



Figure similar

SIPLUS HMI KTP700 Basic DP based on 6AV2123-2GA03-0AX0 with conformal coating, -20...+50 °C, key/touch operation, 7" TFT display, 65536 colors, PROFIBUS interface, configurable as of WinCC Basic V13/ STEP 7 Basic V13, contains open source software, which is provided free of charge see enclosed CD-ROM

| General information                                                   |                                          |
|-----------------------------------------------------------------------|------------------------------------------|
| Product type designation                                              | KTP700 Basic color DP                    |
| based on                                                              | <a href="#">6AV2123-2GA03-0AX0</a>       |
| 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                                                              |                                          |
| • 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; Analog-resistive                    |
| 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 <sup>2</sup> t         | 0.2 A²·s                                |
| <b>Power</b>                                     |                                         |
| Active power input, typ.                         | 5.5 W                                   |
| <b>Processor</b>                                 |                                         |
| Processor type                                   | ARM                                     |
| <b>Storage</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         | 0                                       |
| Number of RS 485 interfaces                      | 1                                       |
| Number of RS 422 interfaces                      | 1; together with RS 485                 |
| Number of RS 232 interfaces                      | 0; with optional adapter                |
| 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                 | 0                                       |
| <b>Protocols</b>                                 |                                         |
| PROFINET                                         | No                                      |
| PROFINET IO                                      | No                                      |
| IRT                                              | No                                      |
| PROFIBUS                                         | Yes                                     |
| EtherNet/IP                                      | No                                      |
| MPI                                              | Yes                                     |
| <b>Protocols (Ethernet)</b>                      |                                         |
| • TCP/IP                                         | No                                      |
| • DHCP                                           | No                                      |
| • SNMP                                           | No                                      |
| • DCP                                            | No                                      |
| • LLDP                                           | No                                      |
| <b>WEB characteristics</b>                       |                                         |
| • HTTP                                           | No                                      |
| • HTML                                           | No                                      |
| <b>Redundancy mode</b>                           |                                         |
| Media redundancy                                 |                                         |
| — MRP                                            | No                                      |
| <b>Further protocols</b>                         |                                         |
| • CAN                                            | No                                      |
| • MODBUS                                         | Yes; Modicon (MODBUS RTU)               |
| <b>Interrupts/diagnostics/status information</b> |                                         |
| Diagnoses                                        |                                         |
| • Diagnostic information readable                | No                                      |

|                                                                     |                                                                                                                                                                                                                 |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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>                               |                                                                                                                                                                                                                 |
| IP (at the front)                                                   | IP65                                                                                                                                                                                                            |
| IP (rear)                                                           | IP20                                                                                                                                                                                                            |
| NEMA (front)                                                        |                                                                                                                                                                                                                 |
| • Enclosure Type 4 at the front                                     | Yes                                                                                                                                                                                                             |
| • Enclosure Type 4x at the front                                    | Yes                                                                                                                                                                                                             |
| <b>Standards, approvals, certificates</b>                           |                                                                                                                                                                                                                 |
| Ecological footprint                                                |                                                                                                                                                                                                                 |
| • environmental product declaration                                 | Yes                                                                                                                                                                                                             |
| Global warming potential                                            |                                                                                                                                                                                                                 |
| — global warming potential, (total) [CO2 eq]                        | 85 kg                                                                                                                                                                                                           |
| — global warming potential, (during production) [CO2 eq]            | 26.2 kg                                                                                                                                                                                                         |
| — global warming potential, (during operation) [CO2 eq]             | 59.2 kg                                                                                                                                                                                                         |
| — global warming potential, (after end of life cycle) [CO2 eq]      | -0.682 kg                                                                                                                                                                                                       |
| <b>Ambient conditions</b>                                           |                                                                                                                                                                                                                 |
| Ambient temperature during operation                                |                                                                                                                                                                                                                 |
| Operation (vertical installation)                                   |                                                                                                                                                                                                                 |
| — For vertical installation, min.                                   | -20 °C; = Tmin                                                                                                                                                                                                  |
| — For vertical installation, max.                                   | 50 °C                                                                                                                                                                                                           |
| Operation (max. tilt angle)                                         |                                                                                                                                                                                                                 |
| — At maximum tilt angle, min.                                       | -20 °C; = Tmin                                                                                                                                                                                                  |
| — At maximum tilt angle, max.                                       | 40 °C                                                                                                                                                                                                           |
| Operation (vertical installation, portrait format)                  |                                                                                                                                                                                                                 |
| — For vertical installation, min.                                   | -20 °C; = Tmin                                                                                                                                                                                                  |
| — For vertical installation, max.                                   | 40 °C                                                                                                                                                                                                           |
| Operation (max. tilt angle, portrait format)                        |                                                                                                                                                                                                                 |
| — At maximum tilt angle, min.                                       | -20 °C; = Tmin                                                                                                                                                                                                  |
| — At maximum tilt angle, max.                                       | 35 °C                                                                                                                                                                                                           |
| Ambient temperature during storage/transportation                   |                                                                                                                                                                                                                 |
| • min.                                                              | -20 °C                                                                                                                                                                                                          |
| • max.                                                              | 60 °C                                                                                                                                                                                                           |
| Altitude during operation relating to sea level                     |                                                                                                                                                                                                                 |
| • Installation altitude above sea level, max.                       | 5 000 m                                                                                                                                                                                                         |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m) |
| Relative humidity                                                   |                                                                                                                                                                                                                 |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position                                                                                                     |
| <b>Resistance</b>                                                   |                                                                                                                                                                                                                 |
| Coolants and lubricants                                             |                                                                                                                                                                                                                 |
| — Resistant to commercially available coolants and lubricants       | Yes; Incl. diesel and oil droplets in the air                                                                                                                                                                   |
| Use in stationary industrial systems                                |                                                                                                                                                                                                                 |
| — to biologically active substances according to EN 60721-3-3       | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request                                                                                                              |
| — to chemically active substances according to EN 60721-3-3         | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                                                        |
| — to mechanically active substances according to EN 60721-3-3       | Yes; Class 3S4 incl. sand, dust, *                                                                                                                                                                              |
| Use on ships/at sea                                                 |                                                                                                                                                                                                                 |
| — to biologically active substances according to EN 60721-3-6       | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request                                                                                                                                   |
| — to chemically active substances according to EN 60721-3-6         | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *                                                                                                                        |

