

SIPLUS HMI KTP400 Basic Color PN -20...+60°C with conformal coating based on 6AV2123-2DB03-0AX0 . 4" TFT display, 65536 colors PROFINET" interface



Figure similar

| General information            |                                          |
|--------------------------------|------------------------------------------|
| Product type designation       | KTP400 Basic color PN                    |
| Display                        |                                          |
| Design of display              | TFT widescreen display, LED backlighting |
| Screen diagonal                | 4.3 in                                   |
| Display width                  | 95 mm                                    |
| Display height                 | 53.9 mm                                  |
| Number of colors               | 65 536                                   |
| Resolution (pixels)            |                                          |
| • Horizontal image resolution  | 480 Pixel                                |
| • Vertical image resolution    | 272 Pixel                                |
| Backlighting                   |                                          |
| • MTBF backlighting (at 25 °C) | 20 000 h                                 |
| • Backlight dimmable           | Yes                                      |
| Control elements               |                                          |
| Keyboard fonts                 |                                          |

|                                                                                                                                                                                                                                                                                                          |                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Function keys <ul style="list-style-type: none"> <li>— Number of function keys</li> <li>— Number of function keys with LEDs</li> </ul> </li> <li>• Keys with LED</li> <li>• System keys</li> <li>• Numeric keyboard</li> <li>• alphanumeric keyboard</li> </ul> | 4<br>0<br>No<br>No<br>Yes; Onscreen keyboard<br>Yes; Onscreen keyboard |
| Touch operation                                                                                                                                                                                                                                                                                          |                                                                        |
| <ul style="list-style-type: none"> <li>• Design as touch screen</li> </ul>                                                                                                                                                                                                                               | Yes                                                                    |
| Installation type/mounting                                                                                                                                                                                                                                                                               |                                                                        |
| Mounting in portrait format possible                                                                                                                                                                                                                                                                     | Yes                                                                    |
| Mounting in landscape format possible                                                                                                                                                                                                                                                                    | Yes                                                                    |
| maximum permissible angle of inclination without external ventilation                                                                                                                                                                                                                                    | 35°                                                                    |
| Supply voltage                                                                                                                                                                                                                                                                                           |                                                                        |
| Type of supply voltage                                                                                                                                                                                                                                                                                   | 24 V 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)                                                                                                                                                                                                                                                                        | 125 mA                                                                 |
| Starting current inrush $I^2t$                                                                                                                                                                                                                                                                           | 0.2 A <sup>2</sup> ·s                                                  |
| Power                                                                                                                                                                                                                                                                                                    |                                                                        |
| Active power input, typ.                                                                                                                                                                                                                                                                                 | 3 W                                                                    |
| Processor                                                                                                                                                                                                                                                                                                |                                                                        |
| Processor type                                                                                                                                                                                                                                                                                           | ARM                                                                    |
| Memory                                                                                                                                                                                                                                                                                                   |                                                                        |
| Flash                                                                                                                                                                                                                                                                                                    | Yes                                                                    |
| RAM                                                                                                                                                                                                                                                                                                      | Yes                                                                    |
| Memory available for user data                                                                                                                                                                                                                                                                           | 10 Mbyte                                                               |
| Type of output                                                                                                                                                                                                                                                                                           |                                                                        |
| Acoustics <ul style="list-style-type: none"> <li>• Buzzer</li> <li>• Speaker</li> </ul>                                                                                                                                                                                                                  | Yes<br>No                                                              |
| Time of day                                                                                                                                                                                                                                                                                              |                                                                        |
| Clock <ul style="list-style-type: none"> <li>• Hardware clock (real-time)</li> <li>• Software clock</li> <li>• retentive</li> </ul>                                                                                                                                                                      | Yes<br>Yes<br>Yes                                                      |

