

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



### Product type designation

#### 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 |
| • Vertical image resolution   | 480 |

#### Backlighting

- |                                |          |
|--------------------------------|----------|
| • MTBF backlighting (at 25 °C) | 20 000 h |
| • Dimmable backlight           | Yes      |

#### Control elements

##### Keyboard

- |                              |                        |
|------------------------------|------------------------|
| • Function keys              |                        |
| — Number of function keys    | 8                      |
| • Keys with LED              | No                     |
| • System keys                | No                     |
| • Numeric/alphabetical input |                        |
| — 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                                                | 24 V DC              |
| Rated value (DC)                                                      | 24 V                 |
| permissible range, lower limit (DC)                                   | 19.2 V               |
| permissible range, upper limit (DC)                                   | 28.8 V               |
| Input current                                                         |                      |
| Current consumption (rated value)                                     | 230 mA               |
| Inrush current A <sup>2</sup> s                                       | 0.2 A <sup>2</sup> s |
| Power                                                                 |                      |
| Power consumption, typ.                                               | 5.5 W                |
| Processor                                                             |                      |
| Processor type                                                        | ARM                  |
| Memory                                                                |                      |
| Flash                                                                 | Yes                  |
| RAM                                                                   | Yes                  |
| Usable memory for user data                                           | 10 Mbyte             |
| Type of output                                                        |                      |
| Acoustics                                                             |                      |
| • Buzzer                                                              | Yes                  |
| • Speaker                                                             | No                   |
| Time of day                                                           |                      |
| Clock                                                                 |                      |
| • Hardware clock (real-time clock)                                    | Yes                  |
| • Software clock                                                      | Yes                  |
| • Battery-backed                                                      | Yes                  |
| • Synchronizable                                                      | Yes                  |
| Interfaces                                                            |                      |
| Number of RS 485 interfaces                                           | 0                    |
| Number of USB interfaces                                              | 1; Up to 16 GB       |
| Number of 20 mA interfaces (TTY)                                      | 0                    |
| Number of RS 232 interfaces                                           | 0                    |
| Number of RS 422 interfaces                                           | 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>                              |                              |
| • Number of industrial Ethernet interfaces              | 1                            |
| • Industrial Ethernet status LED                        | 2                            |
| <b>Protocols</b>                                        |                              |
| PROFINET                                                | Yes                          |
| PROFINET IO                                             | No                           |
| IRT                                                     | 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                           |
| • MODBUS                                                | Yes; Modicon (MODBUS TCP/IP) |
| • Supports protocol for EtherNet/IP                     | Yes                          |
| <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)                                       | 65                           |
| Enclosure Type 4 at the front                           | Yes                          |
| Enclosure type 4x at the front                          | Yes                          |
| IP (rear)                                               | 20                           |
| <b>Standards, approvals, certificates</b>               |                              |
| CE mark                                                 | Yes                          |
| KC approval                                             | Yes                          |
| cULus                                                   | Yes                          |
| RCM (formerly C-TICK)                                   | Yes                          |

| Use in hazardous areas             |    |
|------------------------------------|----|
| • ATEX Zone 2                      | No |
| • ATEX Zone 22                     | No |
| • cULus Class I Zone 1             | No |
| • cULus Class I Zone 2, Division 2 | No |
| • FM Class I Division 2            | No |

### Ambient conditions

| Ambient temperature in operation                     |       |
|------------------------------------------------------|-------|
| • Operation (vertical installation)                  |       |
| — in vertical mounting position, minimum             | 0 °C  |
| — in vertical mounting position, maximum             | 50 °C |
| • Operation (max. tilt angle)                        |       |
| — at maximum tilt angle, minimum                     | 0 °C  |
| — at maximum tilt angle, maximum                     | 40 °C |
| • Operation (vertical installation, portrait format) |       |
| — in vertical mounting position, minimum             | 0 °C  |
| — in vertical mounting position, maximum             | 40 °C |
| • Operation (max. tilt angle, portrait format)       |       |
| — at maximum tilt angle, minimum                     | 0 °C  |
| — at maximum tilt angle, maximum                     | 35 °C |

| Storage/transport temperature |        |
|-------------------------------|--------|
| • Min.                        | -20 °C |
| • max.                        | 60 °C  |

| Relative humidity |      |
|-------------------|------|
| • Operation, max. | 90 % |

