

SIMATIC HMI, KTP1200 Basic, Basic Panel, Key/touch operation, 12" TFT display, 65536 colors, PROFINET interface, configurable from WinCC Basic V13/ STEP 7 Basic V13, contains open-source software, which is provided free of charge see enclosed CD



| General information                                                   |                                          |
|-----------------------------------------------------------------------|------------------------------------------|
| Product type designation                                              | KTP1200 Basic color PN                   |
| 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                                                              |                                          |
| • 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; Analog-resistive                    |
| Installation type/mounting                                            |                                          |
| Mounting position                                                     | vertical                                 |
| 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)                                     | 510 mA                                   |
| Starting current inrush I <sub>st</sub>                               | 0.2 A <sup>2</sup> ·s                    |

|                                                  |                                         |
|--------------------------------------------------|-----------------------------------------|
| <b>Power</b>                                     |                                         |
| Active power input, typ.                         | 12.2 W                                  |
| <b>Processor</b>                                 |                                         |
| Processor type                                   | ARM                                     |
| <b>Storage</b>                                   |                                         |
| Flash                                            | Yes                                     |
| RAM                                              | Yes                                     |
| Memory available for user data                   | 10 Mbyte                                |
| <b>Type of output</b>                            |                                         |
| Acoustics                                        |                                         |
| • Buzzer                                         | Yes                                     |
| • Speaker                                        | No                                      |
| <b>Time of day</b>                               |                                         |
| Clock                                            |                                         |
| • Hardware clock (real-time)                     | Yes                                     |
| • Software clock                                 | Yes                                     |
| • retentive                                      | Yes; Back-up duration typically 6 weeks |
| • synchronizable                                 | Yes                                     |
| <b>Interfaces</b>                                |                                         |
| Number of industrial Ethernet interfaces         | 1                                       |
| 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                                      |
| <b>Industrial Ethernet</b>                       |                                         |
| • Industrial Ethernet status LED                 | 2                                       |
| <b>Protocols</b>                                 |                                         |
| PROFINET                                         | Yes                                     |
| Supports protocol for PROFINET IO                | No                                      |
| IRT                                              | No                                      |
| PROFIBUS                                         | No                                      |
| EtherNet/IP                                      | Yes                                     |
| MPI                                              | No                                      |
| <b>Protocols (Ethernet)</b>                      |                                         |
| • TCP/IP                                         | Yes                                     |
| • DHCP                                           | Yes                                     |
| • DCP                                            | Yes                                     |
| • LLDP                                           | Yes                                     |
| <b>WEB characteristics</b>                       |                                         |
| • HTTP                                           | No                                      |
| • HTML                                           | No                                      |
| <b>Redundancy mode</b>                           |                                         |
| Media redundancy                                 |                                         |
| — MRP                                            | No                                      |
| <b>Further protocols</b>                         |                                         |
| • CAN                                            | No                                      |
| • MODBUS                                         | Yes; Modicon (MODBUS TCP/IP)            |
| <b>Interrupts/diagnostics/status information</b> |                                         |
| <b>Diagnoses</b>                                 |                                         |
| • Diagnostic information readable                | No                                      |
| <b>EMC</b>                                       |                                         |
| Emission of radio interference acc. to EN 55 011 |                                         |
| • Limit class A, for use in industrial areas     | Yes                                     |