- synchronizable

Yes

## Interfaces

|                                          |                |
|------------------------------------------|----------------|
| Number of industrial Ethernet interfaces | 1              |
| Number of RS 485 interfaces              | 0              |
| Number of RS 422 interfaces              | 0              |
| Number of RS 232 interfaces              | 0              |
| Number of USB interfaces                 | 1; Up to 16 GB |
| Number of 20 mA interfaces (TTY)         | 0              |
| Number of parallel interfaces            | 0              |
| Number of other interfaces               | 0              |
| Number of SD card slots                  | 0              |
| With software interfaces                 | No             |

## Industrial Ethernet

- Industrial Ethernet status LED

2

## Protocols

|                                   |     |
|-----------------------------------|-----|
| PROFINET                          | Yes |
| Supports protocol for PROFINET IO | No  |
| IRT                               | No  |
| PROFIBUS                          | No  |
| MPI                               | No  |

## Protocols (Ethernet)

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

Yes  
Yes  
Yes  
Yes  
Yes

## WEB characteristics

- HTTP
- HTML

No  
No

## Further protocols

- CAN
- EtherNet/IP
- MODBUS

No  
Yes  
Yes; Modicon (MODBUS TCP/IP)

## Interrupts/diagnostics/status information

### Diagnostic messages

- Diagnostic information readable

No

## EMC

### Emission of radio interference acc. to EN 55 011

- Limit class A, for use in industrial areas
- Limit class B, for use in residential areas

Yes  
No

| Degree and class of protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| IP (at the front)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 65  |
| Enclosure Type 4 at the front                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes |
| Enclosure Type 4x at the front                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Yes |
| IP (rear)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20  |
| Ambient conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |
| Ambient temperature during operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |
| <ul style="list-style-type: none"> <li>Operation (vertical installation) <ul style="list-style-type: none"> <li>— For vertical installation, min. -20 °C; = Tmin</li> <li>— For vertical installation, max. 60 °C; = Tmax</li> </ul> </li> <li>Operation (max. tilt angle) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min. -20 °C; = Tmin</li> <li>— At maximum tilt angle, min. 40 °C; = Tmax</li> </ul> </li> <li>Operation (vertical installation, portrait format) <ul style="list-style-type: none"> <li>— For vertical installation, min. -20 °C; = Tmin</li> <li>— For vertical installation, max. 40 °C; = Tmax</li> </ul> </li> <li>Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min. -20 °C; = Tmin</li> <li>— At maximum tilt angle, min. 35 °C; = Tmax</li> </ul> </li> </ul> |     |
| Ambient temperature during storage/transportation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |
| <ul style="list-style-type: none"> <li>min. -20 °C</li> <li>max. 60 °C</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |
| Altitude during operation relating to sea level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |     |
| <ul style="list-style-type: none"> <li>Installation altitude above sea level, max. 5 000 m</li> <li>Ambient air temperature-barometric pressure-altitude<br/>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)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |
| Relative humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |
| <ul style="list-style-type: none"> <li>With condensation, tested in accordance with IEC 60068-2-38, max. 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |
| Resistance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |
| Coolants and lubricants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |
| <ul style="list-style-type: none"> <li>— Resistant to commercially available coolants and lubricants Yes; Incl. diesel and oil droplets in the air</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |
| Use in stationary industrial systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |
| <ul style="list-style-type: none"> <li>— 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</li> <li>— to chemically active substances according to EN 60721-3-3 Yes; Class 3C4 (RH &lt; 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</li> <li>— to mechanically active substances according to EN 60721-3-3 Yes; Class 3S4 incl. sand, dust, *</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                  |     |
| 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; *                                                                                                                                                  |
| <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 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                                                                                                                                                     |
| <b>Operating systems</b>                                                                                                |                                                                                                                                                                                     |
| proprietary                                                                                                             | Yes                                                                                                                                                                                 |
| <b>pre-installed operating system</b>                                                                                   |                                                                                                                                                                                     |
| • Windows CE                                                                                                            | No                                                                                                                                                                                  |
| <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)                                                                                             | Yes; via integrated WinCC Basic (TIA Portal)                                                                                                                                        |
| • STEP 7 Professional (TIA Portal)                                                                                      | Yes; via integrated WinCC Basic (TIA Portal)                                                                                                                                        |
| • WinCC flexible Compact                                                                                                | No                                                                                                                                                                                  |
| • WinCC flexible Standard                                                                                               | No                                                                                                                                                                                  |
| • WinCC flexible Advanced                                                                                               | No                                                                                                                                                                                  |
| • WinCC Basic (TIA Portal)                                                                                              | Yes                                                                                                                                                                                 |
| • WinCC Comfort (TIA Portal)                                                                                            | Yes                                                                                                                                                                                 |

