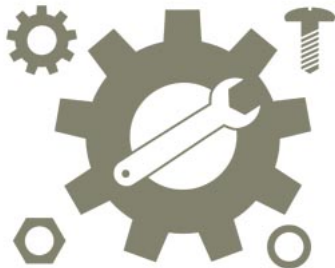


\*\*\*spare part\*\*\* SIPLUS HMI KTP400 Basic mono PN based on 6AV6647-0AA11-3AX1 with conformal coating, -10...+60 °C, display, Ethernet interface



| General information                                                   |                                    |
|-----------------------------------------------------------------------|------------------------------------|
| Product type designation                                              | KTP400 Basic mono PN               |
| based on                                                              | <a href="#">6AV6647-0AA11-3AX1</a> |
| Display                                                               |                                    |
| Design of display                                                     | STN                                |
| Screen diagonal                                                       | 3.8 in                             |
| Display width                                                         | 76.8 mm                            |
| Display height                                                        | 57.6 mm                            |
| Resolution (pixels)                                                   |                                    |
| • Horizontal image resolution                                         | 320 pixel                          |
| • Vertical image resolution                                           | 240 pixel                          |
| Backlighting                                                          |                                    |
| • MTBF backlighting (at 25 °C)                                        | 30 000 h                           |
| Control elements                                                      |                                    |
| Keyboard                                                              |                                    |
| • Function keys                                                       |                                    |
| — Number of function keys                                             | 4                                  |
| — Number of function keys with LEDs                                   | 0                                  |
| • Keys with LED                                                       | No                                 |
| • System keys                                                         | No                                 |
| • Numeric keyboard                                                    | Yes; Onscreen keyboard             |
| • alphanumeric keyboard                                               | Yes; Onscreen keyboard             |
| Touch operation                                                       |                                    |
| • Design as touch screen                                              | Yes                                |
| Installation type/mounting                                            |                                    |
| Mounting position                                                     | vertical                           |
| Rack mounting                                                         | No                                 |
| Wall mounting/direct mounting                                         | No                                 |
| maximum permissible angle of inclination without external ventilation | 35°                                |
| Supply voltage                                                        |                                    |
| Type of supply voltage                                                | DC                                 |
| permissible range, lower limit (DC)                                   | 19.2 V                             |
| permissible range, upper limit (DC)                                   | 28.8 V                             |
| Input current                                                         |                                    |
| Starting current inrush I <sup>2</sup> t                              | 0.5 A <sup>2</sup> ·s              |
| Processor                                                             |                                    |
| Processor type                                                        | RISC 32 bit                        |
| Storage                                                               |                                    |

