

SIMATIC HMI KP1200 Comfort, Comfort Panel, key operation, 12" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, (Microsoft Support included Security updates discontinued) configurable from WinCC Comfort V11



### General information

|                          |                |
|--------------------------|----------------|
| Product type designation | KP1200 Comfort |
|--------------------------|----------------|

### Display

|                   |            |
|-------------------|------------|
| Design of display | TFT        |
| Screen diagonal   | 12.1 in    |
| Display width     | 261.1 mm   |
| Display height    | 163.2 mm   |
| Number of colors  | 16 777 216 |

### Resolution (pixels)

|                               |             |
|-------------------------------|-------------|
| • Horizontal image resolution | 1 280 Pixel |
| • Vertical image resolution   | 800 Pixel   |

### Backlighting

|                                |              |
|--------------------------------|--------------|
| • MTBF backlighting (at 25 °C) | 80 000 h     |
| • Backlight dimmable           | Yes; 0-100 % |

### Control elements

#### Keyboard fonts

|                           |    |
|---------------------------|----|
| • Function keys           |    |
| — Number of function keys | 34 |

|   |                              |
|---|------------------------------|
| • Keys with LED   | Yes                          |
| • System keys   | Yes                          |
| • Numeric keyboard  | Yes                          |
| • alphanumeric keyboard   | Yes; similar to mobile phone |
| <b>Touch operation</b>  |                              |
| • Design as touch screen  | No                           |
| <b>Expansions for operator control of the process</b>                 |                              |
| • DP direct LEDs (LEDs as S7 output I/O)<br>— F1...Fx                 | 34                           |
| • Direct keys (keys as S7 input I/O)<br>— F1...Fx                     | 34                           |
| • Direct keys (touch buttons as S7 input I/O)                         | 0                            |
| <b>Installation type/mounting</b>                                     |                              |
| Mounting position   | vertical                     |
| Mounting in portrait format possible                                  | No                           |
| Mounting in landscape format possible                                 | Yes                          |
| maximum permissible angle of inclination without external ventilation | 35°                          |
| <b>Supply voltage</b>   |                              |
| 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                       |
| <b>Input current</b>  |                              |
| Current consumption (rated value)                                     | 0.85 A                       |
| Starting current inrush I <sup>2</sup> t                              | 0.5 A <sup>2</sup> ·s        |
| <b>Power</b>  |                              |
| Active power input, typ.  | 20 W                         |
| <b>Processor</b>  |                              |
| Processor type  | X86                          |
| <b>Memory</b>   |                              |
| Flash   | Yes                          |
| RAM   | Yes                          |
| Memory available for user data  | 12 Mbyte                     |
| <b>Type of output</b>   |                              |
| Info LED  | Yes                          |
| Power LED   | No                           |
| Error LED   | No                           |
| Acoustics   |                              |
| • Buzzer  | No                           |

- Speaker Yes

## Time of day

### Clock

- Hardware clock (real-time) Yes
- Software clock Yes
- retentive Yes; Back-up duration typically 6 weeks
- synchronizable Yes

## Interfaces

|  |                          |
|--|--------------------------|
| Number of industrial Ethernet interfaces                       | 1; 2 ports (switch)      |
| Number of RS 485 interfaces                                    | 1; RS 422 / 485 combined |
| Number of RS 422 interfaces                                    | 1                        |
| Number of RS 232 interfaces                                    | 0                        |
| Number of USB interfaces                                       | 2; USB 2.0               |
| <ul style="list-style-type: none"> <li>• USB Mini B</li> </ul> | 1; 5-pole                |
| 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                       |

### Industrial Ethernet

- Industrial Ethernet status LED 2
- Number of ports of the integrated switch 2

## Protocols

|                                   |                      |
|-----------------------------------|----------------------|
| PROFINET                          | Yes                  |
| Supports protocol for PROFINET IO | Yes                  |
| IRT                               | Yes; As of WinCC V12 |
| PROFIBUS                          | Yes                  |
| MPI                               | Yes                  |

