

SIMATIC HMI, KTP700 Basic, Basic Panel, Key/touch operation, 7" 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 | KTP700 Basic color PN |
|--------------------------|-----------------------|

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 |

| | |
|---|---|
| — Number of function keys with LEDs | 0 |
| • Keys with LED | No |
| • System keys | No |
| • Numeric keyboard | Yes; Onscreen keyboard |
| • alphanumeric keyboard | Yes; Onscreen keyboard |
| Touch operation | |
| • Design as touch screen | Yes |
| Installation type/mounting | |
| Mounting 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) | 230 mA |
| Starting current inrush I ² t | 0.2 A ² ·s |
| Power | |
| Active power input, typ. | 5.5 W |
| Processor | |
| Processor type | ARM |
| Memory | |
| Flash | Yes |
| RAM | Yes |
| Memory available for user data | 10 Mbyte |
| Type of output | |
| Acoustics | |
| • Buzzer | Yes |
| • Speaker | No |
| Time of day | |
| Clock | |
| • Hardware clock (real-time) | Yes |
| • Software clock | Yes |
| • retentive | Yes; Back-up duration typically 6 weeks |
| • synchronizable | Yes |

Interfaces

| | |
|--|----------------|
| Number of industrial Ethernet interfaces | 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 |

Industrial Ethernet

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

| 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 |

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| — At maximum tilt angle, min. | 35 °C |
| Ambient temperature during storage/transportation | |
| • min. | -20 °C |
| • max. | 60 °C |
| Relative humidity | |
| • 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 | Yes |
| • time-controlled | No |
| • task-controlled | Yes |
| Help system | Yes |

| | |
|--|---|
| • Number of characters per info text | 500 |
| Message system | |
| • Number of alarm classes | 32 |
| • Bit messages | |
| — Number of bit messages | 1 000 |
| • Analog messages | |
| — Number of analog messages | 25 |
| • S7 alarm number procedure | No |
| • System messages HMI | Yes |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes; System message buffer of the SIMATIC S7-1200 and S7-1500 |
| • Number of characters per message | 80 |
| • Number of process values per message | 8 |
| • Acknowledgment groups | Yes |
| • Message indicator | Yes |
| • Message buffer | |
| — Number of entries | 256 |
| — Circulating buffer | Yes |
| — retentive | Yes |
| — maintenance-free | Yes |
| Recipe management | |
| • Number of recipes | 50 |
| • Data records per recipe | 100 |
| • Entries per data record | 100 |
| • Size of internal recipe memory | 256 kbyte |
| • Recipe memory expandable | No |
| Variables | |
| • Number of variables per device | 800 |
| • Number of variables per screen | 100 |
| • Limit values | Yes |
| • Multiplexing | Yes |
| • Structures | No |
| • Arrays | Yes |
| Images | |
| • 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 |
| • Number of user rights | 32 |
| • Number of users | 50 |
| • Password export/import | Yes |
| • SIMATIC Logon | No |
| Character sets | |
| • Keyboard fonts | |
| — US English | Yes |
| Transfer (upload/download) | |
| • MPI/PROFIBUS DP | No |
| • USB | No |
| • Ethernet | Yes |
| • using external storage medium | Yes |
| Process coupling | |
| • 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 |
| Service tools/configuration aids | |
| • Backup/Restore manually | Yes |
| • Backup/Restore automatically | No |
| • Simulation | Yes |
| • Device switchover | Yes |

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|--|-----|
| 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 |

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|----------------------------|-----|
| Mechanics/material | |
| Enclosure material (front) | |
| • Plastic | Yes |
| • Aluminum | No |
| • Stainless steel | No |

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|----------------------------|--------|
| 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 |

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

last modified: 01/24/2020