|                                                                     |                                                                                                                                                                                                                  |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flash                                                               | Yes                                                                                                                                                                                                              |
| RAM                                                                 | Yes                                                                                                                                                                                                              |
| Memory available for user data                                      | 512 kbyte                                                                                                                                                                                                        |
| <b>Type of output</b>                                               |                                                                                                                                                                                                                  |
| Acoustics                                                           | Sound signal                                                                                                                                                                                                     |
| <b>Time of day</b>                                                  |                                                                                                                                                                                                                  |
| Clock                                                               |                                                                                                                                                                                                                  |
| • Software clock                                                    | Yes                                                                                                                                                                                                              |
| <b>Interfaces</b>                                                   |                                                                                                                                                                                                                  |
| Number of industrial Ethernet interfaces                            | 1                                                                                                                                                                                                                |
| Number of RS 485 interfaces                                         | 0                                                                                                                                                                                                                |
| Number of RS 422 interfaces                                         | 0                                                                                                                                                                                                                |
| Number of RS 232 interfaces                                         | 0                                                                                                                                                                                                                |
| Number of USB interfaces                                            | 0                                                                                                                                                                                                                |
| Number of 20 mA interfaces (TTY)                                    | 0                                                                                                                                                                                                                |
| Number of parallel interfaces                                       | 0                                                                                                                                                                                                                |
| Number of other interfaces                                          | 0                                                                                                                                                                                                                |
| With software interfaces                                            | No                                                                                                                                                                                                               |
| <b>Industrial Ethernet</b>                                          |                                                                                                                                                                                                                  |
| • Industrial Ethernet status LED                                    | 2                                                                                                                                                                                                                |
| <b>Protocols</b>                                                    |                                                                                                                                                                                                                  |
| PROFINET                                                            | Yes                                                                                                                                                                                                              |
| Supports protocol for PROFINET IO                                   | No                                                                                                                                                                                                               |
| PROFIBUS                                                            | No                                                                                                                                                                                                               |
| EtherNet/IP                                                         | Yes                                                                                                                                                                                                              |
| MPI                                                                 | No                                                                                                                                                                                                               |
| <b>Protocols (Ethernet)</b>                                         |                                                                                                                                                                                                                  |
| • TCP/IP                                                            | Yes                                                                                                                                                                                                              |
| • DHCP                                                              | Yes                                                                                                                                                                                                              |
| • SNMP                                                              | Yes                                                                                                                                                                                                              |
| • DCP                                                               | Yes                                                                                                                                                                                                              |
| • LLDP                                                              | Yes                                                                                                                                                                                                              |
| <b>Further protocols</b>                                            |                                                                                                                                                                                                                  |
| • MODBUS                                                            | Yes; Modicon (MODBUS TCP/IP)                                                                                                                                                                                     |
| <b>Degree and class of protection</b>                               |                                                                                                                                                                                                                  |
| IP (at the front)                                                   | IP65                                                                                                                                                                                                             |
| IP (rear)                                                           | IP20                                                                                                                                                                                                             |
| <b>Ambient conditions</b>                                           |                                                                                                                                                                                                                  |
| Suited for indoor use                                               | Yes                                                                                                                                                                                                              |
| Suited for outdoor use                                              | No                                                                                                                                                                                                               |
| <b>Ambient temperature during operation</b>                         |                                                                                                                                                                                                                  |
| Operation (vertical installation)                                   |                                                                                                                                                                                                                  |
| — For vertical installation, min.                                   | -10 °C; = Tmin (incl. condensation/frost)                                                                                                                                                                        |
| — For vertical installation, max.                                   | 60 °C; = Tmax                                                                                                                                                                                                    |
| Operation (max. tilt angle)                                         |                                                                                                                                                                                                                  |
| — At maximum tilt angle, min.                                       | -10 °C                                                                                                                                                                                                           |
| — At maximum tilt angle, max.                                       | 40 °C                                                                                                                                                                                                            |
| <b>Ambient temperature during storage/transportation</b>            |                                                                                                                                                                                                                  |
| • min.                                                              | -20 °C                                                                                                                                                                                                           |
| • max.                                                              | 60 °C                                                                                                                                                                                                            |
| <b>Altitude during operation relating to sea level</b>              |                                                                                                                                                                                                                  |
| • Installation altitude above sea level, max.                       | 5 000 m                                                                                                                                                                                                          |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 080 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) |
| <b>Relative humidity</b>                                            |                                                                                                                                                                                                                  |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)                                                                                                                              |
| <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; *                                                                 |
| Remark                                                                                                                  |                                                                                                    |
| — 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!       |
| Conformal coating                                                                                                       |                                                                                                    |
| • 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                                                                    |
| Configuration                                                                                                           |                                                                                                    |
| Message indicator                                                                                                       | Yes                                                                                                |
| Alarm system (incl. buffer and acknowledgment)                                                                          | Yes                                                                                                |
| Process value display (output)                                                                                          | Yes                                                                                                |
| Process value default (input) possible                                                                                  | Yes                                                                                                |
| Recipe management                                                                                                       | Yes                                                                                                |
| Languages                                                                                                               |                                                                                                    |
| Online languages                                                                                                        |                                                                                                    |
| • Number of online/runtime languages                                                                                    | 5                                                                                                  |
| Project languages                                                                                                       |                                                                                                    |
| • Languages per project                                                                                                 | 32                                                                                                 |
| Functionality under WinCC (TIA Portal)                                                                                  |                                                                                                    |
| Libraries                                                                                                               | Yes                                                                                                |
| Applications/options                                                                                                    | none                                                                                               |
| • Web browser                                                                                                           | No                                                                                                 |
| • SIMATIC WinCC Sm@rtServer                                                                                             | No                                                                                                 |
| Task planner                                                                                                            | Yes                                                                                                |
| Help system                                                                                                             | Yes                                                                                                |
| • Number of characters per info text                                                                                    | 320                                                                                                |
| Message system                                                                                                          |                                                                                                    |
| • Number of alarm classes                                                                                               | 32                                                                                                 |
| • Bit messages                                                                                                          | Yes                                                                                                |
| — Number of bit messages                                                                                                | 200                                                                                                |
| • Analog messages                                                                                                       | Yes                                                                                                |
| — Number of analog messages                                                                                             | 15                                                                                                 |
| • System messages HMI                                                                                                   | Yes                                                                                                |
| • System event, more (SIMATIC S7, SINUMERIK, SIMOTION, ... )                                                            | No                                                                                                 |
| • Number of characters per message                                                                                      | 80                                                                                                 |
| • Number of process values per message                                                                                  | 8                                                                                                  |
| • Message indicator                                                                                                     | Yes                                                                                                |
| • Message buffer                                                                                                        | Ring buffer (n x 256 entries), non-retentive                                                       |
| — Number of entries                                                                                                     | 256                                                                                                |
| — Circulating buffer                                                                                                    | Yes                                                                                                |

