

\*\*\*Spare part\*\*\* as of 01.01.2015 the product is blocked for delivery and can no longer be ordered as a new part. For information on the successor See FAQ Entry ID: 82203106. For further questions, the familiar contact partners are available. . SIPLUS HMI TP 177B color PN/DP for medial exposure based on 6AV6642-0BA01-1AX1



General information	
Customer-specific configuration	Yes
Display	
Design of display	STN
Screen diagonal	5.7 in
Color display	Yes
Number of colors	256
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
Keyboard fonts	
• System keys	Yes
• alphanumeric keyboard	Yes
• hexadecimal keyboard	Yes

• Multi-key operation	No
<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>Installation type/mounting</b>	
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	35°
<b>Supply voltage</b>	
Type of supply voltage	DC
<b>Input current</b>	
Current consumption (rated value)	0.24 A
Starting current inrush I <sup>2</sup> t	0.5 A <sup>2</sup> ·s
<b>Processor</b>	
Processor type	ARM, 200 MHz
<b>Memory</b>	
Type of memory	Flash / RAM
Memory available for user data	2 048 kbyte
<b>Time of day</b>	
<b>Clock</b>	
• Type	Hardware clock, synchronizable, no battery backup
• retentive	No
• synchronizable	Yes
<b>Interfaces</b>	
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
PC card slot	No
CF card slot	No
Multimedia card/SD card slot	combined
<b>Industrial Ethernet</b>	
• Industrial Ethernet interface	1 x Ethernet (RJ45)
• Industrial Ethernet status LED	1
<b>Protocols</b>	
<b>Protocols (terminal link)</b>	
• Sm@rtServer	Yes

Degree and class of protection	
IP (at the front)	IP65
NEMA (front)	NEMA 4x, NEMA 12 (when installed)
IP (rear)	IP20
Standards, approvals, certificates	
Certifications	CE
cULus	No
EAC (formerly Gost-R)	No
Suitable for safety functions	No
Marine approval	
<ul style="list-style-type: none"> <li>• Germanischer Lloyd (GL)</li> <li>• American Bureau of Shipping (ABS)</li> <li>• Bureau Veritas (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Polski Rejestr Statkow (PRS)</li> </ul>	No
Use in hazardous areas	
<ul style="list-style-type: none"> <li>• ATEX Zone 2</li> <li>• ATEX Zone 22</li> <li>• FM Class I Division 2</li> </ul>	No
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	0 °C; = Tmin 50 °C; = Tmax
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	-20 °C 60 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	Tmin ... Tmax at 1 080 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax - 20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Use in stationary industrial systems	
<ul style="list-style-type: none"> <li>— to biologically active substances according to EN 60721-3-3</li> <li>— to chemically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3C4 incl. salt spray. The supplied connector covers must remain on the unused interfaces during operation!

— to mechanically active substances according to EN 60721-3-3

Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!

## Operating systems

pre-installed operating system	Windows CE
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## 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

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Configuration tool</li> </ul> | WinCC flexible Compact Version 2005 or higher (to be ordered separately) |
|--|--|

## Languages

### Online languages

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Number of online/runtime languages</li> </ul> | 5 |
|--|---|

### Project languages

- |   |    |
|---|----|
| <ul style="list-style-type: none"> <li>• Languages per project</li> </ul> | 32 |
|---|----|

## Functionality under WinCC (TIA Portal)

Libraries	Yes
Task planner	Yes
Help system	Yes
<ul style="list-style-type: none"> <li>• Number of characters per info text</li> </ul>	70