|                                                                  |                                                               |
|------------------------------------------------------------------|---------------------------------------------------------------|
| • WinCC Advanced (TIA Portal)                                    | Yes                                                           |
| • WinCC Professional (TIA Portal)                                | Yes                                                           |
| <b>Languages</b>                                                 |                                                               |
| <b>Online languages</b>                                          |                                                               |
| • Number of online/runtime languages                             | 10                                                            |
| <b>Project languages</b>                                         |                                                               |
| • Languages per project                                          | 32                                                            |
| <b>Functionality under WinCC (TIA Portal)</b>                    |                                                               |
| Libraries                                                        | Yes                                                           |
| Number of Visual Basic Scripts                                   | No                                                            |
| Task planner                                                     | Yes                                                           |
| • time-controlled                                                | No                                                            |
| • task-controlled                                                | Yes                                                           |
| Help system                                                      | Yes                                                           |
| • Number of characters per info text                             | 500                                                           |
| <b>Message system</b>                                            |                                                               |
| • Number of alarm classes                                        | 32                                                            |
| • Bit messages                                                   |                                                               |
| — Number of bit messages                                         | 1 000                                                         |
| • Analog messages                                                |                                                               |
| — Number of analog messages                                      | 25                                                            |
| • S7 alarm number procedure                                      | No                                                            |
| • System messages HMI                                            | Yes                                                           |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes; System message buffer of the SIMATIC S7-1200 and S7-1500 |
| • Number of characters per message                               | 80                                                            |
| • Number of process values per message                           | 8                                                             |
| • Acknowledgment groups                                          | Yes                                                           |
| • Message indicator                                              | Yes                                                           |
| • Message buffer                                                 | Yes                                                           |
| — Number of entries                                              | 256                                                           |
| — Circulating buffer                                             | Yes                                                           |
| — retentive                                                      | Yes                                                           |
| — maintenance-free                                               | Yes                                                           |
| <b>Recipe management</b>                                         |                                                               |
| • Number of recipes                                              | 50                                                            |
| • Data records per recipe                                        | 100                                                           |
| • Entries per data record                                        | 100                                                           |
| • Size of internal recipe memory                                 | 256 kbyte                                                     |
| • Recipe memory expandable                                       | No                                                            |
| <b>Variables</b>                                                 |                                                               |

|                                        |                                                               |
|----------------------------------------|---------------------------------------------------------------|
| • Number of variables per device       | 800                                                           |
| • Number of variables per screen       | 100                                                           |
| • Limit values                         | Yes                                                           |
| • Multiplexing                         | Yes                                                           |
| • Structures                           | No                                                            |
| • Arrays                               | Yes                                                           |
| <b>Images</b>                          |                                                               |
| • Number of configurable images        | 250                                                           |
| • Permanent window/default             | Yes                                                           |
| • Global image                         | Yes                                                           |
| • Image selection by PLC               | Yes                                                           |
| • Image number in the PLC              | Yes                                                           |
| <b>Image objects</b>                   |                                                               |
| • Number of objects per image          | 100                                                           |
| • 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 | 10                                                            |
| • Alarm view                           | Yes                                                           |
| • Trend view                           | Yes                                                           |
| • User view                            | Yes                                                           |
| • Status/control                       | No                                                            |
| • Sm@rtClient view                     | No                                                            |
| • Recipe view                          | Yes                                                           |
| • f(x) trend view                      | No                                                            |
| • System diagnostics view              | Yes; System message buffer of the SIMATIC S7-1200 and S7-1500 |
| • Media Player                         | No                                                            |
| • Bar graphs                           | Yes                                                           |
| • Sliders                              | No                                                            |
| • Pointer instruments                  | No                                                            |
| • Analog/digital clock                 | No                                                            |
| <b>Lists</b>                           |                                                               |

