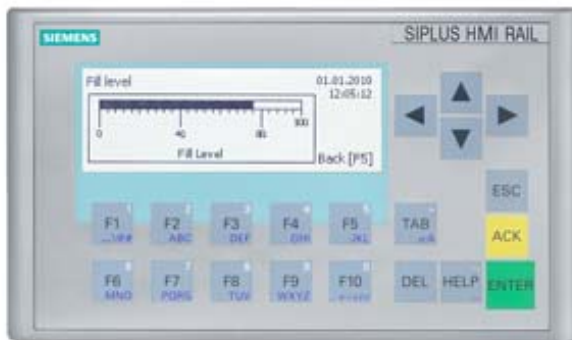


SIPLUS HMI KP300 Basic mono "3,6" T1 RAIL -25 ... +55°C T1" at 70°C for 10 min with conformal coating based on 6AV6647-0AH11-3AX0 . Basic "Panel, key operation, 3" FSTN" LCD display, Black/white, PROFINET interface, configurable from WinCE Basic V11/ STEP 7 Basic V11, contains open source software, which is provided free of charge See enclosed CD-ROM



| General information            |   |
|--------------------------------|---|
| Product type designation       | KP300 Basic mono PN                                 |
| Display                        |   |
| Design of display              | FSTN  |
| Screen diagonal                | 3.6 in  |
| Display width                  | 87 mm   |
| Display height                 | 31 mm   |
| Number of colors               | 4; Backlit display only (white, red, green, yellow) |
| Resolution (pixels)            |   |
| • Horizontal image resolution  | 240 Pixel   |
| • Vertical image resolution    | 80 Pixel  |
| Backlighting                   |   |
| • MTBF backlighting (at 25 °C) | 50 000 h  |
| • Backlight dimmable           | No  |
| Control elements               |   |
| Keyboard fonts                 |   |
| • Function keys                |   |
| — Number of function keys      | 10  |

|   |                       |
|---|-----------------------|
| — Number of function keys with LEDs                                   | 0                     |
| • Keys with LED   | No                    |
| • System keys   | Yes                   |
| • Numeric keyboard  | Yes; Keyboard         |
| • alphanumeric keyboard   | Yes; Keyboard         |
| <b>Touch operation</b>  |                       |
| • Design as touch screen  | No                    |
| <b>Installation type/mounting</b>                                     |                       |
| Mounting position   | vertical              |
| Mounting in portrait format possible                                  | No                    |
| Mounting in landscape format possible                                 | Yes                   |
| maximum permissible angle of inclination without external ventilation | 35°                   |
| <b>Supply voltage</b>   |                       |
| Type of supply voltage  | DC                    |
| Rated value (DC)  | 24 V                  |
| permissible range, lower limit (DC)                                   | 19.2 V                |
| permissible range, upper limit (DC)                                   | 28.8 V                |
| <b>Input current</b>  |                       |
| Current consumption (rated value)                                     | 0.1 A                 |
| Starting current inrush I <sup>2</sup> t                              | 0.5 A <sup>2</sup> ·s |
| <b>Power</b>  |                       |
| Active power input, typ.  | 3 W                   |
| <b>Memory</b>   |                       |
| Flash   | Yes                   |
| RAM   | Yes                   |
| Memory available for user data  | 1 Mbyte               |
| <b>Type of output</b>   |                       |
| Acoustics   |                       |
| • Buzzer  | No                    |
| • Speaker   | No                    |
| <b>Time of day</b>  |                       |
| <b>Clock</b>  |                       |
| • Hardware clock (real-time)  | No                    |
| • Software clock  | Yes                   |
| • retentive   | No                    |
| • synchronizable  | 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  |
| Number of SD card slots          | 0  |
| With software interfaces         | No |
| <b>Industrial Ethernet</b>       |    |
| • Industrial Ethernet status LED | 2  |

