

*** SPARE PART*** SIMATIC PANEL OP177B PN/DP STN 256
 COLOR DISPLAY TOUCH AND KEYS MPI-/PROFIBUS-DP
 PROTOCOL RS485-/RS422-/USB- INTERFACE ETHERNET -
 INTERFACE PRINTER INTERFACE SLOT FOR MM-CARD
 CONFIGURABLE WITH WINCC FLEXIBLE 2005

General information

Customer-specific configuration	Yes
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Display

Design of display	STN
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Screen diagonal	5.7 in
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Color display	Yes
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Number of colors	256
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Resolution (pixels)

- | | |
|-------------------------------|-----------|
| • Horizontal image resolution | 320 Pixel |
| • Vertical image resolution | 240 Pixel |

Backlighting

- | | |
|--------------------------------|----------|
| • MTBF backlighting (at 25 °C) | 50 000 h |
|--------------------------------|----------|

Control elements

Control elements	Touch screen and membrane keyboard
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Keyboard fonts

- | | |
|--------------------------------------|-----|
| • Membrane keyboard | |
| — user-definable label membrane keys | Yes |
| • Function keys | |
| — Number of function keys | 32 |
| — Number of function keys with LEDs | 26 |
| • System keys | Yes |
| — Number of configurable system keys | 32 |
| • alphanumeric keyboard | Yes |
| • hexadecimal keyboard | Yes |
| • Multi-key operation | Yes |

Touch operation

- | | |
|--------------------------|------------------------|
| • Design as touch screen | Yes; analog, resistive |
|--------------------------|------------------------|

Connection type

- | | |
|--|---------------|
| • Connection for mouse/keyboard/barcode reader | USB / USB / - |
|--|---------------|

Installation type/mounting

Mounting position	vertical
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maximum permissible angle of inclination without external ventilation	35°
Processor	
Processor type	RISC 32-bit, 200 MHz
Memory	
Type of memory	Flash / RAM
Memory available for user data	2 048 kbyte
Time of day	
Clock	
• Type	Hardware clock, synchronizable, no battery backup
• retentive	No
• synchronizable	Yes
Interfaces	
Interfaces/bus type	RS232 optional, 1 x RS422, 1 x RS485, 1 x Ethernet (RJ45) (max. 12 Mbit/s)
Number of RS 485 interfaces	1
• Transmission rate, max.	12 Mbit/s
Number of USB interfaces	1; Up to 1 GB
PC card slot	No
CF card slot	No
Multimedia card/SD card slot	1x Multimedia Card slot, up to 128 MB
Industrial Ethernet	
• Industrial Ethernet interface	1 x Ethernet (RJ45)
• Industrial Ethernet status LED	1
Degree and class of protection	
IP (at the front)	IP65
NEMA (front)	NEMA 4, NEMA 4x, NEMA 12 (when installed)
IP (rear)	IP20
Standards, approvals, certificates	
Certifications	CE, GL, ABS, BV, DNV, LRS, PRS, FM Class I Div. 2, UL, CSA, cULus, EX-Zone 2/22, Gost-R, C-TICK, NEMA 4, NEMA 4x, NEMA 12
cULus	Yes
EAC (formerly Gost-R)	Yes
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Polski Rejestr Statkow (PRS)	Yes

Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• FM Class I Division 2	Yes
Ambient conditions	
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	90 %
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 Compact Version 2005 or higher (to be ordered separately)
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	70
Message system	
• Number of alarm classes	32
• Number of messages	2 000
• Bit messages	Yes
— Number of bit messages	2 000
• Analog messages	Yes
— Number of analog messages	2 000
• Telegram message procedure Alarm S	No
• System messages HMI	Yes

• System messages PLC	Yes
• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)	No
• 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
• acoustic feedback	No
• First/last value	Yes
Recipe management	
• Number of recipes	100
• Data records per recipe	200
• Entries per data record	200
• Recipe memory	32 KB integrated Flash, expandable
Variables	
• Number of variables per device	1 000
• Number of variables per screen	50
• Number of variables	1 000
• Initial values	1 000
• Type Date & Time	1 000
• Limit values	Yes
• Multiplexing	Yes
• Structures	No
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	2,500 text elements
• Number of I/O fields per image	50
• Number of date/time fields	30
• Index of screen context	No
• Return	Yes
• Graphics object	Bit maps, icons, icon (full-screen), vector graphics
— Icons	500
— Icon (full screen)	50
Complex image objects	

• Status/control • dynamic objects — Number of objects per project — Number of curve diagrams per image • Methods • Bar graphs — Number of bars per chart • Sliders — Number of slides per image • Pointer instruments — Number of analog indicators per image • Limit value lines • Number of alphanumerical fields — alphanumeric fields per image • Number of numerical fields — numerical fields per image • Number of password fields • Number of visible switches per project — visible switches per image — hidden switches per image • Number of status switches per project — Number of status switches per image • Number of selector switches per project — Selector switches per image • Number of decade switches per project — Decade switches per image • Number of signal lamps per project — Signal lamps per image	With SIMATIC S7 Diagrams, bar graphs, sliders, analog display, invisible buttons 500 5 Trend 5 0 0 Yes 1 000 100 1 000 100 1 000 1 000 100 100 1 000 100 1 000 100 0 0 1 000 100
Attributes for dynamic objects	
• Color change • X/Y movement • Hide • Angle of rotation	Yes Yes Yes No
Lists	
• Number of text lists per project • Number of text lists per image • Number of entries per text list • Number of graphics lists per project • Number of graphic lists per image • Number of entries per graphics list	300 10 30 100 10 30
Security	

• Number of user groups	50
• Number of user rights	32
• 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, Ethernet, by means of external storage medium, automatic transfer recognition
Process coupling	
• Connection to controller	S5, S7-200, S7- 300/400, Win AC, SINUMERIK, SIMOTION, Allen Bradley (DF1), Mitsubishi (FX), Telemecanique (ADJUST), Modicon (Modbus), for further non-Siemens drivers, see section on "System interfaces"
• S7-200	Yes
— PPI (point-to-point)	Yes
— PPI network	No
— MPI	Yes
— PROFIBUS DP	Yes
• S7-300/400	Yes
— MPI	Yes
— PROFIBUS DP	Yes
— PROFINET	No
• S5	Yes
— serial	No
— PROFIBUS DP	Yes
• TI 505	No
• Allen Bradley (DF1)	Yes
• Allen Bradley (DF485)	No
• Mitsubishi (FX)	Yes
• Telemecanique (ADJUST)	Yes
• OMRON (LINK/Multilink)	No
• Modicon (Modbus)	Yes
Functions	
• Key repeat	No
• TAB sequence	Yes
• Calculating functions	Yes
• Animate	Yes
• Menu tree editor	Yes
• Unit switchover	No
Service tools/configuration aids	
• Clean screen	Yes
• Touch calibration	Yes

• Backup/Restore manually	Yes
• Simulation	Yes
• Device switchover	Yes
• Delta transfer	Yes
• Monitoring function for battery and memory	Yes
• Trace (operation archive)	No
Expandability/openness	
• Open Platform Program	Yes
Peripherals/Options	
Peripherals	Printer
• SIMATIC HMI MM memory card: Multi Media Card	Yes
Additional software components loadable	Yes
Dimensions	
Width of the housing front	243 mm
Height of housing front	212.5 mm
Overall depth	47 mm
Other	
free hotline	Yes
Warranty period	1 y
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