

SIPLUS HMI KTP1200 Basic DP -10...+50°C with conformal coating based on 6AV2123-2MA03-0AX0 . Key/touch "operation, ""12"" TFT display," 65536 colors PROFIBUS interface, configurable as of WinCC Basic V13/ STEP 7 Basic V13, contains open source software, which is provided free of charge See enclosed CD-ROM



### General information

|                          |                        |
|--------------------------|------------------------|
| Product type designation | KTP1200 Basic color DP |
|--------------------------|------------------------|

### Display

|                   |                                          |
|-------------------|------------------------------------------|
| Design of display | TFT widescreen display, LED backlighting |
| Screen diagonal   | 12 in                                    |
| Display width     | 261.1 mm                                 |
| Display height    | 163.2 mm                                 |
| Number of colors  | 65 536                                   |

### Resolution (pixels)

|                               |             |
|-------------------------------|-------------|
| • Horizontal image resolution | 1 280 Pixel |
| • Vertical image resolution   | 800 Pixel   |

### Backlighting

|                                |          |
|--------------------------------|----------|
| • MTBF backlighting (at 25 °C) | 20 000 h |
| • Backlight dimmable           | Yes      |

### Control elements

#### Keyboard fonts

|                           |    |
|---------------------------|----|
| • Function keys           |    |
| — Number of function keys | 10 |

|                                                                       |                                         |
|-----------------------------------------------------------------------|-----------------------------------------|
| — Number of function keys with LEDs                                   | 0                                       |
| • Keys with LED                                                       | No                                      |
| • System keys                                                         | No                                      |
| • Numeric keyboard                                                    | Yes; Onscreen keyboard                  |
| • alphanumeric keyboard                                               | Yes; Onscreen keyboard                  |
| Touch operation                                                       |                                         |
| • Design as touch screen                                              | 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                                                | 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)                                     | 550 mA                                  |
| Starting current inrush I <sup>2</sup> t                              | 0.2 A <sup>2</sup> ·s                   |
| Power                                                                 |                                         |
| Active power input, typ.                                              | 13.2 W                                  |
| Processor                                                             |                                         |
| Processor type                                                        | ARM                                     |
| Memory                                                                |                                         |
| Flash                                                                 | Yes                                     |
| RAM                                                                   | Yes                                     |
| Memory available for user data                                        | 10 Mbyte                                |
| Type of output                                                        |                                         |
| Acoustics                                                             |                                         |
| • Buzzer                                                              | Yes                                     |
| • Speaker                                                             | No                                      |
| Time of day                                                           |                                         |
| Clock                                                                 |                                         |
| • Hardware clock (real-time)                                          | Yes                                     |
| • Software clock                                                      | Yes                                     |
| • retentive                                                           | Yes; Back-up duration typically 6 weeks |
| • synchronizable                                                      | Yes                                     |
| Interfaces                                                            |                                         |

|                                                         |                           |
|---------------------------------------------------------|---------------------------|
| Number of industrial Ethernet interfaces                | 0                         |
| Number of RS 485 interfaces                             | 1                         |
| Number of RS 422 interfaces                             | 1; together with RS 485   |
| Number of RS 232 interfaces                             | 0; with optional adapter  |
| 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                        |
| <b>Industrial Ethernet</b>                              |                           |
| • Industrial Ethernet status LED                        | 0                         |
| <b>Protocols</b>                                        |                           |
| PROFINET                                                | No                        |
| Supports protocol for PROFINET IO                       | No                        |
| IRT                                                     | No                        |
| PROFIBUS                                                | Yes                       |
| MPI                                                     | Yes                       |
| <b>Protocols (Ethernet)</b>                             |                           |
| • TCP/IP                                                | No                        |
| • DHCP                                                  | No                        |
| • SNMP                                                  | No                        |
| • DCP                                                   | No                        |
| • LLDP                                                  | No                        |
| <b>WEB characteristics</b>                              |                           |
| • HTTP                                                  | No                        |
| • HTML                                                  | No                        |
| <b>Redundancy mode</b>                                  |                           |
| • MRP                                                   | No                        |
| <b>Further protocols</b>                                |                           |
| • CAN                                                   | No                        |
| • EtherNet/IP                                           | No                        |
| • MODBUS                                                | Yes; Modicon (MODBUS RTU) |
| <b>Interrupts/diagnostics/status information</b>        |                           |
| <b>Diagnostic messages</b>                              |                           |
| • Diagnostic information readable                       | No                        |
| <b>EMC</b>                                              |                           |
| <b>Emission of radio interference acc. to EN 55 011</b> |                           |
| • 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                                                                                                                                                                                                                       |
| Enclosure Type 4 at the front                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                                                                                                                                                                                                                        |
| Enclosure Type 4x at the front                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                                                                                                                                                                                                                        |
| IP (rear)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | IP20                                                                                                                                                                                                                       |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                            |
| Suited for indoor use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes                                                                                                                                                                                                                        |
| Suited for outdoor use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                                                                         |
| <b>Ambient temperature during operation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Operation (vertical installation) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> <li>• Operation (max. tilt angle) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> <li>• Operation (vertical installation, portrait format) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> <li>• Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> </ul> | -10 °C; = Tmin<br>50 °C<br>-10 °C; = Tmin<br>40 °C<br>-10 °C; = Tmin<br>40 °C<br>-10 °C; = Tmin<br>35 °C                                                                                                                   |
| <b>Ambient temperature during storage/transportation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -20 °C<br>60 °C                                                                                                                                                                                                            |
| <b>Altitude during operation relating to sea level</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5 000 m<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) |
| <b>Relative humidity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position                                                                                                                |
| <b>Resistance</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                            |
| <b>Coolants and lubricants</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                            |
| — Resistant to commercially available coolants and lubricants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes; Incl. diesel and oil droplets in the air                                                                                                                                                                              |
| <b>Use in stationary industrial systems</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                            |
| — 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; *                                                                                                                                                  |
| Usage in industrial process technology                                                                                  |                                                                                                                                                                                     |
| — 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) |
| 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                                                                                                             | Yes                                                                                                                                                                                 |
| pre-installed operating system                                                                                          |                                                                                                                                                                                     |
| • Windows CE                                                                                                            | No                                                                                                                                                                                  |
| 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)                                                                                             | 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 |

