

SIMATIC HMI TP2200 Comfort PRO, for pedestal (extendable, flange bottom), neutral front, Comfort Panel, touch operation, 22" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, WEC 2013, configurable as of TIA Portal V16 Update 8 or V17 Update 6.



| General information                                                   |                            |
|-----------------------------------------------------------------------|----------------------------|
| Product type designation                                              | TP2200 Comfort PRO         |
| Display                                                               |                            |
| Design of display                                                     | TFT                        |
| Screen diagonal                                                       | 21.5 in                    |
| Display width                                                         | 476 mm                     |
| Display height                                                        | 267.8 mm                   |
| Number of colors                                                      | 16 777 216                 |
| Resolution (pixels)                                                   |                            |
| • Horizontal image resolution                                         | 1 920 pixel                |
| • Vertical image resolution                                           | 1 080 pixel                |
| Backlighting                                                          |                            |
| • MTBF backlighting (at 25 °C)                                        | 30 000 h; At 25°C          |
| • Backlight dimmable                                                  | Yes; LED, dimmable         |
| Control elements                                                      |                            |
| Keyboard                                                              |                            |
| • Function keys                                                       |                            |
| — Number of function keys                                             | 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; Projective-capacitive |
| Expansions for operator control of the process                        |                            |
| • Direct keys (touch buttons as S7 input I/O)                         | 70                         |
| Installation type/mounting                                            |                            |
| Mounting                                                              | Pedestal                   |
| Mounting position                                                     | vertical                   |
| Mounting in portrait format possible                                  | No                         |
| 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)          | 1.6 A                                           |
| Current consumption, max.                  | 1.9 A                                           |
| Starting current inrush I <sup>2</sup> t   | 0.5 A <sup>2</sup> ·s                           |
| <b>Power</b>                               |                                                 |
| Active power input, typ.                   | 38.4 W                                          |
| <b>Processor</b>                           |                                                 |
| Processor type                             | X86                                             |
| <b>Storage</b>                             |                                                 |
| Flash                                      | Yes                                             |
| RAM                                        | Yes                                             |
| Memory available for user data             | 24 Mbyte                                        |
| <b>Type of output</b>                      |                                                 |
| Info LED                                   | No                                              |
| Power LED                                  | No                                              |
| Error LED                                  | No                                              |
| Acoustics                                  |                                                 |
| • Buzzer                                   | No                                              |
| • Speaker                                  | Yes                                             |
| <b>Time of day</b>                         |                                                 |
| <b>Clock</b>                               |                                                 |
| • Hardware clock (real-time)               | Yes                                             |
| • Software clock                           | Yes                                             |
| • retentive                                | Yes; Back-up duration typically 6 weeks         |
| • synchronizable                           | Yes                                             |
| <b>Interfaces</b>                          |                                                 |
| Number of industrial Ethernet interfaces   | 2; 2 ports (switch) + independent port          |
| Number of RS 485 interfaces                | 1; RS 422 / 485 combined                        |
| Number of RS 422 interfaces                | 0; together with RS 485                         |
| Number of RS 232 interfaces                | 0                                               |
| Number of USB interfaces                   | 2; USB 2.0                                      |
| Number of 20 mA interfaces (TTY)           | 0                                               |
| Number of parallel interfaces              | 0                                               |
| Number of other interfaces                 | 0                                               |
| Number of SD card slots                    | 2                                               |
| With software interfaces                   | No                                              |
| <b>Industrial Ethernet</b>                 |                                                 |
| • Industrial Ethernet status LED           | 3                                               |
| • Number of ports of the integrated switch | 2                                               |
| <b>Protocols</b>                           |                                                 |
| PROFINET                                   | Yes                                             |
| Supports protocol for PROFINET IO          | Yes                                             |
| IRT                                        | Yes; WinCC V16 Update 8, V17 Update 6 or higher |
| PROFIBUS                                   | Yes                                             |
| EtherNet/IP                                | Yes                                             |
| MPI                                        | Yes                                             |
| <b>Protocols (Ethernet)</b>                |                                                 |
| • TCP/IP                                   | Yes                                             |
| • DHCP                                     | Yes                                             |
| • SNMP                                     | Yes                                             |
| • DCP                                      | Yes                                             |
| • LLDP                                     | Yes                                             |
| <b>WEB characteristics</b>                 |                                                 |
| • HTTP                                     | Yes                                             |
| • HTTPS                                    | Yes                                             |
| • HTML                                     | Yes                                             |
| • XML                                      | Yes                                             |
| • CSS                                      | Yes                                             |
| • Active X                                 | Yes                                             |