|                                                                                                                         |                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| — to mechanically active substances according to EN 60721-3-6                                                           | Yes; Class 6S3 incl. sand, dust; *                                                                                                                                                  |
| <b>Usage in industrial process technology</b>                                                                           |                                                                                                                                                                                     |
| — Against chemically active substances acc. to EN 60654-4                                                               | Yes; Class 3 (excluding trichlorethylene)                                                                                                                                           |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04                            | Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) |
| <b>Remark</b>                                                                                                           |                                                                                                                                                                                     |
| — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04             | * The supplied plug covers must remain in place over the unused interfaces during operation!                                                                                        |
| <b>Conformal coating</b>                                                                                                |                                                                                                                                                                                     |
| • Coatings for printed circuit board assemblies acc. to EN 61086                                                        | Yes; Class 2 for high reliability                                                                                                                                                   |
| • Protection against fouling acc. to EN 60664-3                                                                         | Yes; Type 1 protection                                                                                                                                                              |
| • Military testing according to MIL-I-46058C, Amendment 7                                                               | Yes; Discoloration of coating possible during service life                                                                                                                          |
| • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | Yes; Conformal coating, Class A                                                                                                                                                     |
| <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                                                                                                           | No                                                                                                                                                                                  |
| • SIMATIC WinCC Sm@rtServer                                                                                             | No                                                                                                                                                                                  |
| 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 event, more (SIMATIC S7, SINUMERIK, SIMOTION, ...) | 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                                              | No                                                            |

|                                         |                                              |
|-----------------------------------------|----------------------------------------------|
| • 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                       | Yes                                          |
| • USB                                   | No                                           |
| • Ethernet                              | No                                           |
| • 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)           | No                                           |
| • Allen Bradley (DF1)                   | Yes                                          |
| • Mitsubishi (MC TCP/IP)                | No                                           |
| • Mitsubishi (FX)                       | Yes                                          |
| • OMRON (FINS TCP)                      | No                                           |
| • OMRON (Host Link)                     | Yes                                          |
| • Modicon (Modbus TCP/IP)               | No                                           |
| • Modicon (Modbus RTU)                  | Yes                                          |
| <b>Service tools/configuration aids</b> |                                              |

|                                |     |
|--------------------------------|-----|
| • Backup/Restore manually      | Yes |
| • Backup/Restore automatically | No  |
| • Simulation                   | Yes |
| • Device switchover            | Yes |

#### 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 |

#### Mechanics/material

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

#### Dimensions

|                            |        |
|----------------------------|--------|
| Width of the housing front | 214 mm |
| Height of housing front    | 158 mm |
| Mounting cutout, width     | 198 mm |
| Mounting cutout, height    | 142 mm |
| mounting depth             | 39 mm  |

#### Weights

|                            |       |
|----------------------------|-------|
| Weight (without packaging) | 800 g |
| Weight (with packaging)    | 1 kg  |

#### Classifications

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 16      | 27-33-02-01    |
| eClass | 14      | 27-33-02-01    |
| eClass | 12      | 27-33-02-01    |
| eClass | 9.1     | 27-33-02-01    |
| eClass | 9       | 27-33-02-01    |
| eClass | 8       | 27-24-23-02    |
| eClass | 7.1     | 27-24-23-02    |
| eClass | 6       | 27-24-23-02    |
| ETIM   | 10      | EC001412       |
| ETIM   | 9       | EC001412       |
| ETIM   | 8       | EC001412       |
| ETIM   | 7       | EC001412       |
| IDEA   | 4       | 6607           |
| UNSPSC | 15      | 43-21-15-06    |

#### Approvals / Certificates

##### General Product Approval



[Manufacturer Declaration](#)

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|                          |     |             |
|--------------------------|-----|-------------|
| General Product Approval | EMV | Environment |
|--------------------------|-----|-------------|

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