



SIMATIC HMI SMART 700 IE V3, SMART Panel, Touch operation, 7" widescreen TFT display, 65536 colors, RS422/485 interface, Ethernet (RJ45) interface, host USB type A, RTC support, with CE certificate, configurable from WinCC flexible SMART; contains open-source software, which is provided free of charge see enclosed CD

General information	
Product type designation	700 IE V3
Display	
Design of display	TFT
Screen diagonal	7 in
Display width	154.1 mm
Display height	85.9 mm
Number of colors	65 536
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	20 000 h
• Backlight dimmable	No
Control elements	
Keyboard fonts	
• 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)	200 mA
Current consumption, max.	340 mA
Starting current inrush I ² t	0.1 A ² ·s
Processor	

Processor type	ARM, 600 MHz
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	8 Mbyte
Type of output	
Acoustics	
• Buzzer	Yes
• 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
RCM (formerly C-TICK)	No
KC approval	No
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• IECEx Zone 2	No
• IECEx Zone 22	No
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
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
Railway application	
• EN 50121-4	No
• EN 50155	No
• Fire protection acc. to EN 45545-2	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
pre-installed operating system	
• Windows CE	No
configuration / header	
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	
• STEP 7 Basic (TIA Portal)	No
• STEP 7 Professional (TIA Portal)	No
• WinCC flexible Compact	No

• WinCC flexible Standard	Yes; WinCC flexible Smart V3
• WinCC flexible Advanced	No
• WinCC Basic (TIA Portal)	No
• WinCC Comfort (TIA Portal)	No
• WinCC Advanced (TIA Portal)	No
• WinCC Professional (TIA Portal)	No

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
— 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
- Alarm view
- Trend view
- User view
- Status/control
- Sm@rtClient view
- Recipe view
- f(x) trend view
- System diagnostics view
- Media Player
- Bar graphs
- Sliders
- Pointer instruments
- Analog/digital clock

5
Yes
Yes
Yes
No
No
Yes
No
No
No
Yes
No
No
No

Lists

- Number of text lists per project
- Number of entries per text list
- Number of graphics lists per project
- Number of entries per graphics list

200
50
100
50

Archiving

- Number of archives per device
- Number of entries per archive
- Message archive
- Process value archive
- Archiving methods
 - Sequential archive
- Memory location
 - Memory card
 - USB memory
 - Ethernet
- Data storage format
 - CSV
 - TXT
 - RDB

2
10 000
Yes
Yes
Sequential log, circular log, alarm log, process value archive
Yes
No
Yes
No
CSV file, readable, e.g. with MS Excel, MS Access
No
Yes
No

Security

- Number of user groups
- Number of user rights
- Number of users
- Password export/import

50
32
50
No

Character sets

- Keyboard fonts
 - US English

US American (English)
Yes

Transfer (upload/download)

- MPI/PROFIBUS DP
- USB
- Ethernet
- using external storage medium

No
No
Yes
No

Process coupling

- S7-1200
- S7-1500
- S7-200
- S7-300/400
- LOGO!
- WinAC
- SINUMERIK
- SIMOTION
- Allen Bradley (EtherNet/IP)
- Allen Bradley (DF1)
- Mitsubishi (MC TCP/IP)
- Mitsubishi (FX)
- OMRON (FINS TCP)

No
No
Yes
No
Yes
No
No
No
No
No
No
Yes
No

• OMRON (LINK/Multilink)	Yes
• Modicon (Modbus TCP/IP)	No
• Modicon (Modbus)	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	209 mm
Height of housing front	155 mm
Mounting cutout, width	192 mm
Mounting cutout, height	138 mm
Overall depth	39 mm
Weights	
Weight (without packaging)	765 g

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