

SIMATIC HMI, KTP900 Basic, Basic Panel, Key/touch operation, 9" 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 | KTP900 Basic color PN |
|--------------------------|-----------------------|

### Display

|                   |  |
|-------------------|--|
| Design of display | TFT widescreen display, LED backlighting |
| Screen diagonal   | 9 in                                     |
| Display width     | 198 mm                                   |
| Display height    | 111.7 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   | 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>2</sup> t                              | 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              |

### Protocols

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

### Protocols (Ethernet)

|          |     |
|----------|-----|
| • TCP/IP | Yes |
| • DHCP   | Yes |
| • SNMP   | Yes |
| • DCP    | Yes |
| • LLDP   | Yes |

### WEB characteristics

|        |    |
|--------|----|
| • HTTP | No |
| • HTML | No |

### Redundancy mode

|       |    |
|-------|----|
| • MRP | No |
|-------|----|

### Further protocols

|               |                              |
|---------------|------------------------------|
| • CAN         | No                           |
| • EtherNet/IP | Yes                          |
| • MODBUS      | Yes; Modicon (MODBUS TCP/IP) |

### Interrupts/diagnostics/status information

#### Diagnostic messages

|                                   |    |
|-----------------------------------|----|
| • Diagnostic information readable | No |
|-----------------------------------|----|

### EMC

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

|   |     |
|---|-----|
| • Limit class A, for use in industrial areas  | Yes |
| • Limit class B, for use in residential areas | No  |

### Degree and class of protection

|                                |      |
|--------------------------------|------|
| IP (at the front)              | IP65 |
| Enclosure Type 4 at the front  | Yes  |
| Enclosure Type 4x at the front | Yes  |
| IP (rear)                      | IP20 |

#### Standards, approvals, certificates

|                       |     |
|-----------------------|-----|
| CE mark               | Yes |
| cULus                 | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval           | Yes |

#### Use in hazardous areas

|                                    |    |
|------------------------------------|----|
| • 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 |

#### Marine approval

|  |     |
|--|-----|
| • 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  |

#### Ambient conditions

|  |       |
|--|-------|
| Ambient temperature during operation                 |       |
| • 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 |
| Ambient temperature during storage/transportation    |       |

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

|   |  |
|---|--|
| <b>Functionality under WinCC (TIA Portal)</b> |  |
| Libraries                                     | Yes  |
| <b>Applications/options</b>                   |  |
| • Web browser                                 | Yes  |
| • SIMATIC WinCC Sm@rtServer                   | Yes; Available with WinCC (TIA Portal) V14 or higher |
| Number of Visual Basic Scripts                | No   |
| <b>Task planner</b>                           |  |
| • time-controlled                             | No   |
| • task-controlled                             | Yes  |
| <b>Help system</b>                            |  |
| • Number of characters per info text          | 500  |
| <b>Message system</b>                         |  |

|  |   |
|--|---|
| • Number of alarm classes  | 32  |
| • Bit messages   |   |
| — Number of bit messages   | 1 000   |
| • Analog messages  |   |
| — Number of analog messages                                      | 25  |
| • S7 alarm number procedure                                      | No  |
| • System messages HMI  | Yes   |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes; System message buffer of the SIMATIC S7-1200 and S7-1500 |
| • Number of characters per message                               | 80  |
| • Number of process values per message                           | 8   |
| • Acknowledgment groups  | Yes   |
| • Message indicator  | Yes   |
| • Message buffer   |   |
| — 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 | 267 mm |
| Height of housing front    | 182 mm |
| Mounting cutout, width     | 251 mm |
| Mounting cutout, height    | 166 mm |
| Overall depth              | 55 mm  |

### Weights

|                          |         |
|--------------------------|---------|
| Weight without packaging | 1 130 g |
| Weight incl. packaging   | 1 393 g |

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