



SIMATIC HMI KTP700F Mobile Arctic, (extended operating temperature range), 7.0" TFT display, 800x 480 pixel, 16m colors, key and touch operation, 8 function keys, 1x PROFINET/Industrial Ethernet interface, 1x multimedia card, 1x USB, 1x touch pen, keyswitch, acknowledgement button, emergency shutdown/stop button, configurable from WinCC Comfort V15 SP1

| General information                                       |                                |
|-----------------------------------------------------------|--------------------------------|
| Product type designation                                  | KTP700F Mobile Arctic          |
| Display                                                   |                                |
| Design of display                                         | TFT, bonded, daylight-readable |
| Screen diagonal                                           | 7 in                           |
| Color display                                             | Yes                            |
| Number of colors                                          | 16 777 216                     |
| Resolution (pixels)                                       |                                |
| • Horizontal image resolution                             | 800 pixel                      |
| • Vertical image resolution                               | 480 pixel                      |
| Backlighting                                              |                                |
| • MTBF backlighting (at 25 °C)                            | 50 000 h                       |
| • Backlight dimmable                                      | Yes; 0-100 %                   |
| Control elements                                          |                                |
| Keyboard fonts                                            |                                |
| • Function keys                                           |                                |
| — Number of function keys                                 | 8                              |
| — Number of function keys with LEDs                       | 8                              |
| • Keys with LED                                           | Yes                            |
| • Numeric keyboard                                        | Yes; Onscreen keyboard         |
| • alphanumeric keyboard                                   | Yes; Onscreen keyboard         |
| Touch operation                                           |                                |
| • Design as touch screen                                  | Yes                            |
| • Design as multi-touch screen                            | No                             |
| Special operator controls                                 |                                |
| • Stop button (forced blocking)                           | Yes                            |
| • Emergency stop button (illuminated and forced blocking) | Yes                            |
| • Acknowledgement button (3-stage)                        | Yes                            |
| • Key-operated switch                                     | Yes                            |
| • Illuminated pushbutton                                  | Yes                            |
| Camera                                                    |                                |
| • integrated camera                                       | No                             |
| Expansions for operator control of the process            |                                |
| • DP direct LEDs (LEDs as S7 output I/O)                  |                                |
| — F1...Fx                                                 | 8                              |
| • Direct keys (keys as S7 input I/O)                      |                                |
| — F1...Fx                                                 | 8                              |
| • Direct keys (touch buttons as S7 input I/O)             | 32                             |
| 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     |
| <b>Processor</b>                                 |            |
| Processor type                                   | ARM        |
| <b>Memory</b>                                    |            |
| Flash                                            | Yes        |
| RAM                                              | Yes        |
| Memory available for user data                   | 12 Mbyte   |
| <b>Type of output</b>                            |            |
| Power LED                                        | No         |
| LED for safe                                     | No         |
| LED for communication                            | No         |
| LED for battery                                  | No         |
| Vibrations                                       | No         |
| <b>Time of day</b>                               |            |
| Clock                                            |            |
| • Hardware clock (real-time)                     | Yes        |
| • retentive                                      | Yes        |
| • synchronizable                                 | Yes        |
| <b>Interfaces</b>                                |            |
| Number of industrial Ethernet interfaces         | 1          |
| Number of PROFINET 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; USB 2.0 |
| Number of wireless interfaces                    | 0          |
| Number of SD card slots                          | 1          |
| <b>Protocols</b>                                 |            |
| PROFINET                                         | Yes        |
| Supports protocol for PROFINET IO                | Yes        |
| PROFIsafe                                        | Yes        |
| PROFIBUS                                         | No         |
| EtherNet/IP                                      | Yes        |
| MPI                                              | No         |
| Protocols (Ethernet)                             |            |
| • TCP/IP                                         | Yes        |
| • DHCP                                           | Yes        |
| • SNMP                                           | Yes        |
| • DCP                                            | Yes        |
| • LLDP                                           | Yes        |
| WEB characteristics                              |            |
| • HTTP                                           | Yes        |
| • HTTPS                                          | Yes        |
| • HTML                                           | Yes        |
| • XML                                            | No         |
| • CSS                                            | Yes        |
| • Active X                                       | No         |
| • JavaScript                                     | Yes        |
| • Java VM                                        | No         |
| Further protocols                                |            |
| • MODBUS                                         | Yes        |
| • other bus systems                              | No         |
| <b>communication functions / header</b>          |            |
| Wireless communication                           |            |
| • supported standards                            |            |
| — Radio standard WLAN 802.11                     | No         |
| — Bluetooth radio standard                       | No         |
| <b>Interrupts/diagnostics/status information</b> |            |