### Protocols (Ethernet)

- TCP/IP Yes
- DHCP Yes
- SNMP Yes
- DCP Yes
- LLDP Yes

### WEB characteristics

- HTTP Yes
- HTTPS Yes
- HTML Yes
- XML Yes
- CSS Yes
- Active X Yes

|   |                                |
|---|--------------------------------|
| • JavaScript  | Yes                            |
| • Java VM   | No                             |
| <b>Redundancy mode</b>                                  |                                |
| • MRP   | Yes; As of WinCC V12           |
| <b>Further protocols</b>                                |                                |
| • CAN   | No                             |
| • EtherNet/IP   | Yes                            |
| • MODBUS  | Yes                            |
| <b>EMC</b>  |                                |
| <b>Emission of radio interference acc. to EN 55 011</b> |                                |
| • Limit class A, for use in industrial areas            | Yes                            |
| • Limit class B, for use in residential areas           | No                             |
| <b>Degree and class of protection</b>                   |                                |
| IP (at the front)                                       | IP65                           |
| Enclosure Type 4 at the front                           | Yes                            |
| Enclosure Type 4x at the front                          | Yes                            |
| IP (rear)   | IP20                           |
| <b>Standards, approvals, certificates</b>               |                                |
| CE mark   | Yes                            |
| cULus   | Yes                            |
| RCM (formerly C-TICK)                                   | Yes                            |
| KC approval   | Yes                            |
| <b>Use in hazardous areas</b>                           |                                |
| • ATEX Zone 2   | Yes                            |
| • ATEX Zone 22  | Yes                            |
| • IECEx Zone 2  | Yes                            |
| • IECEx Zone 22   | Yes                            |
| • cULus Class I Zone 1                                  | No                             |
| • cULus Class I Zone 2, Division 2                      | Yes                            |
| • FM Class I Division 2                                 | Yes                            |
| <b>Marine approval</b>                                  |                                |
| • Germanischer Lloyd (GL)                               | Yes; As of product version: 10 |
| • American Bureau of Shipping (ABS)                     | Yes; As of product version: 10 |
| • Bureau Veritas (BV)                                   | Yes; As of product version: 10 |
| • Det Norske Veritas (DNV)                              | Yes; As of product version: 10 |
| • Lloyds Register of Shipping (LRS)                     | Yes; As of product version: 10 |
| • Nippon Kaiji Kyokai (Class NK)                        | Yes; As of product version: 10 |
| • Polski Rejestr Statkow (PRS)                          | No                             |
| <b>Ambient conditions</b>                               |                                |
| <b>Ambient temperature during operation</b>             |                                |

|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Operation (vertical installation) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> <li>• Operation (max. tilt angle) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> <li>• Operation (vertical installation, portrait format) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> <li>• Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> </ul> | <p>0 °C</p> <p>50 °C; (55 °C, see entry ID: 64847814)</p> <p>0 °C</p> <p>40 °C</p> <p>0 °C</p> <p>40 °C</p> <p>0 °C</p> <p>35 °C</p> |
| <b>Ambient temperature during storage/transportation</b>   |  |
| <ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>   | <p>-20 °C</p> <p>60 °C</p>   |
| <b>Relative humidity</b>   |  |
| <ul style="list-style-type: none"> <li>• Operation, max.</li> </ul>  | 90 %; no condensation  |
| <b>Operating systems</b>   |  |
| proprietary  | No   |
| <b>pre-installed operating system</b>  |  |
| <ul style="list-style-type: none"> <li>• Windows CE</li> </ul>   | Yes  |
| <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>  |  |
| <ul style="list-style-type: none"> <li>• STEP 7 Basic (TIA Portal)</li> <li>• STEP 7 Professional (TIA Portal)</li> <li>• WinCC flexible Compact</li> <li>• WinCC flexible Standard</li> <li>• WinCC flexible Advanced</li> <li>• WinCC Basic (TIA Portal)</li> <li>• WinCC Comfort (TIA Portal)</li> <li>• WinCC Advanced (TIA Portal)</li> <li>• WinCC Professional (TIA Portal)</li> </ul>  | <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>No</p> <p>Yes; from V11</p> <p>Yes; from V11</p> <p>Yes; from V11</p>           |
| <b>Languages</b>   |  |
| <b>Online languages</b>  |  |
| <ul style="list-style-type: none"> <li>• Number of online/runtime languages</li> </ul>   | 32   |
| <b>Project languages</b>   |  |

