

SIPLUS HMI KP1500 Comfort for medial exposure with conformal coating based on 6AV2124-1QC02-0AX0



Figure similar

| 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; 0-100 % |
| Control elements | |
| Keyboard fonts | |

| | |
|---|-----------------------|
| • Function keys | |
| — Number of function keys | 36 |
| — Number of function keys with LEDs | 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 |
| Input current | |
| Current consumption (rated value) | 1.5 A |
| Starting current inrush I ² t | 0.5 A ² ·s |
| Power | |
| Active power input, typ. | 36 W |
| Processor | |
| Processor type | X86 |
| Memory | |
| Flash | Yes |
| RAM | Yes |
| Memory available for user data | 24 Mbyte |
| Type of output | |
| Info LED | No |
| Power LED | No |
| Error LED | No |

| | |
|------------------|-----|
| Acoustics | |
| • Buzzer | No |
| • Speaker | Yes |

Time of day

| | |
|------------------------------|-----|
| Clock | |
| • Hardware clock (real-time) | Yes |
| • Software clock | No |
| • retentive | Yes |
| • synchronizable | Yes |

Interfaces

| | |
|--|--------------------------|
| Number of industrial Ethernet interfaces | 3 |
| 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 |

Industrial Ethernet

| | |
|--|---|
| • Industrial Ethernet status LED | 3 |
| • Number of ports of the integrated switch | 2 |

Protocols

| | |
|-----------------------------------|-------------------------------------|
| PROFINET | Yes |
| Supports protocol for PROFINET IO | Yes |
| IRT | Yes; With WinCC, subsequent version |
| 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 |
| Redundancy mode | |
| • MRP | Yes; With WinCC, subsequent version |
| Further protocols | |
| • CAN | No |
| • EtherNet/IP | Yes |
| • MODBUS | Yes |
| Interrupts/diagnostics/status information | |
| Diagnostic messages | |
| • 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 |
| Enclosure Type 4 at the front | Yes |
| Enclosure Type 4x at the front | Yes |
| IP (rear) | IP20 |
| Ambient conditions | |
| Suited for indoor use | Yes |
| Suited for outdoor use | No |
| 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, min. | 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, min. | 40 °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, * |
| Use on ships/at sea | |
| — 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; * |
| Remark | |
| — 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! |
| Conformal coating | |
| • Coatings for printed circuit board assemblies acc. to EN 61086 | Yes; Class 2 for high availability |
| • 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 |
| Operating systems | |
| proprietary | No |
| pre-installed operating system | |

- Windows CE

Yes

Configuration

| | |
|--|-----|
| 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; V11 SP2 or higher |
| • WinCC Advanced (TIA Portal) | Yes; V11 SP2 or higher |
| • WinCC Professional (TIA Portal) | Yes; V11 SP2 or 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 |
| • 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 |
| 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 |
| • 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 |
| • 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 |
| Security | |
| • Number of user groups | 50 |
| • Number of user rights | 32 |
| • Number of users | 50 |
| • Password export/import | Yes |
| • SIMATIC Logon | Yes |
| Logging through printer | |
| • Alarms | Yes |
| • Report (shift log) | Yes |
| • Hardcopy | Yes |
| • Electronic print to file | Yes; PDF, HTML |
| Character sets | |
| • Keyboard fonts | |
| — US English | Yes |
| Transfer (upload/download) | |
| • MPI/PROFIBUS DP | Yes |
| • USB | Yes |
| • Ethernet | Yes |
| • using external storage medium | No |
| Process coupling | |
| • S7-1200 | Yes |
| • S7-1500 | Yes |
| • S7-200 | Yes |
| • S7-300/400 | Yes |
| • LOGO! | Yes |
| • WinAC | Yes |
| • SINUMERIK | No |
| • SIMOTION | No; With WinCC, subsequent version |
| • 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 |
| Service tools/configuration aids | |
| • Backup/Restore manually | Yes |
| • Backup/Restore automatically | Yes |
| • Simulation | Yes |

- Device switchover

Yes

Peripherals/Options

Peripherals

- Printer
- SIMATIC HMI MM memory card: Multi Media Card
- SIMATIC HMI SD memory card: Secure Digital memory card
- USB memory

Yes

Yes

Yes

Yes

Mechanics/material

Enclosure material (front)

- Plastic
- Aluminum
- Stainless steel

No

Yes

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 | 75 mm |

Weights

Weight without packaging 5.4 kg

last modified: 08/29/2019