## Languages

|                                      |    |
|--------------------------------------|----|
| Online languages                     |    |
| • Number of online/runtime languages | 10 |
| Project languages                    |    |
| • Languages per project              | 32 |

## Functionality under WinCC (TIA Portal)

|                                                                  |                                                               |
|------------------------------------------------------------------|---------------------------------------------------------------|
| Libraries                                                        | Yes                                                           |
| Applications/options                                             |                                                               |
| • Web browser                                                    | 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                                                           |
| Message system                                                   |                                                               |
| • 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                                                 |                                                               |
| — Number of entries                                              | 256                                                           |
| — Circulating buffer                                             | Yes                                                           |
| — retentive                                                      | Yes                                                           |
| — maintenance-free                                               | Yes                                                           |
| Recipe management                                                |                                                               |
| • 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     | 300    |
| • 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    |
| • SIMATIC Logon                        | No     |
| <b>Character sets</b>                  |        |
| • Keyboard fonts                       |        |
| — US English                           | Yes    |
| <b>Transfer (upload/download)</b>      |        |
| • MPI/PROFIBUS DP                      | Yes    |
| • USB                                  | No     |
| • Ethernet                             | No     |
| • 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                                            | Yes; No access to NCK data                                                                     |
| • SIMOTION                                             | Yes                                                                                            |
| • Allen Bradley (EtherNet/IP)                          | No                                                                                             |
| • Allen Bradley (DF1)                                  | Yes                                                                                            |
| • Mitsubishi (MC TCP/IP)                               | No                                                                                             |
| • Mitsubishi (FX)                                      | Yes                                                                                            |
| • OMRON (FINS TCP)                                     | No                                                                                             |
| • OMRON (LINK/Multilink)                               | Yes                                                                                            |
| • Modicon (Modbus TCP/IP)                              | No                                                                                             |
| • Modicon (Modbus)                                     | Yes                                                                                            |
| <b>Service tools/configuration aids</b>                |                                                                                                |
| • Backup/Restore manually                              | Yes                                                                                            |
| • Backup/Restore automatically                         | No                                                                                             |
| • Simulation                                           | Yes                                                                                            |
| • Device switchover                                    | Yes                                                                                            |
| <b>Peripherals/Options</b>                             |                                                                                                |
| Printer                                                | No                                                                                             |
| SIMATIC HMI MM memory card: Multi Media Card           | No                                                                                             |
| SIMATIC HMI SD memory card: Secure Digital memory card | No                                                                                             |
| USB memory                                             | Yes                                                                                            |
| <b>Mechanics/material</b>                              |                                                                                                |
| Enclosure material (front)                             |                                                                                                |
| • Plastic                                              | Yes                                                                                            |
| • Aluminum                                             | No                                                                                             |
| • Stainless steel                                      | No                                                                                             |
| <b>Dimensions</b>                                      |                                                                                                |
| Width of the housing front                             | 330 mm                                                                                         |
| Height of housing front                                | 245 mm                                                                                         |
| Mounting cutout, width                                 | 310 mm                                                                                         |
| Mounting cutout, height                                | 221 mm                                                                                         |
| Overall depth                                          | 60 mm                                                                                          |
| <b>Weights</b>                                         |                                                                                                |
| Weight without packaging                               | 1 710 g                                                                                        |
| Weight incl. packaging                                 | 2.2 kg                                                                                         |
| <b>last modified:</b>                                  | 11/25/2019  |