|                                                           |                       |
|-----------------------------------------------------------|-----------------------|
| • Limit class B, for use in residential areas             | No                    |
| <b>Degree and class of protection</b>                     |                       |
| IP (at the front)                                         | IP65                  |
| IP (rear)                                                 | IP20                  |
| NEMA (front)                                              |                       |
| • Enclosure Type 4 at the front                           | Yes                   |
| • Enclosure Type 4x at the front                          | Yes                   |
| <b>Standards, approvals, certificates</b>                 |                       |
| CE mark                                                   | Yes                   |
| cULus                                                     | Yes                   |
| RCM (formerly C-TICK)                                     | Yes                   |
| KC approval                                               | Yes                   |
| <b>Use in hazardous areas</b>                             |                       |
| • ATEX Zone 2                                             | No                    |
| • ATEX Zone 22                                            | No                    |
| • IECEx Zone 2                                            | No                    |
| • IECEx Zone 22                                           | No                    |
| • cULus Class I Zone 1                                    | No                    |
| • cULus Class I Zone 2, Division 2                        | No                    |
| • FM Class I Division 2                                   | No                    |
| <b>Marine approval</b>                                    |                       |
| • Germanischer Lloyd (GL)                                 | Yes                   |
| • American Bureau of Shipping (ABS)                       | Yes                   |
| • Bureau Veritas (BV)                                     | Yes                   |
| • Det Norske Veritas (DNV)                                | Yes                   |
| • Lloyds Register of Shipping (LRS)                       | Yes                   |
| • Nippon Kaiji Kyokai (Class NK)                          | Yes                   |
| • Polski Rejestr Statkow (PRS)                            | No                    |
| • Chinese Classification Society (CCS)                    | No                    |
| <b>Ambient conditions</b>                                 |                       |
| <b>Ambient temperature during operation</b>               |                       |
| <b>Operation (vertical installation)</b>                  |                       |
| — For vertical installation, min.                         | 0 °C                  |
| — For vertical installation, max.                         | 50 °C                 |
| <b>Operation (max. tilt angle)</b>                        |                       |
| — At maximum tilt angle, min.                             | 0 °C                  |
| — At maximum tilt angle, max.                             | 40 °C                 |
| <b>Operation (vertical installation, portrait format)</b> |                       |
| — For vertical installation, min.                         | 0 °C                  |
| — For vertical installation, max.                         | 40 °C                 |
| <b>Operation (max. tilt angle, portrait format)</b>       |                       |
| — At maximum tilt angle, min.                             | 0 °C                  |
| — At maximum tilt angle, max.                             | 35 °C                 |
| <b>Ambient temperature during storage/transportation</b>  |                       |
| • min.                                                    | -20 °C                |
| • max.                                                    | 60 °C                 |
| <b>Relative humidity</b>                                  |                       |
| • Operation, max.                                         | 90 %; no condensation |
| <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>                                            |                                                               |
| Online languages                                            |                                                               |
| • Number of online/runtime languages                        | 10                                                            |
| Project languages                                           |                                                               |
| • Languages per project                                     | 32                                                            |
| <b>Functionality under WinCC (TIA Portal)</b>               |                                                               |
| Libraries                                                   | Yes                                                           |
| Applications/options                                        |                                                               |
| • Web browser                                               | Yes                                                           |
| • SIMATIC WinCC Sm@rtServer                                 | Yes; Available with WinCC (TIA Portal) V14 or higher          |
| Number of Visual Basic Scripts                              | No                                                            |
| Task planner                                                |                                                               |
| • time-controlled                                           | No                                                            |
| • task-controlled                                           | Yes                                                           |
| Help system                                                 |                                                               |
| • 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 event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...) | 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                                                           |
| <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                                                           |
| • Pop-up images                        | No                                                            |
| • Slide-in images                      | No                                                            |
| • Image selection by PLC               | Yes                                                           |
| • Image number in the PLC              | Yes                                                           |
| Image objects                          |                                                               |
| • 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                                                           |
| Complex image objects                  |                                                               |
| • 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                                                            |
| • HTML browser                         | Yes                                                           |
| • PDF display                          | No                                                            |
| • IP camera display                    | No                                                            |
| • Bar graphs                           | Yes                                                           |
| • Sliders                              | No                                                            |
| • Pointer instruments                  | No                                                            |
| • Analog/digital clock                 | No                                                            |
| Lists                                  |                                                               |
| • 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                                                           |
| Archiving                              |                                                               |
| • Number of archives per device        | 2; One message and one process value archive                  |
| • 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                                                            |
| Security                               |                                                               |
| • Number of user groups                | 50                                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                      |         |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|
| <ul style="list-style-type: none"><li>• Number of user rights</li><li>• Number of users</li><li>• Password export/import</li><li>• SIMATIC Logon</li></ul>                                                                                                                                                                                                                                                                                      | 32<br>50<br>Yes<br>No                                                                                                                |         |                |
| Character sets                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                      |         |                |
| <ul style="list-style-type: none"><li>• Keyboard fonts<ul style="list-style-type: none"><li>— US English</li></ul></li></ul>                                                                                                                                                                                                                                                                                                                    | Yes                                                                                                                                  |         |                |
| Transfer (upload/download)                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                      |         |                |
| <ul style="list-style-type: none"><li>• MPI/PROFIBUS DP</li><li>• USB</li><li>• Ethernet</li><li>• using external storage medium</li></ul>                                                                                                                                                                                                                                                                                                      | No<br>No<br>Yes<br>Yes                                                                                                               |         |                |
| Process coupling                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                      |         |                |
| <ul style="list-style-type: none"><li>• S7-1200</li><li>• S7-1500</li><li>• S7-200</li><li>• S7-300/400</li><li>• LOGO!</li><li>• WinAC</li><li>• SINUMERIK</li><li>• SIMOTION</li><li>• Allen Bradley (EtherNet/IP)</li><li>• Allen Bradley (DF1)</li><li>• Mitsubishi (MC TCP/IP)</li><li>• Mitsubishi (FX)</li><li>• OMRON (FINS TCP)</li><li>• OMRON (Host Link)</li><li>• Modicon (Modbus TCP/IP)</li><li>• Modicon (Modbus RTU)</li></ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes; No access to NCK data<br>Yes<br>Yes<br>No<br>Yes<br>No<br>No<br>No<br>No<br>Yes<br>No |         |                |
| Service tools/configuration aids                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                      |         |                |
| <ul style="list-style-type: none"><li>• Backup/Restore manually</li><li>• Backup/Restore automatically</li><li>• Simulation</li><li>• Device switchover</li></ul>                                                                                                                                                                                                                                                                               | Yes<br>No<br>Yes<br>Yes                                                                                                              |         |                |
| Peripherals/Options                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                      |         |                |
| Printer                                                                                                                                                                                                                                                                                                                                                                                                                                         | No                                                                                                                                   |         |                |
| SIMATIC HMI MM memory card: Multi Media Card                                                                                                                                                                                                                                                                                                                                                                                                    | No                                                                                                                                   |         |                |
| SIMATIC HMI SD memory card: Secure Digital memory card                                                                                                                                                                                                                                                                                                                                                                                          | No                                                                                                                                   |         |                |
| SIMATIC HMI CF memory card Compact Flash Card                                                                                                                                                                                                                                                                                                                                                                                                   | No                                                                                                                                   |         |                |
| USB memory                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                                                                                                                                  |         |                |
| SIMATIC IPC USB Flashdrive (USB stick)                                                                                                                                                                                                                                                                                                                                                                                                          | Yes                                                                                                                                  |         |                |
| SIMATIC HMI USB stick                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                                                                                                                                  |         |                |
| Mechanics/material                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                      |         |                |
| Enclosure material (front) <ul style="list-style-type: none"><li>• Plastic</li><li>• Aluminum</li><li>• Stainless steel</li></ul>                                                                                                                                                                                                                                                                                                               | Yes<br>No<br>No                                                                                                                      |         |                |
| Dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                      |         |                |
| Width of the housing front                                                                                                                                                                                                                                                                                                                                                                                                                      | 330 mm                                                                                                                               |         |                |
| Height of housing front                                                                                                                                                                                                                                                                                                                                                                                                                         | 245 mm                                                                                                                               |         |                |
| Mounting cutout, width                                                                                                                                                                                                                                                                                                                                                                                                                          | 310 mm                                                                                                                               |         |                |
| Mounting cutout, height                                                                                                                                                                                                                                                                                                                                                                                                                         | 221 mm                                                                                                                               |         |                |
| mounting depth                                                                                                                                                                                                                                                                                                                                                                                                                                  | 54.9 mm                                                                                                                              |         |                |
| Weights                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                      |         |                |
| Weight (without packaging)                                                                                                                                                                                                                                                                                                                                                                                                                      | 1 710 g                                                                                                                              |         |                |
| Weight (with packaging)                                                                                                                                                                                                                                                                                                                                                                                                                         | 2.2 kg                                                                                                                               |         |                |
| Classifications                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                      |         |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                      | Version | Classification |