|                                                   |                       |
|---------------------------------------------------|-----------------------|
| • JavaScript                                      | Yes                   |
| • Java VM                                         | No                    |
| Redundancy mode                                   |                       |
| Media redundancy                                  |                       |
| — MRP                                             | Yes                   |
| Further protocols                                 |                       |
| • CAN                                             | No                    |
| • MODBUS                                          | Yes                   |
| 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)                                         | IP65                  |
| NEMA (front)                                      |                       |
| • Enclosure Type 4 at the front                   | Yes                   |
| • Enclosure Type 4x at the front                  | Yes                   |
| Standards, approvals, certificates                |                       |
| CE mark                                           | Yes                   |
| cULus                                             | Yes                   |
| FM approval                                       | Yes                   |
| RCM (formerly C-TICK)                             | Yes                   |
| KC approval                                       | Yes                   |
| 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                    |
| • cULus Class II Division 2                       | No                    |
| • FM Class I Division 2                           | No                    |
| • FM Class II Division 2                          | No                    |
| Marine approval                                   |                       |
| • Germanischer Lloyd (GL)                         | No                    |
| • American Bureau of Shipping (ABS)               | No                    |
| • Bureau Veritas (BV)                             | No                    |
| • Det Norske Veritas (DNV)                        | No                    |
| • Korean Register of Shipping (KRS)               | No                    |
| • Lloyds Register of Shipping (LRS)               | No                    |
| • Nippon Kaiji Kyokai (Class NK)                  | No                    |
| • Polski Rejestr Statkow (PRS)                    | No                    |
| • Chinese Classification Society (CCS)            | No                    |
| Ambient conditions                                |                       |
| Ambient temperature during operation              |                       |
| Operation (vertical installation)                 |                       |
| — For vertical installation, min.                 | 0 °C                  |
| — For vertical installation, max.                 | 45 °C                 |
| Operation (max. tilt angle)                       |                       |
| — At maximum tilt angle, min.                     | 0 °C                  |
| — At maximum tilt angle, max.                     | 40 °C                 |
| Ambient temperature during storage/transportation |                       |
| • min.                                            | -20 °C                |
| • max.                                            | 60 °C                 |
| Relative humidity                                 |                       |
| • Operation, max.                                 | 90 %; no condensation |
| Operating systems                                 |                       |
| proprietary                                       | No                    |