## Message system

- |  |       |
|--|-------|
| <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>   | 2 000 |
| <ul style="list-style-type: none"> <li>• Bit messages</li> </ul>   | Yes   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— Number of bit messages</li> </ul> </li> </ul>           | 2 000 |
| <ul style="list-style-type: none"> <li>• Analog messages</li> </ul>  | Yes   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— Number of analog messages</li> </ul> </li> </ul>        | 50    |
| <ul style="list-style-type: none"> <li>• Telegram message procedure Alarm S</li> </ul>   | No    |
| <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   |
| <ul style="list-style-type: none"> <li>• System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.)</li> </ul>                       | No    |
| <ul style="list-style-type: none"> <li>• Lines</li> </ul>  | 1     |
| <ul style="list-style-type: none"> <li>• Number of characters per message</li> </ul>   | 80    |
| <ul style="list-style-type: none"> <li>• Number of process values per message</li> </ul>   | 8     |
| <ul style="list-style-type: none"> <li>• Acknowledgment groups</li> </ul>  |       |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— Number of acknowledgement groups</li> </ul> </li> </ul> | 99    |
| <ul style="list-style-type: none"> <li>• Message indicator</li> </ul>  | Yes   |

• acoustic feedback	No
• First/last value	Yes
<b>Recipe management</b>	
• Number of recipes	100
• Data records per recipe	200
• Entries per data record	200
• Recipe memory	32 KB integrated Flash, expandable
<b>Variables</b>	
• 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
<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	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
<b>Complex image objects</b>	
• Status/control	With SIMATIC S7
• dynamic objects	Diagrams, bar graphs, sliders, analog display, invisible buttons
— Number of objects per project	500
— Number of curve diagrams per image	5
• Methods	Trend
• Bar graphs	
— Number of bars per chart	5
• Sliders	
— Number of slides per image	0

• Pointer instruments	
— Number of analog indicators per image	0
• Limit value lines	Yes
• Number of alphanumeric fields	1 000
— alphanumeric fields per image	100
• Number of numerical fields	1 000
— numerical fields per image	100
• Number of password fields	1 000
• Number of visible switches per project	1 000
— visible switches per image	100
— hidden switches per image	100
• Number of status switches per project	1 000
— Number of status switches per image	100
• Number of selector switches per project	1 000
— Selector switches per image	100
• Number of decade switches per project	0
— Decade switches per image	0
• Number of signal lamps per project	1 000
— Signal lamps per image	100
<b>Attributes for dynamic objects</b>	
• Color change	Yes
• X/Y movement	Yes
• Hide	Yes
• Angle of rotation	No
<b>Lists</b>	
• Number of text lists per project	300
• Number of text lists per image	10
• Number of entries per text list	30
• Number of graphics lists per project	100
• Number of graphic lists per image	10
• Number of entries per graphics list	30
<b>Security</b>	
• Number of user groups	50
• Number of user rights	32
• Password export/import	Yes
<b>Data carrier support</b>	
• PC card	No
• CF card	No
<b>Logging through printer</b>	
• Recording/Printing	Alarms, report (shift report), color print, hardcopy
<b>Transfer (upload/download)</b>	

- Transfer of configuration

MPI/PROFIBUS DP, serial, USB, Ethernet, by means of external storage medium, automatic transfer recognition

### Process coupling

- Connection to controller
  - S5, S7-200, S7-300/400, Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Mitsubishi (FX), Telemecanique (ADJUST), Modicon (Modbus), further non-Siemens drivers, see chapter "System interfaces"
- S7-200
  - PPI (point-to-point) Yes
  - PPI network Yes
  - MPI No
  - PROFIBUS DP Yes
- S7-300/400
  - MPI Yes
  - PROFIBUS DP Yes
  - PROFINET Yes
- S5
  - serial Yes; only PROFIBUS DP
  - PROFIBUS DP No
- TI 505 Yes
- Allen Bradley (DF1) No
- Allen Bradley (DF485) Yes
- Mitsubishi (FX) No
- 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 No
- 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	212 mm
Height of housing front	156 mm
Overall depth	44 mm

### Weights

Weight (without packaging)	0.8 kg
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### Other

free hotline	Yes
Warranty period	1 y

**last modified:** 05/16/2018