### Operating systems

| Pre-installed operating system |     |
|--------------------------------|-----|
| • Windows CE                   | No  |
| proprietary                    | Yes |

### Configuration

|                                                        |     |
|--------------------------------------------------------|-----|
| Message indicator                                      | Yes |
| Alarm logging system (incl. buffer and acknowledgment) | Yes |
| Process value display (output)                         | Yes |
| Process value default (input) possible                 | Yes |
| Recipe administration                                  | 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 |
|--------------------------------------|----|

### Languages

|                         |     |
|-------------------------|-----|
| • Languages per project | 32  |
| • Languages             |     |
| — D                     | Yes |
| — GB                    | Yes |
| — F                     | Yes |
| — I                     | Yes |
| — E                     | Yes |
| — Chinese traditional   | Yes |
| — Chinese simplified    | Yes |
| — DK                    | Yes |
| — FIN                   | Yes |
| — GR                    | Yes |
| — J                     | Yes |
| — KP / ROK              | Yes |
| — NL                    | Yes |
| — N                     | Yes |
| — PL                    | Yes |
| — P                     | Yes |
| — RUS                   | Yes |
| — S                     | Yes |
| — CZ                    | Yes |
| — TR                    | Yes |
| — H                     | Yes |

## Functionality under WinCC (TIA Portal)

|                                      |     |
|--------------------------------------|-----|
| Libraries                            | Yes |
| Number of Visual Basic Scripts       | No  |
| Task planner                         | Yes |
| • time-controlled                    | No  |
| • task-controlled                    | Yes |
| Help system                          | Yes |
| • Number of characters per info text | 500 |

### Message system

|                                                                  |                                                               |
|------------------------------------------------------------------|---------------------------------------------------------------|
| • Number of alarm classes                                        | 32                                                            |
| • S7 alarm number procedure                                      | No                                                            |
| • System messages HMI                                            | Yes                                                           |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes; System message buffer of the SIMATIC S7-1200 and S7-1500 |
| • Number of characters per message                               | 80                                                            |
| • Number of process values per message                           | 8                                                             |
| • Acknowledgment groups                                          | Yes                                                           |
| • Message indicator                                              | Yes                                                           |
| • Message buffer                                                 | Yes                                                           |
| — Number of entries                                              | 256                                                           |
| — Circulating buffer                                             | Yes                                                           |
| — retentive                                                      | Yes                                                           |
| — maintenance-free                                               | Yes                                                           |
| <b>Recipe administration</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                                                           |
| • Structs                                                        | No                                                            |
| • Arrays                                                         | Yes                                                           |
| <b>Images</b>                                                    |                                                               |
| • Number of configurable images                                  | 250                                                           |
| • Permanent window/default                                       | Yes                                                           |
| • Global image                                                   | Yes                                                           |
| • Start screen configurable                                      | 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 view                         | Yes                                                           |
| • Icons                                | Yes                                                           |
| • Geometric objects                    | Yes                                                           |
| <b>Complex image objects</b>           |                                                               |
| • Number of complex objects per screen | 10                                                            |
| • Alarm view                           | Yes                                                           |
| • Trend view                           | Yes                                                           |
| • User view                            | Yes                                                           |
| • Status/control                       | No                                                            |
| • Sm@rtClient view                     | No                                                            |
| • Recipe view                          | Yes                                                           |
| • f(x) trend view                      | No                                                            |
| • System diagnostics view              | Yes; System message buffer of the SIMATIC S7-1200 and S7-1500 |
| • Media Player                         | No                                                            |
| • Bar graphs                           | Yes                                                           |
| • Sliders                              | No                                                            |
| • Pointer instruments                  | No                                                            |
| • Analog/digital clock                 | No                                                            |
| <b>Lists</b>                           |                                                               |
| • Number of text lists per project     | 150                                                           |
| • Number of entries per text list      | 100                                                           |
| • Number of graphics lists per project | 100                                                           |
| • Number of entries per graphics list  | 100                                                           |
| <b>Archiving</b>                       |                                                               |
| • Number of archives per device        | 2                                                             |
| • Number of entries per archive        | 10 000                                                        |
| • Message archive                      | Yes                                                           |
| • Process value archive                | Yes                                                           |
| • Archiving methods                    |                                                               |
| — Sequential archive                   | Yes                                                           |
| — Short-term archive                   | Yes                                                           |
| • Memory location                      |                                                               |
| — Memory card                          | No                                                            |
| — USB memory                           | Yes                                                           |
| — Ethernet                             | No                                                            |
| • Data storage format                  |                                                               |
| — CSV                                  | No                                                            |
| — TXT                                  | Yes                                                           |