|                                                              |                                           |
|--------------------------------------------------------------|-------------------------------------------|
| pre-installed operating system                               |                                           |
| • Windows CE                                                 | Yes; Windows Embedded Compact 2013        |
| <b>Configuration</b>                                         |                                           |
| 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>                                |                                           |
| • STEP 7 Basic (TIA Portal)                                  | No                                        |
| • STEP 7 Professional (TIA Portal)                           | No                                        |
| • WinCC flexible Compact                                     | No                                        |
| • WinCC flexible Standard                                    | No                                        |
| • WinCC flexible Advanced                                    | No                                        |
| • WinCC Basic (TIA Portal)                                   | No                                        |
| • WinCC Comfort (TIA Portal)                                 | Yes; V16 Update 8, V17 Update 6 or higher |
| • WinCC Advanced (TIA Portal)                                | Yes; V16 Update 8, V17 Update 6 or higher |
| • WinCC Professional (TIA Portal)                            | Yes; V16 Update 8, V17 Update 6 or higher |
| <b>Languages</b>                                             |                                           |
| <b>Online languages</b>                                      |                                           |
| • Number of online/runtime languages                         | 32                                        |
| <b>Project languages</b>                                     |                                           |
| • Languages per project                                      | 32                                        |
| <b>Functionality under WinCC (TIA Portal)</b>                |                                           |
| Libraries                                                    | Yes                                       |
| <b>Applications/options</b>                                  |                                           |
| • Web browser                                                | Yes                                       |
| • Pocket Word                                                | Yes                                       |
| • Pocket Excel                                               | Yes                                       |
| • PDF Viewer                                                 | Yes                                       |
| • Media Player                                               | Yes                                       |
| • SIMATIC WinCC Sm@rtServer                                  | Yes                                       |
| • SIMATIC WinCC Audit                                        | Yes                                       |
| Number of Visual Basic Scripts                               | Yes                                       |
| <b>Task planner</b>                                          |                                           |
| • time-controlled                                            | Yes                                       |
| • task-controlled                                            | Yes                                       |
| <b>Help system</b>                                           |                                           |
| • Number of characters per info text                         | 320                                       |
| <b>Message system</b>                                        |                                           |
| • Number of alarm classes                                    | 32                                        |
| • Bit messages                                               |                                           |
| — Number of bit messages                                     | 6 000                                     |
| • Analog messages                                            |                                           |
| — Number of analog messages                                  | 200                                       |
| • System messages HMI                                        | Yes                                       |
| • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... ) | Yes                                       |
| • Number of characters per message                           | 80                                        |
| • Number of process values per message                       | 8                                         |
| • Acknowledgment groups                                      | Yes                                       |
| • Message indicator                                          | Yes                                       |
| • Message buffer                                             |                                           |
| — Number of entries                                          | 1 024                                     |
| — Circulating buffer                                         | Yes                                       |
| — retentive                                                  | Yes                                       |
| — maintenance-free                                           | Yes                                       |
| <b>Recipe management</b>                                     |                                           |
| • Number of recipes                                          | 500                                       |

|                                        |         |
|----------------------------------------|---------|
| • Data records per recipe              | 1 000   |
| • Entries per data record              | 2 000   |
| • Size of internal recipe memory       | 4 Mbyte |
| • Recipe memory expandable             | Yes     |
| <b>Variables</b>                       |         |
| • Number of variables per device       | 4 096   |
| • Number of variables per screen       | 400     |
| • Limit values                         | Yes     |
| • Multiplexing                         | Yes     |
| • Structures                           | Yes     |
| • Arrays                               | Yes     |
| <b>Images</b>                          |         |
| • Number of configurable images        | 750     |
| • Permanent window/default             | Yes     |
| • Global image                         | Yes     |
| • Pop-up images                        | Yes     |
| • Slide-in images                      | Yes     |
| • Image selection by PLC               | Yes     |
| • Image number in the PLC              | Yes     |
| <b>Image objects</b>                   |         |
| • Number of objects per image          | 600     |
| • 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     |
| • Icons                                | Yes     |
| • Geometric objects                    | Yes     |
| <b>Complex image objects</b>           |         |
| • Number of complex objects per screen | 40      |
| • Alarm view                           | Yes     |
| • Trend view                           | Yes     |
| • User view                            | Yes     |
| • Status/control                       | Yes     |
| • Sm@rtClient view                     | Yes     |
| • Recipe view                          | Yes     |
| • f(x) trend view                      | Yes     |
| • System diagnostics view              | Yes     |
| • Media Player                         | Yes     |
| • HTML browser                         | Yes     |
| • PDF display                          | Yes     |
| • IP camera display                    | Yes     |
| • Bar graphs                           | Yes     |
| • Sliders                              | Yes     |
| • Pointer instruments                  | Yes     |
| • Analog/digital clock                 | Yes     |
| <b>Lists</b>                           |         |
| • Number of text lists per project     | 500     |
| • Number of entries per text list      | 500     |
| • Number of graphics lists per project | 500     |
| • Number of entries per graphics list  | 500     |
| <b>Archiving</b>                       |         |
| • Number of archives per device        | 50      |
| • Number of entries per archive        | 50 000  |
| • 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 <ul style="list-style-type: none"> <li>— Memory card</li> <li>— USB memory</li> <li>— Ethernet</li> </ul> </li> <li>• Data storage format <ul style="list-style-type: none"> <li>— CSV</li> <li>— TXT</li> <li>— RDB</li> </ul> </li> </ul>                                                                            | Yes<br>Yes<br><br>Yes<br>Yes<br>Yes<br><br>Yes<br>Yes<br>Yes                                                                                                    |
| <b>Security</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Number of user groups</li> <li>• Number of user rights</li> <li>• Number of users</li> <li>• Password export/import</li> <li>• SIMATIC Logon</li> </ul>                                                                                                                                                                                                                                                                                                                   | 50<br>32<br>50<br>Yes<br>Yes                                                                                                                                    |
| <b>Logging through printer</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Alarms</li> <li>• Report (shift log)</li> <li>• Hardcopy</li> <li>• Electronic print to file</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   | Yes<br>Yes<br>Yes<br>Yes; PDF, HTML                                                                                                                             |
| <b>Character sets</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Keyboard fonts <ul style="list-style-type: none"> <li>— US English</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | <br>Yes                                                                                                                                                         |
| <b>Transfer (upload/download)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• MPI/PROFIBUS DP</li> <li>• USB</li> <li>• Ethernet</li> <li>• using external storage medium</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    | Yes<br>Yes<br>Yes<br>Yes                                                                                                                                        |
| <b>Process coupling</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• S7-1200</li> <li>• S7-1500</li> <li>• S7-200</li> <li>• S7-300/400</li> <li>• LOGO!</li> <li>• WinAC</li> <li>• SINUMERIK</li> <li>• SIMOTION</li> <li>• Allen Bradley (EtherNet/IP)</li> <li>• Allen Bradley (DF1)</li> <li>• Mitsubishi (MC TCP/IP)</li> <li>• Mitsubishi (FX)</li> <li>• OMRON (FINS TCP)</li> <li>• OMRON (Host Link)</li> <li>• Modicon (Modbus TCP/IP)</li> <li>• Modicon (Modbus RTU)</li> <li>• OPC UA Client</li> <li>• OPC UA Server</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; with SINUMERIK option package<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes |
| <b>Service tools/configuration aids</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Backup/Restore manually</li> <li>• Backup/Restore automatically</li> <li>• Simulation</li> <li>• Device switchover</li> </ul>                                                                                                                                                                                                                                                                                                                                             | Yes<br>Yes<br>Yes<br>Yes                                                                                                                                        |
| <b>Peripherals/Options</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                 |
| Printer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes                                                                                                                                                             |
| SIMATIC HMI MM memory card: Multi Media Card                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes; Up to 128 MB                                                                                                                                               |
| SIMATIC HMI SD memory card: Secure Digital memory card                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Yes; Up to 2 GB                                                                                                                                                 |
| SIMATIC HMI CF memory card Compact Flash Card                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                                                                                                                                                              |