### Protocols

|                                   |     |
|-----------------------------------|-----|
| PROFINET                          | Yes |
| Supports protocol for PROFINET IO | No  |
| IRT                               | No  |
| PROFIBUS                          | No  |
| MPI                               | No  |

### Protocols (Ethernet)

|          |     |
|----------|-----|
| • TCP/IP | Yes |
| • DHCP   | Yes |
| • SNMP   | Yes |
| • DCP    | Yes |
| • LLDP   | Yes |

### WEB characteristics

|        |    |
|--------|----|
| • HTTP | No |
| • HTML | No |

### Further protocols

|               |                              |
|---------------|------------------------------|
| • CAN         | No                           |
| • EtherNet/IP | Yes                          |
| • MODBUS      | Yes; Modicon (MODBUS TCP/IP) |

### Interrupts/diagnostics/status information

#### Diagnostic messages

|                                   |    |
|-----------------------------------|----|
| • Diagnostic information readable | No |
|-----------------------------------|----|

### Isolation

|                       |   |
|-----------------------|---|
| Isolation tested with | 707 V DC (type test) and according to EN 50155 (routine test) |
|-----------------------|---|

### Degree and class of protection

|                                  |      |
|----------------------------------|------|
| IP (at the front)                | IP65 |
| IP (rear)                        | IP20 |
| NEMA (front)                     |      |
| • Enclosure Type 4 at the front  | Yes  |
| • Enclosure Type 4x at the front | Yes  |

## Standards, approvals, certificates

| Railway application                  |  |
|--------------------------------------|--|
| • EN 50121-3-2                       | Yes; EMC for rail vehicles   |
| • EN 50121-4                         | Yes; EMC for signal and telecommunications systems   |
| • EN 50124-1                         | Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 24 V DC                                  |
| • EN 50125-1                         | Yes; Rail vehicles - see ambient conditions  |
| • EN 50125-2                         | Yes; Stationary electrical equipment - see ambient conditions  |
| • EN 50125-3                         | Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track) |
| • EN 50155                           | Yes; Rail vehicles - temperature class T1, horizontal mounting position, salt spray Class ST2  |
| • EN 61373                           | Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B   |
| • Fire protection acc. to EN 45545-2 | Yes; Rail vehicles - verification on request   |

## Ambient conditions

| Ambient temperature during storage/transportation                   |  |
|---|--|
| • min.  | -20 °C   |
| • max.  | 60 °C  |
| Altitude during operation relating to sea level                     |  |
| • Installation altitude above sea level, max.                       | 2 000 m  |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)                                     |
| Relative humidity   |  |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)                |
| Resistance  |  |
| 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 land craft, rail vehicles and special-purpose vehicles       |  |
| — to biologically active substances according to EN 60721-3-5       | Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request |
| — to chemically active substances according to EN 60721-3-5         | Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); *                              |

|   |   |
|---|---|
| — to mechanically active substances according to EN 60721-3-5   | Yes; Class 5S3 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   |
| • Protection against fouling acc. to EN 60664-3   | Yes; Type 1 protection  |
| • Electronic equipment on rolling stock acc. to EN 50155  | Yes; Class PC2 protective coating acc. to EN 50155:2017   |
| • 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   |

| Languages                              |          |
|--|----------|
| Online languages                       |          |
| • Number of online/runtime languages   | 5        |
| Project languages                      |          |
| • Languages per project                | 32       |
| Functionality under WinCC (TIA Portal) |          |
| Libraries                              | Yes      |
| Task planner                           |          |
| • time-controlled                      | No       |
| • task-controlled                      | Yes      |
| Help system                            |          |
| • Number of characters per info text   | 320      |
| Message system                         |          |
| • Number of alarm classes              | 32       |
| • Bit messages                         |          |
| — Number of bit messages               | 200      |
| • Analog messages                      |          |
| — Number of analog messages            | 15       |
| • System messages HMI                  |          |
| • Number of characters per message     | 80       |
| • Number of process values per message | 8        |
| • Message indicator                    |          |
| • Message buffer                       | Yes      |
| — Number of entries                    | 256      |
| — Circulating buffer                   | Yes      |
| — retentive                            | Yes      |
| — maintenance-free                     | 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       | 250      |
| • Number of variables per screen       | 30       |
| • Limit values                         |          |
| • Multiplexing                         | Yes      |
| • Structures                           |          |
| • Arrays                               | No       |
| • Arrays                               |          |
| • Arrays                               | Yes      |
| Images                                 |          |

