

SIPLUS HMI KP900 Comfort based on 6AV2124-1JC01-0AX0 with conformal coating, 0...+50 °C,



Figure similar

| General information                                       |                                    |
|---|------------------------------------|
| Product type designation                                  | KP900 Comfort                      |
| based on  | <a href="#">6AV2124-1JC01-0AX0</a> |
| 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 | 35°                                |

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|--|---|
| ventilation                                |   |
| <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)          | 0.75 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  |
| <b>Redundancy mode</b>  |   |
| Media redundancy  |   |
| — MRP   | Yes; As of WinCC V12  |
| <b>Further protocols</b>  |   |
| • 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>Ambient conditions</b>   |   |
| Ambient temperature during operation                                |   |
| Operation (vertical installation)                                   |   |
| — For vertical installation, min.                                   | 0 °C; = Tmin  |
| — For vertical installation, max.                                   | 50 °C; = Tmax   |
| Operation (max. tilt angle)   |   |
| — At maximum tilt angle, min.                                       | 0 °C; = Tmin  |
| — At maximum tilt angle, max.                                       | 40 °C; = Tmax   |
| Operation (vertical installation, portrait format)                  |   |
| — For vertical installation, min.                                   | 0 °C; = Tmin  |
| — For vertical installation, max.                                   | 40 °C; = Tmax   |
| Operation (max. tilt angle, portrait format)                        |   |
| — At maximum tilt angle, min.                                       | 0 °C; = Tmin  |
| — At maximum tilt angle, max.                                       | 35 °C; = Tmax   |
| Ambient temperature during storage/transportation                   |   |
| • min.  | -20 °C  |
| • max.  | 60 °C   |
| Altitude during operation relating to sea level                     |   |
| • Installation altitude above sea level, max.                       | 5 000 m   |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m) |
| Relative humidity   |   |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)   |
| Resistance  |   |
| Coolants and lubricants   |   |
| — Resistant to commercially available coolants and lubricants       | Yes; Incl. diesel and oil droplets in the air   |
| Use in stationary industrial systems                                |   |
| — to biologically active substances according to EN 60721-3-3       | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request  |

|   |   |
|---|---|
| — to chemically active substances according to EN 60721-3-3   | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  |
| — to mechanically active substances according to EN 60721-3-3   | Yes; Class 3S4 incl. sand, dust, *  |
| <b>Use on ships/at sea</b>  |   |
| — to biologically active substances according to EN 60721-3-6   | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request   |
| — to chemically active substances according to EN 60721-3-6   | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  |
| — to mechanically active substances according to EN 60721-3-6   | Yes; Class 6S3 incl. sand, dust; *  |
| <b>Usage in industrial process technology</b>   |   |
| — Against chemically active substances acc. to EN 60654-4   | Yes; Class 3 (excluding trichlorethylene)   |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04                            | Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) |
| <b>Remark</b>   |   |
| — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04             | * The supplied plug covers must remain in place over the unused interfaces during operation!  |
| <b>Conformal coating</b>  |   |
| • Coatings for printed circuit board assemblies acc. to EN 61086  | Yes; Class 2 for high reliability   |
| • Protection against fouling acc. to EN 60664-3   | Yes; Type 1 protection  |
| • Military testing according to MIL-I-46058C, Amendment 7   | Yes; Discoloration of coating possible during service life  |
| • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | Yes; Conformal coating, Class A   |
| <b>Operating systems</b>  |   |
| proprietary   | No  |
| <b>pre-installed operating system</b>   |   |
| • Windows CE  | 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>   |   |
| • 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     |
| 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 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  | 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            |

| Process coupling              |                                    |
|-------------------------------|------------------------------------|
| • 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                                |

| Service tools/configuration aids |     |
|----------------------------------|-----|
| • Backup/Restore manually        | Yes |
| • Backup/Restore automatically   | Yes |
| • Simulation                     | Yes |
| • Device switchover              | Yes |

| Peripherals/Options                                    |                   |
|--|-------------------|
| 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   |
| mounting 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   | 10      | EC001412       |

|        |    |             |
|--------|----|-------------|
| ETIM   | 9  | EC001412    |
| ETIM   | 8  | EC001412    |
| ETIM   | 7  | EC001412    |
| IDEA   | 4  | 6607        |
| UNSPSC | 15 | 43-21-15-06 |

Approvals / Certificates

General Product Approval

[China RoHS](#)

[Manufacturer Declaration](#)



General Product Approval

EMV

For use in hazardous locations

[China RoHS](#)



[CCC-Ex](#)

Maritime application



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