|                                                   |                       |
|---------------------------------------------------|-----------------------|
| <b>Diagnoses</b>                                  |                       |
| • Diagnostic information readable                 | Yes                   |
| <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>             |                       |
| IP65 (all-round)                                  | Yes                   |
| <b>Standards, approvals, certificates</b>         |                       |
| CE mark                                           | Yes                   |
| cULus                                             | Yes                   |
| FM approval                                       | No                    |
| RCM (formerly C-TICK)                             | Yes                   |
| KC approval                                       | No                    |
| Suitable for safety functions                     | Yes                   |
| Marine approval                                   | No                    |
| Highest safety class achievable in safety mode    |                       |
| • Performance level according to ISO 13849-1      | PLe                   |
| • SIL acc. to IEC 61508                           | SIL 3                 |
| 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                    |
| • cULus Class II Division 2                       | No                    |
| • FM Class I Division 2                           | No                    |
| • FM Class II Division 2                          | No                    |
| Marine approval                                   |                       |
| • Germanischer Lloyd (GL)                         | No                    |
| • American Bureau of Shipping (ABS)               | No                    |
| • Bureau Veritas (BV)                             | No                    |
| • Det Norske Veritas (DNV)                        | No                    |
| • Korean Register of Shipping (KRS)               | No                    |
| • Lloyds Register of Shipping (LRS)               | No                    |
| • Nippon Kaiji Kyokai (Class NK)                  | No                    |
| • Polski Rejestr Statkow (PRS)                    | No                    |
| • Chinese Classification Society (CCS)            | No                    |
| <b>Ambient conditions</b>                         |                       |
| Free fall                                         |                       |
| • Fall height, max.                               | 1.2 m                 |
| Ambient temperature during operation              |                       |
| • min.                                            | -28 °C                |
| • max.                                            | 45 °C                 |
| Ambient temperature during storage/transportation |                       |
| • min.                                            | -30 °C                |
| • max.                                            | 60 °C                 |
| Relative humidity                                 |                       |
| • Operation, max.                                 | 90 %; no condensation |
| <b>Operating systems</b>                          |                       |
| pre-installed operating system                    |                       |
| • Windows CE                                      | Yes                   |
| <b>configuration / header</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                   |
| Configuration software                            |                       |

|                                    |     |
|------------------------------------|-----|
| • STEP 7 Basic (TIA Portal)        | No  |
| • STEP 7 Professional (TIA Portal) | No  |
| • WinCC flexible Compact           | No  |
| • WinCC flexible Standard          | No  |
| • WinCC flexible Advanced          | No  |
| • WinCC Basic (TIA Portal)         | No  |
| • WinCC Comfort (TIA Portal)       | Yes |
| • WinCC Advanced (TIA Portal)      | Yes |
| • WinCC Professional (TIA Portal)  | Yes |

## Languages

### Online languages

|                                      |    |
|--------------------------------------|----|
| • Number of online/runtime languages | 32 |
|--------------------------------------|----|

### Project languages

|                         |    |
|-------------------------|----|
| • Languages per project | 32 |
|-------------------------|----|