|  |     |
|--|-----|
| • Number of configurable images        | 50  |
| • Permanent window/default             | Yes |
| • Global image                         | Yes |
| • Image selection by PLC               | Yes |
| • Image number in the PLC              | Yes |
| <b>Image objects</b>                   |     |
| • Number of objects per image          | 30  |
| • 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 | 5   |
| • 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              | No  |
| • Media Player                         | No  |
| • Bar graphs                           | Yes |
| • Sliders                              | No  |
| • Pointer instruments                  | No  |
| • Analog/digital clock                 | No  |
| <b>Lists</b>                           |     |
| • Number of text lists per project     | 150 |
| • Number of entries per text list      | 30  |
| • Number of graphics lists per project | 100 |
| • Number of entries per graphics list  | 30  |
| <b>Archiving</b>                       |     |
| • Number of archives per device        | 0   |
| <b>Security</b>                        |     |
| • Number of user groups                | 50  |

|  |     |
|--|-----|
| • Number of user rights                                | 32  |
| • Number of users                                      | 50  |
| • Password export/import                               | No  |
| • SIMATIC Logon  | No  |
| <b>Character sets</b>                                  |     |
| • Keyboard fonts                                       |     |
| — US English   | Yes |
| <b>Transfer (upload/download)</b>                      |     |
| • MPI/PROFIBUS DP                                      | No  |
| • USB  | No  |
| • Ethernet   | Yes |
| • using external storage medium                        | No  |
| <b>Process coupling</b>                                |     |
| • S7-1200  | Yes |
| • S7-1500  | Yes |
| • S7-200   | Yes |
| • S7-300/400   | Yes |
| • LOGO!  | Yes |
| • WinAC  | Yes |
| • SINUMERIK  | No  |
| • SIMOTION   | No  |
| • Allen Bradley (EtherNet/IP)                          | Yes |
| • Allen Bradley (DF1)                                  | No  |
| • Mitsubishi (MC TCP/IP)                               | Yes |
| • Mitsubishi (FX)                                      | No  |
| • OMRON (FINS TCP)                                     | No  |
| • OMRON (LINK/Multilink)                               | No  |
| • Modicon (Modbus TCP/IP)                              | Yes |
| • Modicon (Modbus)                                     | No  |
| <b>Service tools/configuration aids</b>                |     |
| • Backup/Restore manually                              | Yes |
| • Backup/Restore automatically                         | No  |
| • Simulation   | Yes |
| • Device switchover                                    | Yes |
| <b>Peripherals/Options</b>                             |     |
| Printer  | No  |
| SIMATIC HMI MM memory card: Multi Media Card           | No  |
| SIMATIC HMI SD memory card: Secure Digital memory card | No  |
| USB memory   | No  |
| <b>Mechanics/material</b>                              |     |



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

### Dimensions

|                            |        |
|----------------------------|--------|
| Width of the housing front | 165 mm |
| Height of housing front    | 97 mm  |
| Mounting cutout, width     | 149 mm |
| Mounting cutout, height    | 82 mm  |
| Overall depth              | 30 mm  |

### Weights

|                          |         |
|--------------------------|---------|
| Weight without packaging | 0.25 kg |
| Weight incl. packaging   | 0.38 kg |

### Other

|                       |  |
|-----------------------|--|
| Note:                 | for use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A, Online Support article 109736776 |
| <b>last modified:</b> | 05/15/2020   |