|                                        |                           |
|----------------------------------------|---------------------------|
| • Number of text lists per project     | 150                       |
| • Number of entries per text list      | 100                       |
| • Number of graphics lists per project | 100                       |
| • Number of entries per graphics list  | 100                       |
| <b>Archiving</b>                       |                           |
| • Number of archives per device        | 2                         |
| • Number of entries per archive        | 10 000                    |
| • Message archive                      | Yes                       |
| • Process value archive                | Yes                       |
| • Archiving methods                    |                           |
| — Sequential archive                   | Yes                       |
| — Short-term archive                   | Yes                       |
| • Memory location                      |                           |
| — Memory card                          | No                        |
| — USB memory                           | Yes                       |
| — Ethernet                             | No                        |
| • Data storage format                  |                           |
| — CSV                                  | No                        |
| — TXT                                  | Yes                       |
| — RDB                                  | No                        |
| <b>Security</b>                        |                           |
| • Number of user groups                | 50                        |
| • Number of user rights                | 32                        |
| • Number of users                      | 50                        |
| • Password export/import               | Yes; Possible via ProSave |
| • SIMATIC Logon                        | No                        |
| <b>Character sets</b>                  |                           |
| • Keyboard fonts                       |                           |
| — US English                           | Yes                       |
| <b>Transfer (upload/download)</b>      |                           |
| • MPI/PROFIBUS DP                      | No                        |
| • USB                                  | No                        |
| • Ethernet                             | Yes                       |
| • using external storage medium        | No                        |
| <b>Process coupling</b>                |                           |
| • S7-1200                              | Yes                       |
| • S7-1500                              | Yes                       |
| • S7-200                               | Yes                       |
| • S7-300/400                           | Yes                       |
| • LOGO!                                | Yes                       |
| • WinAC                                | Yes                       |

|                               |     |
|-------------------------------|-----|
| • SINUMERIK                   | No  |
| • SIMOTION                    | Yes |
| • Allen Bradley (EtherNet/IP) | Yes |
| • Allen Bradley (DF1)         | No  |
| • Mitsubishi (MC TCP/IP)      | Yes |
| • Mitsubishi (FX)             | No  |
| • OMRON (FINS TCP)            | No  |
| • OMRON (LINK/Multilink)      | No  |
| • Modicon (Modbus TCP/IP)     | Yes |
| • Modicon (Modbus)            | No  |

| Service tools/configuration aids |                           |
|----------------------------------|---------------------------|
| • Backup/Restore manually        | Yes; Possible via ProSave |
| • Backup/Restore automatically   | No                        |
| • Simulation                     | Yes                       |
| • Device switchover              | Yes                       |

| Peripherals/Options                                    |     |
|--------------------------------------------------------|-----|
| Printer                                                | No  |
| SIMATIC HMI MM memory card: Multi Media Card           | No  |
| SIMATIC HMI SD memory card: Secure Digital memory card | No  |
| USB memory                                             | Yes |

| Mechanics/material         |     |
|----------------------------|-----|
| Enclosure material (front) |     |
| • Plastic                  | Yes |
| • Aluminum                 | No  |
| • Stainless steel          | No  |

| Dimensions                 |        |
|----------------------------|--------|
| Width of the housing front | 141 mm |
| Height of housing front    | 116 mm |
| Mounting cutout, width     | 123 mm |
| Mounting cutout, height    | 99 mm  |
| Overall depth              | 33 mm  |

| Weights                  |       |
|--------------------------|-------|
| Weight without packaging | 360 g |
| Weight incl. packaging   | 470 g |

**last modified:** 11/15/2019