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SIMATIC TP 177 MICRO

Overview

- Touch Panel for operator control and monitoring of small machines and plants
- Low-cost starter device in the touch panel class with graphics capability and all the basic functions required for simple tasks
- Pixel-graphics 5.7" STN touch screen (analog/resistive), Bluemode (4 levels)
- Specially for SIMATIC S7-200:
  Communication with the PLC takes place via the integrated interface (point-to-point connection)
- Connection to the PLC over MPI or PROFIBUS DP cable
- The SIMATIC TP 177micro is the successor to the SIMATIC TP 070/TP 170micro Touch Panels

Benefits

- Can even be used where installation space is restricted thanks to vertical installation
- Fast configuring and start-up
- Service-friendly thanks to maintenance-free design and the long service life of the backlighting
- Graphics library is available complete with ready-to-use display objects
- Can be used worldwide:
    - 32 languages can be configured (including Asiatic and Cyrillic character sets)
    - Up to 5 languages are selectable online

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Application

TP 177micro Touch Panels can be used wherever small machines and systems are controlled and monitored locally – in production, process and building automation alike. They are used in all types of sectors and applications.
The TP 177micro has been designed specifically for use with the SIMATIC S7-200. With fast response times, it is also ideal for jog mode.

Compatibility with TP 070/TP 170micro

- Same mounting cutout as the TP 070/TP 170micro.

Design

- 5.7" STN display, CCFL[1] backlit, Bluemode (4 levels)
- Resistive analog Touch
- Compact design with small installation depth
- Rugged plastic housing
- The front is resistant to various oils, greases and standard detergents
- Numeric system keyboard for decimal, binary and hexadecimal number formats
- On-screen alphanumeric keyboard
- Plug-in terminals for connecting a 24 V DC power supply
- RS 485 interface for connection of the MPI cable or the PPI adaptor

1) Cold Cathode Fluorescence Lamps
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Function

- Input/output fields for displaying and changing process parameters
- Buttons for direct triggering of functions and actions. Up to 16 functions can be configured simultaneously on buttons
- Graphics can be used as icons instead of text to "label" function keys or buttons. They can also be used as background displays (wallpaper). In the configuration tool, a library is available containing extensive graphics and a wide variety of objects. All editors with an OLE interface can be used as graphics editors (such as PaintShop, Designer or CorelDraw).
- Vector graphics Simple geometric basic forms (line, circle and rectangle) can be created direct in the configuring tool
- Predefined texts for labeling function keys, process images and process values in any character size
- Bars for the graphical display of dynamic values
- Changing languages
    - 5 online languages, 32 configuration languages incl. Asian and Cyrillic character sets
- User administration (security)
    - Authentication using password
- Signaling system
    - Discrete alarms
    - Analog messages
    - Freely definable message classes (e.g., status/fault messages) for definition of acknowledgment response and display of message events
    - Message history
- Help texts for process images, messages and variables
- Arithmetic functions
- Limit value monitoring for reliable process control of inputs and outputs
- Indicator light for machine and plant status indication
- Template concept Creation of picture templates (picture elements configured in the template appear in every image)

- User-friendly maintenance and configuration thanks to:
    - Backup and restoration of configuration, operating system and firmware on a PC using ProSave
    - Configuration download serially via RS485
    - Individual contrast setting and calibration
    - Clean screen
    - No batteries are necessary

Configuring

SIMATIC WinCC flexible Micro, Compact, Standard or Advanced engineering software Version 2004 SP1 and higher plus HSP is used for configuration.
For more information about engineering software, see HMI software/engineering software SIMATIC WinCC flexible.
A PC/PPI adapter cable is needed to download the configuration.
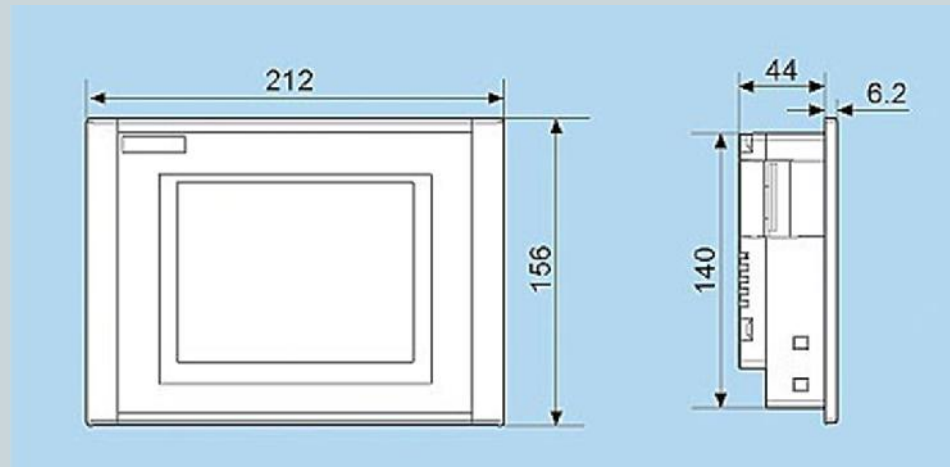
Integration