- Languages per project

32

## Functionality under WinCC (TIA Portal)

|  |         |
|--|---------|
| Libraries  | Yes     |
| Applications/options   |         |
| • 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     |
| Task planner   |         |
| • time-controlled  | Yes     |
| • task-controlled  | Yes     |
| Help system  |         |
| • Number of characters per info text                             | 70      |
| <b>Message system</b>  |         |
| • Number of alarm classes  | 32      |
| • Bit messages   |         |
| — Number of bit messages   | 4 000   |
| • Analog messages  |         |
| — Number of analog messages                                      | 200     |
| • S7 alarm number procedure                                      | Yes     |
| • System messages HMI  | Yes     |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | 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  | 300     |
| • Data records per recipe  | 500     |
| • Entries per data record  | 1 000   |
| • Size of internal recipe memory                                 | 2 Mbyte |

|  |       |
|--|-------|
| • Recipe memory expandable             | Yes   |
| <b>Variables</b>                       |       |
| • Number of variables per device       | 2 048 |
| • Number of variables per screen       | 400   |
| • Limit values                         | Yes   |
| • Multiplexing                         | Yes   |
| • Structures                           | Yes   |
| • Arrays                               | Yes   |
| <b>Images</b>                          |       |
| • Number of configurable images        | 500   |
| • 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          | 400   |
| • 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 | 20    |
| • 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        | 20 000         |
| • Message archive                      | Yes            |
| • Process value archive                | Yes            |
| • Archiving methods                    |                |
| — Sequential archive                   | Yes            |
| — Short-term archive                   | Yes            |
| • Memory location                      |                |
| — Memory card                          | Yes            |
| — USB memory                           | Yes            |
| — Ethernet                             | Yes            |
| • Data storage format                  |                |
| — CSV                                  | Yes            |
| — TXT                                  | Yes            |
| — RDB                                  | Yes            |
| <b>Security</b>                        |                |
| • Number of user groups                | 50             |
| • Number of user rights                | 32             |
| • Number of users                      | 50             |
| • Password export/import               | Yes            |
| • SIMATIC Logon                        | Yes            |
| <b>Logging through printer</b>         |                |
| • Alarms                               | Yes            |
| • Report (shift log)                   | Yes            |
| • Hardcopy                             | Yes            |
| • Electronic print to file             | Yes; PDF, HTML |
| <b>Character sets</b>                  |                |
| • Keyboard fonts                       |                |
| — US English                           | Yes            |
| <b>Transfer (upload/download)</b>      |                |



|  |                                    |
|--|------------------------------------|
| • MPI/PROFIBUS DP  | Yes                                |
| • USB  | Yes                                |
| • Ethernet   | Yes                                |
| • using external storage medium                          | Yes                                |
| <b>Process coupling</b>                                  |                                    |
| • S7-1200  | Yes                                |
| • S7-1500  | Yes                                |
| • S7-200   | Yes                                |
| • S7-300/400   | Yes                                |
| • LOGO!  | Yes                                |
| • WinAC  | Yes                                |
| • SINUMERIK  | Yes; with SINUMERIK option package |
| • SIMOTION   | Yes                                |
| • Allen Bradley (EtherNet/IP)                            | Yes                                |
| • Allen Bradley (DF1)                                    | Yes                                |
| • Mitsubishi (MC TCP/IP)                                 | Yes                                |
| • Mitsubishi (FX)  | Yes                                |
| • OMRON (FINS TCP)                                       | No                                 |
| • OMRON (LINK/Multilink)                                 | Yes                                |
| • Modicon (Modbus TCP/IP)                                | Yes                                |
| • Modicon (Modbus)                                       | Yes                                |
| • OPC UA Client  | Yes                                |
| • OPC UA Server  | Yes                                |
| <b>Service tools/configuration aids</b>                  |                                    |
| • Backup/Restore manually                                | Yes                                |
| • Backup/Restore automatically                           | Yes                                |
| • Simulation   | Yes                                |
| • Device switchover                                      | Yes                                |
| <b>Peripherals/Options</b>                               |                                    |
| <b>Peripherals</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 | 454 mm |
| Height of housing front    | 289 mm |
| Mounting cutout, width     | 434 mm |
| Mounting cutout, height    | 269 mm |
| Overall depth              | 65 mm  |

## Weights

|                          |        |
|--------------------------|--------|
| Weight without packaging | 4.4 kg |
| Weight incl. packaging   | 5.7 kg |

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