## Functionality under WinCC (TIA Portal)

|           |     |
|-----------|-----|
| Libraries | Yes |
|-----------|-----|

### Applications/options

|                             |     |
|-----------------------------|-----|
| • Web browser               | Yes |
| • Pocket Word               | No  |
| • Pocket Excel              | No  |
| • PDF Viewer                | Yes |
| • Media Player              | No  |
| • SIMATIC WinCC Sm@rtServer | Yes |
| • SIMATIC WinCC Audit       | Yes |

|                                |     |
|--------------------------------|-----|
| Number of Visual Basic Scripts | Yes |
|--------------------------------|-----|

### Task planner

|                   |     |
|-------------------|-----|
| • time-controlled | Yes |
| • task-controlled | Yes |

### Help system

|                                      |     |
|--------------------------------------|-----|
| • Number of characters per info text | 500 |
|--------------------------------------|-----|

## Multiproject

|                                 |   |
|---------------------------------|---|
| • Number of projects (internal) | 0 |
| • Number of projects (external) | 0 |

## Message system

|                                                             |       |
|-------------------------------------------------------------|-------|
| • Number of alarm classes                                   | 32    |
| • Bit messages                                              |       |
| — Number of bit messages                                    | 4 000 |
| • Analog messages                                           |       |
| — Number of analog messages                                 | 200   |
| • S7 alarm number procedure                                 | Yes   |
| • System messages HMI                                       | Yes   |
| • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...) | Yes   |
| • Number of characters per message                          | 80    |
| • Number of process values per message                      | 8     |
| • Acknowledgment groups                                     | Yes   |
| • Message indicator                                         | Yes   |
| • Message buffer                                            |       |
| — Number of entries                                         | 1 024 |
| — Circulating buffer                                        | Yes   |
| — retentive                                                 | Yes   |
| — maintenance-free                                          | Yes   |

## Recipe management

|                                  |         |
|----------------------------------|---------|
| • Number of recipes              | 300     |
| • Data records per recipe        | 500     |
| • Entries per data record        | 1 000   |
| • Size of internal recipe memory | 2 Mbyte |
| • Recipe memory expandable       | Yes     |

## Variables

|                                  |       |
|----------------------------------|-------|
| • Number of variables per device | 2 048 |
| • Number of variables per screen | 400   |

|                                        |        |
|----------------------------------------|--------|
| • Limit values                         | Yes    |
| • Multiplexing                         | Yes    |
| • Structures                           | Yes    |
| • Arrays                               | Yes    |
| Images                                 |        |
| • Number of configurable images        | 500    |
| • Permanent window/default             | Yes    |
| • Global image                         | Yes    |
| • Pop-up images                        | Yes    |
| • Slide-in images                      | Yes    |
| • Image selection by PLC               | Yes    |
| • Image number in the PLC              | Yes    |
| Image objects                          |        |
| • Number of objects per image          | 400    |
| • 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 | 20     |
| • Alarm view                           | Yes    |
| • Trend view                           | Yes    |
| • User view                            | Yes    |
| • Status/control                       | Yes    |
| • Sm@rtClient view                     | Yes    |
| • Recipe view                          | Yes    |
| • f(x) trend view                      | Yes    |
| • System diagnostics view              | Yes    |
| • Media Player                         | No     |
| • HTML browser                         | Yes    |
| • PDF display                          | Yes    |
| • IP camera display                    | Yes    |
| • Bar graphs                           | Yes    |
| • Sliders                              | Yes    |
| • Pointer instruments                  | Yes    |
| • Analog/digital clock                 | Yes    |
| Lists                                  |        |
| • Number of text lists per project     | 500    |
| • Number of entries per text list      | 500    |
| • Number of graphics lists per project | 500    |
| • Number of entries per graphics list  | 500    |
| Archiving                              |        |
| • Number of archives per device        | 50     |
| • Number of entries per archive        | 20 000 |
| • Message archive                      | Yes    |
| • Process value archive                | Yes    |
| • Archiving methods                    |        |
| — Sequential archive                   | Yes    |
| — Short-term archive                   | Yes    |
| • Memory location                      |        |
| — Memory card                          | Yes    |
| — USB memory                           | Yes    |
| — Ethernet                             | Yes    |
| • Data storage format                  |        |
| — CSV                                  | Yes    |