|                                        |                  |
|----------------------------------------|------------------|
| USB memory                             | Yes              |
| SIMATIC IPC USB Flashdrive (USB stick) | Yes; Up to 16 GB |
| SIMATIC HMI USB stick                  | Yes; Up to 8 GB  |
| Network camera                         | Yes              |

Mechanics/material

|                            |     |
|----------------------------|-----|
| Enclosure material (front) |     |
| • Plastic                  | No  |
| • Aluminum                 | Yes |
| • Stainless steel          | No  |

Dimensions

|                            |                               |
|----------------------------|-------------------------------|
| Width of the housing front | 527 mm                        |
| Height of housing front    | 329 mm; Without basic adapter |
| mounting depth             | 101 mm; Without basic adapter |

Weights

|                            |        |
|----------------------------|--------|
| Weight (without packaging) | 8.5 kg |
|----------------------------|--------|

Classifications

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 16      | 27-33-02-01    |
| eClass | 14      | 27-33-02-01    |
| eClass | 12      | 27-33-02-01    |
| eClass | 9.1     | 27-33-02-01    |
| eClass | 9       | 27-33-02-01    |
| eClass | 8       | 27-24-23-02    |
| eClass | 7.1     | 27-24-23-02    |
| eClass | 6       | 27-24-23-02    |
| ETIM   | 10      | EC001412       |
| ETIM   | 9       | EC001412       |
| ETIM   | 8       | EC001412       |
| ETIM   | 7       | EC001412       |

Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)






[Miscellaneous](#)


General Product Approval





[China RoHS](#)




EMV

For use in hazardous locations






[Miscellaneous](#)

[CCC-Ex](#)