

SIMATIC HMI, KTP700 BASIC, BASIC PANEL, KEY AND TOUCH OPERATION, 7" TFT DISPLAY, 65536 COLORS, PROFINET INTERFACE, CONFIGURATION FROM WINCC BASIC V13/ STEP7 BASIC V13, CONTAINS OPEN SOURCE SW WHICH IS PROVIDED FREE OF CHARGE FOR DETAILS SEE CD



| Display                        |  |
|--------------------------------|--|
| Design of display              | TFT widescreen display, LED backlighting |
| Screen diagonal                | 7 in                                     |
| Display width                  | 154.1 mm                                 |
| Display height                 | 85.9 mm                                  |
| Number of colors               | 65 536                                   |
| Resolution (pixels)            |  |
| • Horizontal image resolution  | 800 Pixel                                |
| • Vertical image resolution    | 480 Pixel                                |
| Backlighting                   |  |
| • MTBF backlighting (at 25 °C) | 20 000 h                                 |
| • Backlight dimmable           | Yes                                      |
| Control elements               |  |
| Keyboard fonts                 |  |
| • Function keys                |  |
| — Number of function keys      | 8  |
| • Keys with LED                | No                                       |
| • System keys                  | No                                       |

|                          |                        |
|--------------------------|------------------------|
| • Numeric keyboard       | Yes; Onscreen keyboard |
| • alphanumeric keyboard  | Yes; Onscreen keyboard |
| <b>Touch operation</b>   |                        |
| • Design as touch screen | Yes                    |

|   |                      |
|---|----------------------|
| <b>Installation type/mounting</b>                                     |                      |
| Mounting position   | Horizontal, vertical |
| Mounting in portrait format possible                                  | Yes                  |
| Mounting in landscape format possible                                 | Yes                  |
| maximum permissible angle of inclination without external ventilation | 35°                  |

|                                     |        |
|-------------------------------------|--------|
| <b>Supply voltage</b>               |        |
| Type of supply voltage              | DC     |
| Rated value (DC)                    | 24 V   |
| permissible range, lower limit (DC) | 19.2 V |
| permissible range, upper limit (DC) | 28.8 V |

|   |                       |
|---|-----------------------|
| <b>Input current</b>                    |                       |
| Current consumption (rated value)       | 230 mA                |
| Starting current inrush I <sup>st</sup> | 0.2 A <sup>2</sup> ·s |

|                          |       |
|--------------------------|-------|
| <b>Power</b>             |       |
| Active power input, typ. | 5.5 W |

|                  |     |
|------------------|-----|
| <b>Processor</b> |     |
| Processor type   | ARM |

|                                |          |
|--------------------------------|----------|
| <b>Memory</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                           |
| MRP   | No                           |
| PROFIBUS  | No                           |
| MPI   | No                           |
| <b>Protocols (Ethernet)</b>                             |                              |
| • TCP/IP  | Yes                          |
| • DHCP  | Yes                          |
| • SNMP  | Yes                          |
| • DCP   | Yes                          |
| • LLDP  | Yes                          |
| <b>WEB characteristics</b>                              |                              |
| • HTTP  | No                           |
| • HTML  | No                           |
| <b>Further protocols</b>                                |                              |
| • CAN   | No                           |
| • EtherNet/IP   | Yes                          |
| • MODBUS  | Yes; Modicon (MODBUS TCP/IP) |
| <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>Standards, approvals, certificates</b>                |        |
| CE mark  | Yes    |
| cULus  | Yes    |
| RCM (formerly C-TICK)                                    | Yes    |
| KC approval  | Yes    |
| <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>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>Ambient conditions</b>                                |        |
| <b>Ambient temperature during operation</b>              |        |
| • Operation (vertical installation)                      |        |
| — For vertical installation, min.                        | 0 °C   |
| — For vertical installation, max.                        | 50 °C  |
| • Operation (max. tilt angle)                            |        |
| — At maximum tilt angle, min.                            | 0 °C   |
| — At maximum tilt angle, min.                            | 40 °C  |
| • Operation (vertical installation, portrait format)     |        |
| — For vertical installation, min.                        | 0 °C   |
| — For vertical installation, max.                        | 40 °C  |
| • Operation (max. tilt angle, portrait format)           |        |
| — At maximum tilt angle, min.                            | 0 °C   |
| — At maximum tilt angle, min.                            | 35 °C  |
| <b>Ambient temperature during storage/transportation</b> |        |
| • min.   | -20 °C |
| • max.   | 60 °C  |
| <b>Relative humidity</b>                                 |        |

- Operation, max.

90 %; no condensation

## 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  |
| • 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  |
| 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   |
| <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   |
| <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  |
| • HTML browser                         | Yes   |
| • PDF display                          | No  |
| • IP camera display                    | 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; 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                         |
| <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                       | No                         |
| • USB                                   | No                         |
| • Ethernet                              | Yes                        |
| • using external storage medium         | Yes                        |
| <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)           | Yes                        |
| • Allen Bradley (DF1)                   | No                         |
| • Mitsubishi (MC TCP/IP)                | Yes                        |
| • Mitsubishi (FX)                       | No                         |
| • OMRON (FINS TCP)                      | No                         |
| • OMRON (LINK/Multilink)                | No                         |
| • Modicon (Modbus TCP/IP)               | Yes                        |
| • Modicon (Modbus)                      | No                         |
| <b>Service tools/configuration aids</b> |                            |
| • Backup/Restore manually               | Yes                        |
| • Backup/Restore automatically          | No                         |



- Simulation Yes
- Device switchover Yes

### Peripherals/Options

|  |     |
|--|-----|
| Peripherals  |     |
| • 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) |     |
| • Plastic                  | Yes |
| • Aluminum                 | No  |
| • Stainless steel          | No  |

### Dimensions

|                            |        |
|----------------------------|--------|
| Width of the housing front | 214 mm |
| Height of housing front    | 158 mm |
| Mounting cutout, width     | 197 mm |
| Mounting cutout, height    | 141 mm |
| Overall depth              | 39 mm  |

### Weights

|                          |       |
|--------------------------|-------|
| Weight without packaging | 780 g |
| Weight incl. packaging   | 990 g |

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