

SIMATIC Mobile Panel 277 with integrated acknowledgment button and stop button, configurable with WinCC flexible Standard Version 2005 SP1 or higher or TIA Portal V11 to V14



General information	
Product type designation	277
Customer-specific configuration	Yes
Display	
Design of display	TFT
Screen diagonal	7.5 in
Color display	Yes
Number of colors	65 536
Resolution (pixels)	
• Horizontal image resolution	640 Pixel
• Vertical image resolution	480 Pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h
Control elements	
Control elements	Keys and touch
Keyboard fonts	
• Membrane keyboard	
— user-definable label membrane keys	Yes

• Function keys	
— Number of function keys	18
— Number of function keys with LEDs	18
• Keys with LED	Yes
• Numeric keyboard	Yes
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes
• Multi-key operation	Yes
— Number of multi-key operations	2
<b>Touch operation</b>	
• Design as touch screen	Yes; analog, resistive
<b>Connection type</b>	
• Type of connection for mouse/keyboard/barcode reader	USB / USB / USB
<b>Special operator controls</b>	
• Stop button	Yes
• Acknowledgement button	Yes
• Key-operated switch	No
• Illuminated pushbutton	No
• Handwheel	No
<b>Supply voltage</b>	
Design of the power supply	via connection box
Type of supply voltage	DC
<b>Processor</b>	
Processor type	ARM, 520 MHz
<b>Memory</b>	
Type of memory	Flash / RAM
Memory available for user data	6 Mbyte
Capacity of main memory, max.	128 Mbyte
<b>Accumulator</b>	
Buffer battery	Yes; maximum buffer time 10 min
<b>Time of day</b>	
<b>Clock</b>	
• Hardware clock (real-time)	Yes
• retentive	Yes
• synchronizable	Yes
<b>Interfaces</b>	
Interfaces/bus type	1x RS 422, 1x RS 485, 1x Ethernet (RJ45) (max. 12 Mbit/s)
Number of RS 485 interfaces	1
Number of USB interfaces	1

Number of wireless interfaces	0
Multimedia card/SD card slot	1 MMC/SD card slot
<b>Protocols</b>	
Supports protocol for PROFINET IO	Yes
PROFIsafe	No
PROFIBUS	Yes
AS-Interface	No
<b>Protocols (Ethernet)</b>	
• TCP/IP	Yes
<b>Further protocols</b>	
• CAN	No
• Data-Highway	No
• DeviceNet	No
• EtherNet/IP	Yes
• INTERBUS	No
• Local Operating Network	No
• MODBUS	Yes
• SUCOnet	No
• other bus systems	Yes
<b>Standards, approvals, certificates</b>	
Certificate of suitability	CE, cULus, C-TICK, SIBE
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
Suitable for safety functions	Yes
<b>Highest safety class achievable in safety mode</b>	
• Performance level according to ISO 13849-1	d
<b>Ambient conditions</b>	
<b>Free fall</b>	
• Fall height, max.	1.2 m
<b>Ambient temperature during operation</b>	
• min.	0 °C
• max.	40 °C
<b>Ambient temperature during storage/transportation</b>	
• min.	-20 °C
• max.	60 °C
<b>Relative humidity</b>	
• Operation, max.	80 %
<b>Operating systems</b>	
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
<b>Configuration software</b>	
<ul style="list-style-type: none"> <li>• Configuration tool</li> </ul>	WinCC flexible Standard Version 2005 SP1 or higher (to be ordered separately)
<ul style="list-style-type: none"> <li>• WinCC flexible Compact</li> </ul>	No
<ul style="list-style-type: none"> <li>• WinCC flexible Standard</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC flexible Advanced</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC Basic (TIA Portal)</li> </ul>	No
<ul style="list-style-type: none"> <li>• WinCC Comfort (TIA Portal)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC Advanced (TIA Portal)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• WinCC Professional (TIA Portal)</li> </ul>	Yes

## Languages

<b>Online languages</b>	
<ul style="list-style-type: none"> <li>• Number of online/runtime languages</li> </ul>	16
<b>Project languages</b>	
<ul style="list-style-type: none"> <li>• Languages per project</li> </ul>	32

## Functionality under WinCC (TIA Portal)

Libraries	Yes
Applications/options	Internet Explorer, Sm@rtService, Sm@rtAccess
<ul style="list-style-type: none"> <li>• Web browser</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• SIMATIC WinCC Sm@rtServer</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Connection point identification</li> </ul>	Yes
Number of Visual Basic Scripts	Yes
Task planner	Yes
Help system	Yes
<ul style="list-style-type: none"> <li>• Number of characters per info text</li> </ul>	70
<b>Message system</b>	
<ul style="list-style-type: none"> <li>• Number of alarm classes</li> </ul>	32
<ul style="list-style-type: none"> <li>• Number of messages</li> </ul>	4 000
<ul style="list-style-type: none"> <li>• Bit messages</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Number of bit messages</li> </ul>	4 000
<ul style="list-style-type: none"> <li>• Analog messages</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Number of analog messages</li> </ul>	4 000
<ul style="list-style-type: none"> <li>• System messages HMI</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• System messages PLC</li> </ul>	Yes

• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	Yes
• Lines	1
• Number of characters per message	80
• Number of process values per message	8
• Acknowledgment groups	
— Number of acknowledgement groups	99
• Message indicator	Yes
• First/last value	Yes
<b>Recipe management</b>	
• Number of recipes	300
• Data records per recipe	500
• Entries per data record	1 000
• Recipe memory	64 KB integrated Flash, expandable
<b>Variables</b>	
• Number of variables per device	2 048
• Number of variables per screen	200
• Number of variables	1 000
• Initial values	2 048
• Type Date & Time	2 048
• Limit values	Yes
• Multiplexing	Yes
• Structures	Yes
<b>Images</b>	
• Number of configurable images	500
• Permanent window/default	Yes
• Start screen configurable	Yes
• Image selection by PLC	Yes
• Image number in the PLC	Yes
<b>Image objects</b>	
• 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
<b>Complex image objects</b>	
• Status/control	Yes; With SIMATIC S7
• dynamic objects	Diagrams, bar graphs, sliders, analog display, invisible buttons
— 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 alphanumeric 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
<b>Attributes for dynamic objects</b>	
• Color change	Yes
• X/Y movement	Yes
• Hide	Yes
<b>Lists</b>	
• 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
<b>Archiving</b>	
• 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

<ul style="list-style-type: none"> <li>• Archiving methods <ul style="list-style-type: none"> <li>— Sequential archive</li> <li>— Short-term archive</li> </ul> </li> <li>• Memory location</li> <li>• Data storage format <ul style="list-style-type: none"> <li>— CSV</li> </ul> </li> <li>• Online evaluation <ul style="list-style-type: none"> <li>— using trend curves</li> </ul> </li> </ul>	<p>Yes</p> <p>Yes</p> <p>MultiMediaCard</p> <p>Yes</p> <p>Yes</p>
<b>Filters</b>	
<ul style="list-style-type: none"> <li>• cyclic</li> <li>• Tolerance</li> <li>• Change</li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
<b>Security</b>	
<ul style="list-style-type: none"> <li>• Number of user groups</li> <li>• Number of user rights</li> <li>• Password export/import</li> </ul>	<p>50</p> <p>32</p> <p>Yes</p>
<b>Logging through printer</b>	
<ul style="list-style-type: none"> <li>• Recording/Printing</li> </ul>	Alarms, report (shift report), color print, hardcopy
<b>Transfer (upload/download)</b>	
<ul style="list-style-type: none"> <li>• Transfer of configuration</li> </ul>	MPI/PROFIBUS DP, USB, Ethernet, automatic transfer recognition
<b>Process coupling</b>	
<ul style="list-style-type: none"> <li>• Connection to controller</li> </ul>	S5, S7-200, S7-300/400, TI 505, SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), OMRON (LINK/Multilink), Modicon (Modbus), further non-Siemens drivers, see chapter "System interfaces"
<ul style="list-style-type: none"> <li>• S7-1200</li> <li>• S7-1500</li> <li>• S7-200 <ul style="list-style-type: none"> <li>— PPI (point-to-point)</li> <li>— PPI network</li> <li>— MPI</li> <li>— PROFIBUS DP</li> <li>— Ethernet</li> </ul> </li> <li>• S7-300/400 <ul style="list-style-type: none"> <li>— MPI</li> <li>— PROFIBUS DP</li> <li>— PROFINET</li> </ul> </li> <li>• SINUMERIK</li> <li>• SIMOTION</li> <li>• S5 <ul style="list-style-type: none"> <li>— serial</li> </ul> </li> </ul>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

— PROFIBUS DP	Yes
• TI 505	Yes
• Allen Bradley (DF1)	Yes
• Allen Bradley (DF485)	Yes
• Mitsubishi (FX)	Yes
• Mitsubishi (MP4)	Yes
• OMRON (LINK/Multilink)	Yes
• Modicon (Modbus)	Yes
• GE-Fanuc (SNP)	Yes
<b>Functions</b>	
• TAB sequence	Yes
• Calculating functions	Yes
• Animate	Yes
<b>Service tools/configuration aids</b>	
• Clean screen	Yes
• Touch calibration	Yes
• Backup/Restore manually	Yes
• Simulation	Yes
• Device switchover	Yes
• Delta transfer	Yes
<b>Peripherals/Options</b>	
Peripherals	Printer, barcode reader
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes
USB memory	Yes
Additional software components loadable	Yes
<b>Mechanics/material</b>	
Enclosure material (front)	plastic
<b>Dimensions</b>	
Enclosure diameter	290 mm
Depth of housing	103 mm
<b>Weights</b>	
Weight (without packaging)	1.7 kg
<b>Other</b>	
free hotline	Yes
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