|                                                        |                                    |
|--------------------------------------------------------|------------------------------------|
| — TXT                                                  | Yes                                |
| — RDB                                                  | Yes                                |
| <b>Security</b>                                        |                                    |
| • Number of user groups                                | 50                                 |
| • Number of user rights                                | 32                                 |
| • Number of users                                      | 50                                 |
| • Password export/import                               | Yes                                |
| • SIMATIC Logon                                        | Yes                                |
| <b>Logging through printer</b>                         |                                    |
| • Alarms                                               | Yes                                |
| • Report (shift log)                                   | Yes                                |
| • Hardcopy                                             | No                                 |
| • Electronic print to file                             | Yes; PDF, HTML as of TIA V17       |
| <b>Character sets</b>                                  |                                    |
| • Keyboard fonts                                       |                                    |
| — US English                                           | Yes                                |
| <b>Transfer (upload/download)</b>                      |                                    |
| • MPI/PROFIBUS DP                                      | No                                 |
| • USB                                                  | No                                 |
| • Ethernet                                             | Yes                                |
| • Wireless LAN                                         | No                                 |
| • using external storage medium                        | Yes; Backup/restore                |
| <b>Process coupling</b>                                |                                    |
| • S7-1200                                              | Yes                                |
| • S7-1500                                              | Yes                                |
| • S7-200                                               | Yes                                |
| • S7-300/400                                           | Yes                                |
| • LOGO!                                                | Yes                                |
| • WinAC                                                | Yes; WinAC RTX                     |
| • SINUMERIK                                            | Yes; without NC channel            |
| • 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                                 |
| • OPC UA Client                                        | Yes                                |
| • OPC UA Server                                        | Yes                                |
| <b>Service tools/configuration aids</b>                |                                    |
| • Backup/Restore manually                              | Yes                                |
| • Backup/Restore automatically                         | Yes                                |
| • Simulation                                           | Yes                                |
| • Device switchover                                    | Yes                                |
| <b>Peripherals/Options</b>                             |                                    |
| Printer                                                | Yes                                |
| SIMATIC HMI MM memory card: Multi Media Card           | Yes                                |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes                                |
| USB memory                                             | Yes                                |
| Network camera                                         | Yes                                |
| Additional software components loadable                | Yes; SIMATIC options as if TIA V17 |
| <b>Mechanics/material</b>                              |                                    |
| Enclosure material (front)                             |                                    |
| • Plastic                                              | Yes                                |
| • Aluminum                                             | No                                 |
| • Stainless steel                                      | No                                 |
| <b>Weights</b>                                         |                                    |
| Weight (without packaging)                             | 1.3 kg                             |

|                         |        |
|-------------------------|--------|
| Weight (with packaging) | 1.6 kg |
|-------------------------|--------|

Classifications

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 14      | 27-33-02-02    |
| eClass | 12      | 27-33-02-02    |
| eClass | 9.1     | 27-33-02-02    |
| eClass | 9       | 27-33-02-02    |
| eClass | 8       | 27-24-23-03    |
| eClass | 7.1     | 27-24-23-03    |
| eClass | 6       | 27-24-23-03    |
| ETIM   | 10      | EC001427       |
| ETIM   | 9       | EC001427       |
| ETIM   | 8       | EC001427       |
| ETIM   | 7       | EC001427       |
| IDEA   | 4       | 6607           |
| UNSPSC | 15      | 43-21-15-06    |

Approvals / Certificates

|                          |     |                   |
|--------------------------|-----|-------------------|
| General Product Approval | EMV | Functional Saftey |
|--------------------------|-----|-------------------|

[Manufacturer Declara-  
tion](#)



[Type Examination Cer-  
tificate](#)

|                   |       |
|-------------------|-------|
| Functional Saftey | other |
|-------------------|-------|

[TUEV](#)

[Type Examination Cer-  
tificate](#)

last modified: 3/12/2024