

SIMATIC HMI KP900 Comfort, Comfort Panel, key operation, 9" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable from WinCC Comfort V11



| General information                                                   |                              |
|-----------------------------------------------------------------------|------------------------------|
| Product type designation                                              | KP900 Comfort                |
| Display                                                               |                              |
| Design of display                                                     | TFT                          |
| Screen diagonal                                                       | 9 in                         |
| Display width                                                         | 195 mm                       |
| Display height                                                        | 117 mm                       |
| Number of colors                                                      | 16 777 216                   |
| Resolution (pixels)                                                   |                              |
| • Horizontal image resolution                                         | 800 pixel                    |
| • Vertical image resolution                                           | 480 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                                             | 26                           |
| — Number of function keys with LEDs                                   | 26                           |
| • Keys with LED                                                       | Yes                          |
| • System keys                                                         | Yes                          |
| • Numeric keyboard                                                    | Yes                          |
| • alphanumeric keyboard                                               | Yes; similar to mobile phone |
| Touch operation                                                       |                              |
| • Design as touch screen                                              | No; without                  |
| Expansions for operator control of the process                        |                              |
| • DP direct LEDs (LEDs as S7 output I/O)                              |                              |
| — F1...Fx                                                             | 26                           |
| • Direct keys (keys as S7 input I/O)                                  |                              |
| — F1...Fx                                                             | 26                           |
| • Direct keys (touch buttons as S7 input I/O)                         | 0                            |
| Installation type/mounting                                            |                              |
| Mounting position                                                     | vertical                     |
| Wall mounting/direct mounting                                         | No                           |
| 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)          | 0.75 A                                  |
| Starting current inrush I <sup>2</sup> t   | 0.5 A <sup>2</sup> ·s                   |
| <b>Power</b>                               |                                         |
| Active power input, typ.                   | 18 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                                     |
| <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   | 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                              |
| • USB Mini B                               | 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                                      |
| <b>Industrial Ethernet</b>                 |                                         |
| • Industrial Ethernet status LED           | 2                                       |
| • Number of ports of the integrated switch | 2                                       |
| <b>Protocols</b>                           |                                         |
| PROFINET                                   | Yes                                     |
| Supports protocol for PROFINET IO          | Yes                                     |
| IRT                                        | Yes; As of WinCC V12                    |
| 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; As of WinCC V12                   |
| Further protocols                                  |                                        |
| • CAN                                              | No                                     |
| • MODBUS                                           | Yes                                    |
| Interrupts/diagnostics/status information          |                                        |
| Diagnoses                                          |                                        |
| • Diagnostic information readable                  | Yes; S7 controller                     |
| 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)                                          | IP20                                   |
| NEMA (front)                                       |                                        |
| • Enclosure Type 4 at the front                    | Yes                                    |
| • Enclosure Type 4x at the front                   | Yes                                    |
| Standards, approvals, certificates                 |                                        |
| CE mark                                            | Yes                                    |
| cULus                                              | Yes                                    |
| RCM (formerly C-TICK)                              | Yes                                    |
| KC approval                                        | Yes                                    |
| Use in hazardous areas                             |                                        |
| • 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                                    |
| Marine approval                                    |                                        |
| • Germanischer Lloyd (GL)                          | Yes                                    |
| • American Bureau of Shipping (ABS)                | Yes                                    |
| • Bureau Veritas (BV)                              | Yes                                    |
| • Det Norske Veritas (DNV)                         | Yes                                    |
| • Lloyds Register of Shipping (LRS)                | Yes                                    |
| • Nippon Kaiji Kyokai (Class NK)                   | Yes                                    |
| • Polski Rejestr Statkow (PRS)                     | No                                     |
| Ambient conditions                                 |                                        |
| Ambient temperature during operation               |                                        |
| Operation (vertical installation)                  |                                        |
| — For vertical installation, min.                  | 0 °C                                   |
| — For vertical installation, max.                  | 50 °C; (55 °C, see entry ID: 64847814) |
| 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.                      | 35 °C                                  |
| Ambient temperature during storage/transportation  |                                        |
| • min.                                             | -20 °C                                 |

|                                                              |                       |
|--------------------------------------------------------------|-----------------------|
| • max.                                                       | 60 °C                 |
| Relative humidity                                            |                       |
| • Operation, max.                                            | 90 %; no condensation |
| <b>Operating systems</b>                                     |                       |
| proprietary                                                  | No                    |
| pre-installed operating system                               |                       |
| • Windows CE                                                 | Yes                   |
| <b>configuration / header</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; from V11         |
| • WinCC Advanced (TIA Portal)                                | Yes; from V11         |
| • WinCC Professional (TIA Portal)                            | Yes; from V11         |
| <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                         | 70                    |
| <b>Message system</b>                                        |                       |
| • Number of alarm classes                                    | 32                    |
| • Bit messages                                               | Yes                   |
| — Number of bit messages                                     | 4 000                 |
| • Analog messages                                            | Yes                   |
| — Number of analog messages                                  | 200                   |
| • S7 alarm number procedure                                  | Yes                   |
| • 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                    | 300     |
| • Data records per recipe              | 500     |
| • Entries per data record              | 1 000   |
| • Size of internal recipe memory       | 2 Mbyte |
| • Recipe memory expandable             | Yes     |
| Variables                              |         |
| • Number of variables per device       | 2 048   |
| • Number of variables per screen       | 400     |
| • Limit values                         | Yes     |
| • Multiplexing                         | Yes     |
| • Structures                           | Yes     |
| • Arrays                               | Yes     |
| Images                                 |         |
| • 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     |
| Image objects                          |         |
| • 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     |
| Complex image objects                  |         |
| • 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     |
| 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        | 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>                             |                                    |
| 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 | 361.2 mm |
| Height of housing front    | 230 mm   |
| Mounting cutout, width     | 338 mm   |
| Mounting cutout, height    | 206 mm   |
| Overall depth              | 63 mm    |

#### Weights

|                            |        |
|----------------------------|--------|
| Weight (without packaging) | 2.7 kg |
| Weight (with packaging)    | 3.4 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   | 9       | EC001412       |
| ETIM   | 8       | EC001412       |
| ETIM   | 7       | EC001412       |
| IDEA   | 4       | 6607           |
| UNSPSC | 15      | 43-21-15-06    |

#### Approvals / Certificates

##### General Product Approval

[Miscellaneous](#)



[Manufacturer Declaration](#)



[KC](#)

##### General Product Approval

EMV

For use in hazardous locations



[FM](#)



##### For use in hazardous locations

##### Marine / Shipping

[CCC-Ex](#)

[FM](#)



[Miscellaneous](#)



##### Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



## Marine / Shipping

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



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