

SIMATIC HMI KP700 Comfort, Comfort Panel, key operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, (Microsoft Support included Security updates discontinued) configurable from WinCC Comfort V11



### General information

|                          |               |
|--------------------------|---------------|
| Product type designation | KP700 Comfort |
|--------------------------|---------------|

### Display

|                   |            |
|-------------------|------------|
| Design of display | TFT        |
| Screen diagonal   | 7 in       |
| Display width     | 152.4 mm   |
| Display height    | 91.4 mm    |
| Number of colors  | 16 777 216 |

### Resolution (pixels)

|                               |           |
|-------------------------------|-----------|
| • Horizontal image resolution | 800 Pixel |
| • Vertical image resolution   | 480 Pixel |

### Backlighting

|                                |              |
|--------------------------------|--------------|
| • MTBF backlighting (at 25 °C) | 80 000 h     |
| • Backlight dimmable           | Yes; 0-100 % |

### Control elements

#### Keyboard fonts

|                           |    |
|---------------------------|----|
| • Function keys           |    |
| — Number of function keys | 24 |

|                                                                       |                              |
|-----------------------------------------------------------------------|------------------------------|
| — Number of function keys with LEDs                                   | 24                           |
| • Keys with LED                                                       | Yes                          |
| • System keys                                                         | Yes                          |
| • Numeric keyboard                                                    | Yes                          |
| • alphanumeric keyboard                                               | Yes; similar to mobile phone |
| <b>Touch operation</b>                                                |                              |
| • Design as touch screen                                              | No                           |
| <b>Expansions for operator control of the process</b>                 |                              |
| • DP direct LEDs (LEDs as S7 output I/O)                              |                              |
| — F1...Fx                                                             | 24                           |
| • Direct keys (keys as S7 input I/O)                                  |                              |
| — F1...Fx                                                             | 24                           |
| • Direct keys (touch buttons as S7 input I/O)                         | 0                            |
| <b>Installation type/mounting</b>                                     |                              |
| Mounting position                                                     | vertical                     |
| Mounting in portrait format possible                                  | No                           |
| 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)                                     | 0.5 A                        |
| Starting current inrush I <sup>2t</sup>                               | 0.5 A <sup>2</sup> ·s        |
| <b>Power</b>                                                          |                              |
| Active power input, typ.                                              | 12 W                         |
| <b>Processor</b>                                                      |                              |
| Processor type                                                        | X86                          |
| <b>Memory</b>                                                         |                              |
| Flash                                                                 | Yes                          |
| RAM                                                                   | Yes                          |
| Memory available for user data                                        | 12 Mbyte                     |
| <b>Type of output</b>                                                 |                              |
| Info LED                                                              | Yes                          |
| Power LED                                                             | No                           |
| Error LED                                                             | No                           |
| Acoustics                                                             |                              |

|                                            |                                         |
|--------------------------------------------|-----------------------------------------|
| • Buzzer                                   | No                                      |
| • Speaker                                  | Yes                                     |
| <b>Time of day</b>                         |                                         |
| <b>Clock</b>                               |                                         |
| • 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; 2 ports (switch)                     |
| Number of RS 485 interfaces                | 1; RS 422 / 485 combined                |
| Number of RS 422 interfaces                | 1                                       |
| Number of RS 232 interfaces                | 0                                       |
| Number of USB interfaces                   | 2; USB 2.0                              |
| • USB Mini B                               | 1; 5-pole                               |
| Number of 20 mA interfaces (TTY)           | 0                                       |
| Number of parallel interfaces              | 0                                       |
| Number of other interfaces                 | 0                                       |
| Number of SD card slots                    | 2                                       |
| With software interfaces                   | No                                      |
| <b>Industrial Ethernet</b>                 |                                         |
| • Industrial Ethernet status LED           | 2                                       |
| • Number of ports of the integrated switch | 2                                       |
| <b>Protocols</b>                           |                                         |
| PROFINET                                   | Yes                                     |
| Supports protocol for PROFINET IO          | Yes                                     |
| IRT                                        | Yes; As of WinCC V12                    |
| PROFIBUS                                   | Yes                                     |
| MPI                                        | Yes                                     |
| <b>Protocols (Ethernet)</b>                |                                         |
| • TCP/IP                                   | Yes                                     |
| • DHCP                                     | Yes                                     |
| • SNMP                                     | Yes                                     |
| • DCP                                      | Yes                                     |
| • LLDP                                     | Yes                                     |
| <b>WEB characteristics</b>                 |                                         |
| • HTTP                                     | Yes                                     |
| • HTTPS                                    | Yes                                     |
| • HTML                                     | Yes                                     |
| • XML                                      | Yes                                     |
| • CSS                                      | Yes                                     |

