

Data sheet

6AV6648-0BE11-3AX0

SIMATIC HMI SMART 1000 IE, SMART PANEL, TOUCH OPERATION, 10" WIDESCREEN TFT DISPLAY, 65536 COLORS, RS422/485 INTERFACE, ETHERNET(RJ45) INTERFACE, WITH CE CERTIFICATE, CONFIGURATION FROM WINCC FLEXIBLE 2008 SP4 CHINA; CONTAINS OPEN SOURCE SW WHICH IS PROVIDED FREE OF CHARGE FOR DETAILS SEE CD

General information

Product type designation	SIMATIC HMI SMART 1000 IE
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Display

Design of display	TFT
Screen diagonal	10.2 in
Display width	222 mm
Display height	132.5 mm
Number of colors	65 536

Resolution (pixels)

- | | |
|-------------------------------|-----------|
| • Horizontal image resolution | 800 Pixel |
| • Vertical image resolution | 480 Pixel |

Backlighting

- | | |
|--------------------------------|--|
| • MTBF backlighting (at 25 °C) | 40 000 h; Half brightness life time (25°C), Max. |
|--------------------------------|--|

Control elements

Keyboard fonts

- | | |
|------------------------------|---|
| • Function keys | |
| — Number of function keys | 0 |
| • Numeric/alphabetical input | Yes (on-screen keyboard) / Yes (on-screen keyboard) |
| — Numeric keyboard | Yes |
| — alphanumeric keyboard | Yes |

Touch operation

- | | |
|--------------------------|-----|
| • Design as touch screen | Yes |
|--------------------------|-----|

Installation type/mounting

Mounting position	vertical
Mounting in portrait format possible	No
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°

Supply voltage

Type of supply voltage	24 V 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)	0.6 A
Starting current inrush I ² t	0.5 A ² ·s
Processor	
Processor type	ARM
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	2 048 kbyte
Type of output	
Acoustics	Sound signal
• Buzzer	Yes
Time of day	
Clock	
• Hardware clock (real-time)	No
• Software clock	Yes
• retentive	No
• synchronizable	Yes; do the synchronization via PLC-jobs
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	1
Number of USB interfaces	0
Number of 20 mA interfaces (TTY)	0
Number of RS 232 interfaces	0
Number of RS 422 interfaces	1
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
PROFIBUS	No
MPI	No
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	No

• DCP	No
• LLDP	No
Further protocols	
• MODBUS	Yes
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
Marine approval	
• 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)	0 to +50 °C
— For vertical installation, min.	0 °C
— For vertical installation, max.	50 °C
• Operation (max. tilt angle)	0 to +40 °C
— At maximum tilt angle, min.	0 °C
— At maximum tilt angle, min.	40 °C
Relative humidity	
• Operation, max.	90 %
Configuration	
Message indicator	Yes
Alarm logging 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 2008 SP4 CHINA
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
• time-controlled	No
• task-controlled	Yes
Help system	Yes
• Number of characters per info text	320
Message system	
• Number of alarm classes	32
• Bit messages	
— Number of bit messages	200
• Analog messages	
— Number of analog messages	15
• 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
— Circulating buffer	Yes
— retentive	Yes
Recipe management	
• Number of recipes	5
• Data records per recipe	20
• Entries per data record	20
• Size of internal recipe memory	40 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	100
• 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	150
• Number of graphics lists per project	100
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
- S7-200 Yes
- S7-300/400 No
- LOGO! Yes
- WinAC No
- SINUMERIK No
- SIMOTION No
- Allen Bradley (DF1) No
- Mitsubishi (FX) Yes
- OMRON (LINK/Multilink) Yes
- Modicon (Modbus) Yes

Service tools/configuration aids

- Backup/Restore manually Yes
- 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 No

Mechanics/material

- Enclosure material (front)
- Plastic Yes
 - Aluminum No

Dimensions

Width of the housing front	288 mm
Height of housing front	222 mm
Overall depth	48 mm

last modified: 08/13/2016