

SIMATIC HMI KP1500 Comfort, Comfort Panel, key operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, WEC 2013, configurable as of WinCC Comfort V14 SP1 with HSP, ambient temperature up to 45 °C



| General information                                                   |                    |
|-----------------------------------------------------------------------|--------------------|
| Product type designation                                              | KP1500 Comfort     |
| Display                                                               |                    |
| Design of display                                                     | TFT                |
| Screen diagonal                                                       | 15.4 in            |
| Display width                                                         | 331.2 mm           |
| Display height                                                        | 207 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; LED, dimmable |
| Control elements                                                      |                    |
| Keyboard fonts                                                        |                    |
| • Function keys                                                       |                    |
| — Number of function keys                                             | 36                 |
| • Keys with LED                                                       | Yes                |
| • System keys                                                         | Yes                |
| • Numeric keyboard                                                    | Yes                |
| • alphanumeric keyboard                                               | Yes                |
| Touch operation                                                       |                    |
| • Design as touch screen                                              | No                 |
| Expansions for operator control of the process                        |                    |
| • DP direct LEDs (LEDs as S7 output I/O)                              |                    |
| — F1...Fx                                                             | 36                 |
| • Direct keys (keys as S7 input I/O)                                  |                    |
| — F1...Fx                                                             | 36                 |
| Installation type/mounting                                            |                    |
| 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             |

|                                            |                                         |
|--------------------------------------------|-----------------------------------------|
| <b>Input current</b>                       |                                         |
| Current consumption (rated value)          | 1.7 A                                   |
| Starting current inrush I <sub>st</sub>    | 0.5 A <sup>2</sup> ·s                   |
| <b>Power</b>                               |                                         |
| Active power input, typ.                   | 41 W                                    |
| <b>Processor</b>                           |                                         |
| Processor type                             | X86                                     |
| <b>Memory</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>                         |                                         |
| Clock                                      |                                         |
| • 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                                       |
| 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 V14 SP1 HSP 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                |
| <b>Interrupts/diagnostics/status information</b>   |                    |
| Diagnoses                                          |                    |
| • Diagnostic information readable                  | Yes; S7 controller |
| <b>EMC</b>                                         |                    |
| 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                 |
| <b>Degree and class of protection</b>              |                    |
| IP (at the front)                                  | IP65               |
| IP (rear)                                          | IP20               |
| NEMA (front)                                       |                    |
| • Enclosure Type 4 at the front                    | Yes                |
| • Enclosure Type 4x at the front                   | Yes                |
| <b>Standards, approvals, certificates</b>          |                    |
| CE mark                                            | Yes                |
| cULus                                              | Yes                |
| RCM (formerly C-TICK)                              | Yes                |
| KC approval                                        | Yes                |
| EAC (formerly Gost-R)                              | 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                |
| • cULus Class II Division 2                        | No                 |
| • FM Class I Division 2                            | Yes                |
| • FM Class II Division 2                           | No                 |
| <b>Marine approval</b>                             |                    |
| • Germanischer Lloyd (GL)                          | No                 |
| • American Bureau of Shipping (ABS)                | Yes                |
| • Bureau Veritas (BV)                              | Yes                |
| • Det Norske Veritas (DNV)                         | Yes                |
| • Korean Register of Shipping (KRS)                | Yes                |
| • Lloyds Register of Shipping (LRS)                | Yes                |
| • Nippon Kaiji Kyokai (Class NK)                   | Yes                |
| • Polski Rejestr Statkow (PRS)                     | No                 |
| • Chinese Classification Society (CCS)             | Yes                |
| <b>Ambient conditions</b>                          |                    |
| Suited for indoor use                              | Yes                |
| Suited for outdoor use                             | No                 |
| <b>Ambient temperature during operation</b>        |                    |
| 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              |
| Operation (vertical installation, portrait format) |                    |
| — For vertical installation, min.                  | 0 °C               |
| — For vertical installation, max.                  | 40 °C              |
| Operation (max. tilt angle, portrait format)       |                    |
| — 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 |
| configuration / header                                      |                                    |
| 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                                      |                                    |
| • 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; V14 SP1 HSP and higher        |
| • WinCC Advanced (TIA Portal)                               | Yes; V14 SP1 HSP and higher        |
| • WinCC Professional (TIA Portal)                           | Yes; V14 SP1 HSP and higher        |
| Languages                                                   |                                    |
| Online languages                                            |                                    |
| • Number of online/runtime languages                        | 32                                 |
| Project languages                                           |                                    |
| • 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                        | 320                                |
| Message system                                              |                                    |
| • 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     |
| Recipe management                      |         |
| • 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     |
| Variables                              |         |
| • Number of variables per device       | 4 096   |
| • Number of variables per screen       | 400     |
| • Limit values                         | Yes     |
| • Multiplexing                         | Yes     |
| • Structures                           | Yes     |
| • Arrays                               | Yes     |
| Images                                 |         |
| • 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     |
| Image objects                          |         |
| • 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     |
| Complex image objects                  |         |
| • 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     |
| Lists                                  |         |
| • 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     |
| Archiving                              |         |

|                                              |                                    |
|----------------------------------------------|------------------------------------|
| • Number of archives per device              | 50                                 |
| • Number of entries per archive              | 50 000                             |
| • 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>                   |                                    |
| 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 | 483 mm  |
| Height of housing front    | 310 mm  |
| Mounting cutout, width     | 450 mm  |
| Mounting cutout, height    | 291 mm  |
| Overall depth              | 73.2 mm |

#### Weights

|                            |        |
|----------------------------|--------|
| Weight (without packaging) | 4.7 kg |
|----------------------------|--------|

#### Classifications

|        | Version | Classification |
|--------|---------|----------------|
| 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 | EMV | For use in hazardous locations |
|--------------------------|-----|--------------------------------|



[Miscellaneous](#)



[KC](#)



|                                |                      |
|--------------------------------|----------------------|
| For use in hazardous locations | Maritime application |
|--------------------------------|----------------------|

[CCC-Ex](#)

[FM](#)



[Miscellaneous](#)



#### Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

#### Maritime application

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