|                                                  |                      |
|--------------------------------------------------|----------------------|
| • Active X                                       | Yes                  |
| • JavaScript                                     | Yes                  |
| • Java VM                                        | No                   |
| Redundancy mode                                  |                      |
| Media redundancy                                 |                      |
| — MRP                                            | Yes; As of WinCC V12 |
| Further protocols                                |                      |
| • CAN                                            | No                   |
| • EtherNet/IP                                    | Yes                  |
| • MODBUS                                         | Yes                  |
| 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                                    | Yes                  |
| • ATEX Zone 22                                   | Yes                  |
| • IECEx Zone 2                                   | Yes                  |
| • IECEx Zone 22                                  | Yes                  |
| • cULus Class I Zone 1                           | No                   |
| • cULus Class I Zone 2, Division 2               | Yes                  |
| • FM Class I Division 2                          | Yes                  |
| 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                   |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                               |
| <b>Ambient temperature during operation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                               |
| <ul style="list-style-type: none"> <li>• Operation (vertical installation) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> <li>• Operation (max. tilt angle) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> <li>• Operation (vertical installation, portrait format) <ul style="list-style-type: none"> <li>— For vertical installation, min.</li> <li>— For vertical installation, max.</li> </ul> </li> <li>• Operation (max. tilt angle, portrait format) <ul style="list-style-type: none"> <li>— At maximum tilt angle, min.</li> <li>— At maximum tilt angle, min.</li> </ul> </li> </ul> | 0 °C<br>50 °C; (55 °C, see entry ID: 64847814)<br><br>0 °C<br>40 °C<br><br>0 °C<br>40 °C<br><br>0 °C<br>35 °C |
| <b>Ambient temperature during storage/transportation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                               |
| <ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -20 °C<br>60 °C                                                                                               |
| <b>Relative humidity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                               |
| <ul style="list-style-type: none"> <li>• Operation, max.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 90 %; no condensation                                                                                         |
| <b>Operating systems</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                               |
| proprietary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | No                                                                                                            |
| <b>pre-installed operating system</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                               |
| <ul style="list-style-type: none"> <li>• Windows CE</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                                                                                                           |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                               |
| <ul style="list-style-type: none"> <li>• STEP 7 Basic (TIA Portal)</li> <li>• STEP 7 Professional (TIA Portal)</li> <li>• WinCC flexible Compact</li> <li>• WinCC flexible Standard</li> <li>• WinCC flexible Advanced</li> <li>• WinCC Basic (TIA Portal)</li> <li>• WinCC Comfort (TIA Portal)</li> <li>• WinCC Advanced (TIA Portal)</li> <li>• WinCC Professional (TIA Portal)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      | No<br>No<br>No<br>No<br>No<br>No<br>Yes; from V11<br>Yes; from V11<br>Yes; from V11                           |
| <b>Languages</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                               |

|                                                                  |       |
|------------------------------------------------------------------|-------|
| 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                                                    | Yes   |
| • Pocket Excel                                                   | Yes   |
| • PDF Viewer                                                     | Yes   |
| • Media Player                                                   | Yes   |
| • 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                             | 70    |
| 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 messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | 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     |
| <b>Variables</b>                       |         |
| • Number of variables per device       | 2 048   |
| • Number of variables per screen       | 400     |
| • Limit values                         | Yes     |
| • Multiplexing                         | Yes     |
| • Structures                           | Yes     |
| • Arrays                               | Yes     |
| <b>Images</b>                          |         |
| • 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     |
| <b>Image objects</b>                   |         |
| • 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     |
| <b>Complex image objects</b>           |         |
| • 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                         | Yes            |
| • 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            |
| Security                               |                |
| • Number of user groups                | 50             |
| • Number of user rights                | 32             |
| • Number of users                      | 50             |
| • Password export/import               | Yes            |
| • SIMATIC Logon                        | Yes            |
| Logging through printer                |                |
| • Alarms                               | Yes            |
| • Report (shift log)                   | Yes            |
| • Hardcopy                             | Yes            |
| • Electronic print to file             | Yes; PDF, HTML |
| Character sets                         |                |



|                                                        |                                    |
|--------------------------------------------------------|------------------------------------|
| • Keyboard fonts                                       |                                    |
| — US English                                           | Yes                                |
| Transfer (upload/download)                             |                                    |
| • MPI/PROFIBUS DP                                      | Yes                                |
| • USB                                                  | Yes                                |
| • 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; with SINUMERIK option package |
| • SIMOTION                                             | Yes                                |
| • Allen Bradley (EtherNet/IP)                          | Yes                                |
| • Allen Bradley (DF1)                                  | Yes                                |
| • Mitsubishi (MC TCP/IP)                               | Yes                                |
| • Mitsubishi (FX)                                      | Yes                                |
| • OMRON (FINS TCP)                                     | No                                 |
| • OMRON (LINK/Multilink)                               | Yes                                |
| • Modicon (Modbus TCP/IP)                              | Yes                                |
| • Modicon (Modbus)                                     | Yes                                |
| • OPC UA Client                                        | Yes                                |
| • OPC UA Server                                        | Yes                                |
| Service tools/configuration aids                       |                                    |
| • Backup/Restore manually                              | Yes                                |
| • Backup/Restore automatically                         | Yes                                |
| • Simulation                                           | Yes                                |
| • Device switchover                                    | Yes                                |
| Peripherals/Options                                    |                                    |
| Printer                                                | Yes                                |
| SIMATIC HMI MM memory card: Multi Media Card           | Yes; Up to 128 MB                  |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes; Up to 2 GB                    |
| SIMATIC HMI CF memory card Compact Flash Card          | No                                 |
| USB memory                                             | Yes                                |
| SIMATIC IPC USB Flashdrive (USB stick)                 | Yes; Up to 16 GB                   |
| SIMATIC HMI USB stick                                  | Yes; Up to 8 GB                    |
| Network camera                                         | Yes                                |

## Mechanics/material

### Enclosure material (front)

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

## Dimensions

|                            |        |
|----------------------------|--------|
| Width of the housing front | 308 mm |
| Height of housing front    | 204 mm |
| Mounting cutout, width     | 281 mm |
| Mounting cutout, height    | 177 mm |
| Overall depth              | 63 mm  |

## Weights

|                          |        |
|--------------------------|--------|
| Weight without packaging | 2.2 kg |
| Weight incl. packaging   | 2.8 kg |

**last modified:** 06/12/2020