports protocol for PROFINET IO	No
IRT	No
PROFIBUS	No
EtherNet/IP	Yes
MPI	No
Protocols (Ethernet)	
● TCP/IP	Yes
● DHCP	Yes
● SNMP	No
● DCP	No
● LLDP	No
WEB characteristics	
● HTTP	No
● HTML	No
Redundancy mode	
Media redundancy	
— MRP	No
Further protocols	
● CAN	No
● MODBUS	Yes
Interrupts/diagnostics/status information	
Diagnoses	
● Diagnostic information readable	No
EMC	
Emission of radio interference acc. to EN 55 011	
● Limit class A, for use in industrial areas	Yes
● Limit class B, for use in residential areas	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
● Enclosure Type 4 at the front	No
● Enclosure Type 4x at the front	No
Standards, approvals, certificates	
CE mark	Yes
cULus	No
Marine approval	

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● Germanischer Lloyd (GL)	No
● American Bureau of Shipping (ABS)	No
● Bureau Veritas (BV)	No
● Det Norske Veritas (DNV)	No
● Lloyds Register of Shipping (LRS)	No
● Nippon Kaiji Kyokai (Class NK)	No
● Polski Rejestr Statkow (PRS)	No
Ambient conditions	
Ambient temperature during operation	
Operation (vertical installation)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	50 °C
Operation (max. tilt angle)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	40 °C
Operation (vertical installation, portrait format)	
— For vertical installation, min.	0 °C
— For vertical installation, max.	40 °C
Operation (max. tilt angle, portrait format)	
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, max.	35 °C
Ambient temperature during storage/transportation	
● min.	-20 °C
● max.	60 °C
Relative humidity	
● Operation, max.	90 %; at <40 °C (no condensation)
Operating systems	
proprietary	Yes
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	
● WinCC flexible Standard	Yes; WinCC flexible Smart V3
Languages	
Online languages	
● Number of online/runtime languages	5
Project languages	
● Languages per project	32
Functionality under WinCC (TIA Portal)	
Libraries	Yes
Number of Visual Basic Scripts	No
Task planner	Yes
Help system	Yes
● Number of characters per info text	320
Message system	
● Number of alarm classes	32
● Bit messages	
— Number of bit messages	400
● Analog messages	
— Number of analog messages	20
● System messages HMI	Yes
● Number of characters per message	80
● Number of process values per message	8
● Message indicator	Yes
● Message buffer	Ring buffer (n x 256 entries), retentive, maintenance-free
— Number of entries	256

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— Circulating buffer	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe management	
● Number of recipes	10
● Data records per recipe	100
● Entries per data record	50
● Size of internal recipe memory	128 kbyte
● Recipe memory expandable	No
Variables	
● Number of variables per device	800
● Number of variables per screen	100
● Limit values	Yes
● Multiplexing	Yes
● Structures	No
● Arrays	Yes
Images	
● Number of configurable images	150
● Permanent window/default	Yes; No permanent window can be configured
● Global image	Yes
● Image selection by PLC	Yes
● Image number in the PLC	Yes
Image objects	
● Text fields	Yes
● I/O fields	Yes
● Graphic I/O fields (graphics list)	Yes
● Symbolic I/O fields (text list)	Yes
● Date/time fields	Yes
● Switches	Yes
● Buttons	Yes
● Graphic display	Yes
Complex image objects	
● Number of complex objects per screen	5
● Alarm view	Yes
● Trend view	Yes
● User view	Yes
● Status/control	No
● Sm@rtClient view	No
● Recipe view	Yes
● f(x) trend view	No
● System diagnostics view	No
● Media Player	No
● Bar graphs	Yes
● Sliders	No
● Pointer instruments	No
● Analog/digital clock	No
Lists	
● Number of text lists per project	200
● Number of entries per text list	50
● Number of graphics lists per project	100
● Number of entries per graphics list	50
Archiving	
● Number of archives per device	2
● Number of entries per archive	10 000
● Message archive	Yes
● Process value archive	Yes
● Archiving methods	Sequential log, circular log, alarm log, process value archive
— Sequential archive	Yes
● Memory location	

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— Memory card	No
— USB memory	Yes
— Ethernet	No
● Data storage format	CSV file, readable, e.g. with MS Excel, MS Access
— CSV	No
— TXT	Yes
— RDB	No
Security	
● Number of user groups	50
● Number of user rights	32
● Number of users	50
● Password export/import	No
Character sets	
● Keyboard fonts	US American (English)
— US English	Yes
Transfer (upload/download)	
● MPI/PROFIBUS DP	No
● USB	No
● Ethernet	Yes
● using external storage medium	No
Process coupling	
● S7-1200	No
● S7-1500	No
● S7-200	Yes
● S7-300/400	No
● LOGO!	Yes
● WinAC	No
● SINUMERIK	No
● SIMOTION	No
● Allen Bradley (EtherNet/IP)	No
● Allen Bradley (DF1)	No
● Mitsubishi (MC TCP/IP)	No
● Mitsubishi (FX)	Yes
● OMRON (FINS TCP)	No
● OMRON (Host Link)	Yes
● Modicon (Modbus TCP/IP)	No
● Modicon (Modbus RTU)	Yes
Service tools/configuration aids	
● Backup/Restore manually	Yes
● Backup/Restore automatically	No
● Simulation	Yes
● Device switchover	Yes
Peripherals/Options	
Peripherals	none
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory card	No
USB memory	Yes
Mechanics/material	
Enclosure material (front)	
● Plastic	Yes
● Aluminum	No
● Stainless steel	No
Dimensions	
Width of the housing front	276 mm
Height of housing front	218 mm
Mounting cutout, width	259 mm
Mounting cutout, height	201 mm
mounting depth	39 mm

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