|        |     |             |
|--------|-----|-------------|
| eClass | 16  | 27-33-02-01 |
| eClass | 14  | 27-33-02-01 |
| eClass | 12  | 27-33-02-01 |
| eClass | 9.1 | 27-33-02-01 |
| eClass | 9   | 27-33-02-01 |
| eClass | 8   | 27-24-23-02 |
| eClass | 7.1 | 27-24-23-02 |
| eClass | 6   | 27-24-23-02 |
| ETIM   | 10  | EC001412    |
| ETIM   | 9   | EC001412    |
| ETIM   | 8   | EC001412    |
| ETIM   | 7   | EC001412    |
| IDEA   | 4   | 6607        |
| UNSPSC | 15  | 43-21-15-06 |

Approvals / Certificates

General Product Approval



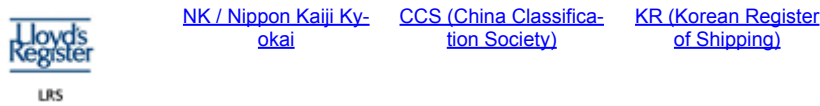
[Miscellaneous](#)   [Manufacturer Declaration](#)

General Product Approval   Maritime application



[China RoHS](#)

Maritime application



[NK / Nippon Kaiji Kyokai](#)

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

[KR \(Korean Register of Shipping\)](#)

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