|                                                        |                                            |
|--------------------------------------------------------|--------------------------------------------|
| Recipe management                                      |                                            |
| • Number of recipes                                    | 5                                          |
| • Data records per recipe                              | 20                                         |
| • Entries per data record                              | 20                                         |
| • Size of internal recipe memory                       | 40 kbyte                                   |
| • Recipe memory expandable                             | No                                         |
| Variables                                              |                                            |
| • Number of variables per device                       | 128                                        |
| • Number of variables per screen                       | 30                                         |
| • Limit values                                         | Yes                                        |
| • Multiplexing                                         | Yes                                        |
| • Structures                                           | No                                         |
| Images                                                 |                                            |
| • Number of configurable images                        | 50                                         |
| • Permanent window/default                             | Yes; No permanent window can be configured |
| • Image selection by PLC                               | Yes                                        |
| • Image number in the PLC                              | Yes                                        |
| Complex image objects                                  |                                            |
| • Status/control                                       | No                                         |
| Lists                                                  |                                            |
| • Number of text lists per project                     | 150                                        |
| • Number of graphics lists per project                 | 100                                        |
| Security                                               |                                            |
| • Number of user groups                                | 50                                         |
| • Number of user rights                                | 32                                         |
| • Password export/import                               | No                                         |
| Character sets                                         |                                            |
| • Keyboard fonts                                       | US American (English)                      |
| — US English                                           | Yes                                        |
| Transfer (upload/download)                             |                                            |
| • MPI/PROFIBUS DP                                      | No                                         |
| • USB                                                  | No                                         |
| • Ethernet                                             | Yes                                        |
| • using external storage medium                        | No                                         |
| Process coupling                                       |                                            |
| • S7-200                                               | Yes; Via CP                                |
| • S7-300/400                                           | Yes                                        |
| • SINUMERIK                                            | No                                         |
| • SIMOTION                                             | No                                         |
| • Allen Bradley (DF1)                                  | No                                         |
| • Mitsubishi (FX)                                      | No                                         |
| • OMRON (Host Link)                                    | No                                         |
| • Modicon (Modbus RTU)                                 | No                                         |
| Service tools/configuration aids                       |                                            |
| • Backup/Restore manually                              | Yes                                        |
| • Simulation                                           | Yes                                        |
| • Device switchover                                    | Yes                                        |
| Peripherals/Options                                    |                                            |
| Peripherals                                            | none                                       |
| Printer                                                | No                                         |
| SIMATIC HMI MM memory card: Multi Media Card           | No                                         |
| SIMATIC HMI SD memory card: Secure Digital memory card | No                                         |
| USB memory                                             | No                                         |
| Mechanics/material                                     |                                            |
| Enclosure material (front)                             |                                            |
| • Plastic                                              | Yes                                        |
| • Aluminum                                             | No                                         |
| Dimensions                                             |                                            |
| Width of the housing front                             | 140 mm                                     |

|                         |        |
|-------------------------|--------|
| Height of housing front | 116 mm |
| Mounting cutout, width  | 123 mm |
| Mounting cutout, height | 99 mm  |
| mounting depth          | 40 mm  |

**Weights**

|                            |         |
|----------------------------|---------|
| Weight (without packaging) | 0.32 kg |
| Weight (with packaging)    | 0.53 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       |

**Approvals / Certificates**

**General Product Approval**



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