The TP 177micro can be connected to all SIMATIC S7-200-CPUs using the standard MPI bus cables or PROFIBUS DP cables (integration into networks possible).

Note:

For further information see "System interfaces"

Dimensional drawings

TP 177micro: Installation cutout (W x H) in mm: 198 x 142

Technical specifications

More information
Additional information is available in the Internet under:
http://www.siemens.com/simatic-micropanels

Note
Do you need a specific modification or option for the products described here? Then look up "Customized products", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

Technical specifications

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	6AV6 640-0CA11-0AX1 TP 177micro
Display	
Size	5.7"
Display type	STN, 4 blue levels
Resolution (pixels)	
•Resolution (WxH in pixel)	320 x 240
Backlighting	
•MTBF backlighting (at 25 °C)	about 50000 hours
Control elements	
Control elements	Touch screen
Function keys, programmable	none
Keyboard fonts	
•System keys	0
Touch operation	
•Touch screen	Analog, resistive
Supply voltage	
Supply voltage	24 V DC
Input current	
Rated current	0.24 A
Processor	
Processor	ARM

Memory	
Type	Flash
Usable memory for user data	256 KB usable memory for user data
Time of day	
Clock	
•Type	Software clock, no battery backup
Interfaces	
Interfaces	1 x RS485 (max. 187.5 Mbit/s)
Ambient conditions	
Storage/transport temperature	
•Transport, storage	-20 °C to +60 °C
Relative humidity	
•max. relative humidity	90 %
Mounting position	vertical
maximum permissible angle of inclination without external ventilation	+/- 35 °
Degree and class of protection	
Front	IP65, NEMA 4x (when installed)
Rear	IP20
Standards, approvals, certificates	
Certifications	CE, GL, ABS, BV, DNV, LRS, FM Class I Div. 2, UL, CSA, cULus, EX-Zone 2 (in Vorbereitung), EX-Zone 22 (in Vorbereitung), C-TICK, NEMA 4x

FM Class I Div. 2	Yes
GL	Yes
ABS	Yes
BV	Yes
DNV	Yes
LRS	Yes
Class NK	Yes
PRS	No
Gost-R	No
Suitable for safety functions	No
Use in hazardous areas	
•EX zone 2	Yes
•EX zone 22	Yes
Operating systems	
Operating system	LINUX
Configuration	
Configuration software	
•Configuration tool	WinCC flexible Micro Version 2004 SP1, HSP or higher (to be ordered separately)
Languages	
Online languages	
•Number of online/runtime languages	5
Functionality under WinCC flexible	
Libraries	Yes

Task planner	Yes
Status/control	Not possible
With alarm logging system (incl. buffer and acknowledgment)	
•Number of messages	500
•Bit messages	Yes
•Analog messages	Yes
Number of process images	
•Process images	250
•Variables	250
•Limit values	Yes
•Multiplexing	Yes
Image elements	
•Text objects	500 text elements
•Graphics object	Bit maps, icons, icon (full-screen), vector graphics
•dynamic objects	Diagrams, bar graphs
Lists	
•Text lists	150
•Graphics list	100
Security	
•Number of user groups	1
•Number of users	1
•Passwords exportable	Yes

Data carrier support	
•Multi Media Card	No
Transfer (upload/download)	
•Transfer of configuration	serial
Process coupling	
•Connection to controller	for S7-200, see section on "System interfaces"
Expandability/openness	
•Open Platform Program	No
Dimensions	
Front of enclosure (W x H)	212 mm x 156 mm
Weight	
Weight	0.75 kg