|                                         |     |
|-----------------------------------------|-----|
| — RDB                                   | No  |
| <b>Security</b>                         |     |
| • Number of user groups                 | 50  |
| • Number of user rights                 | 32  |
| • Number of users                       | 50  |
| • Password export/import                | Yes |
| • SIMATIC Logon                         | No  |
| <b>Character sets</b>                   |     |
| • Keyboard                              |     |
| — US American (English)                 | Yes |
| • Character sets                        |     |
| — Tahoma                                | Yes |
| — Arial                                 | No  |
| — Courier New                           | No  |
| — WinCC flexible Standard               | Yes |
| — Ideographic languages                 | Yes |
| • Font size freely scalable             | Yes |
| <b>Transfer (upload/download)</b>       |     |
| • MPI/PROFIBUS DP                       | No  |
| • USB                                   | No  |
| • Ethernet                              | Yes |
| • using external storage medium         | No  |
| <b>Process coupling</b>                 |     |
| • S7-1200                               | Yes |
| • S7-1500                               | Yes |
| • S7-200                                | Yes |
| • S7-300/400                            | Yes |
| • LOGO!                                 | Yes |
| • Win AC                                | Yes |
| • SINUMERIK                             | No  |
| • SIMOTION                              | Yes |
| • Allen Bradley (EtherNet/IP)           | Yes |
| • Allen Bradley (DF1)                   | No  |
| • Mitsubishi (MC TCP/IP)                | Yes |
| • Mitsubishi (FX)                       | No  |
| • OMRON (FINS TCP)                      | No  |
| • OMRON (LINK/Multilink)                | No  |
| • Modicon (Modbus TCP/IP)               | Yes |
| • Modicon (Modbus)                      | No  |
| <b>Service tools/configuration aids</b> |     |
| • Clean screen                          | Yes |



|                                |     |
|--------------------------------|-----|
| • Touch calibration            | Yes |
| • Backup/restore               | Yes |
| • Backup/Restore automatically | No  |
| • Simulation                   | Yes |
| • Device switchover            | Yes |
| • Delta transfer               | No  |

#### I/O / Options

|                  |     |
|------------------|-----|
| I/O devices      |     |
| • Printer        | No  |
| • MultiMediaCard | No  |
| • SD card        | No  |
| • USB memory     | Yes |

#### Mechanics/material

|                         |     |
|-------------------------|-----|
| Type of housing (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 |
| Device depth               | 39 mm  |

#### Weights

|                       |            |
|-----------------------|------------|
| Without packaging     | 780 g      |
| With packaging        | 990 g      |
| <b>last modified:</b> | 11.02.2015 |