




SIPLUS S7-1200 SB 1223 2DI/2DQ based on 6ES7223-0BD30-0XB0 with conformal coating, -20...+60 °C, start up 0 °C, digital input/output 2 DI 24 V DC/2 DQ 24 V DC

| General information | |
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| Product type designation | SB 1223, DI 2x24 V DC/DQ 2x24 V DC |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version | see entry ID: 109746275 |
| Supply voltage | |
| permissible range, lower limit (DC) | 20.4 V |
| permissible range, upper limit (DC) | 28.8 V |
| Input current | |
| from backplane bus 5 V DC, typ. | 50 mA |
| output voltage / header | |
| supply voltage of the transmitters / header | |
| <ul style="list-style-type: none"> supply current / from supply voltage for transmitter / maximum | 4 mA; per channel |
| Power loss | |
| Power loss, typ. | 1 W |
| Digital inputs | |
| Number of digital inputs | 2; Current-sinking |
| <ul style="list-style-type: none"> in groups of | 1 |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes |
| Number of simultaneously controllable inputs | |
| all mounting positions | |
| — up to 40 °C, max. | 2 |
| Input voltage | |
| <ul style="list-style-type: none"> Type of input voltage Rated value (DC) for signal "0" for signal "1" | DC 24 V 0 to 5 V +15 to +30 V |
| Input current | |
| <ul style="list-style-type: none"> for signal "0", max. (permissible quiescent current) for signal "1", typ. | 1 mA 7 mA |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — parameterizable | Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four |
| — at "0" to "1", max. | 2 µs |
| — at "1" to "0", max. | 10 µs |
| for interrupt inputs | |
| — parameterizable | Yes |

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| for technological functions | |
| — parameterizable | Yes |
| Cable length | |
| • shielded, max. | 50 m |
| Digital outputs | |
| Number of digital outputs | 2; MOSFET, solid-state (current-sinking/current-sourcing) |
| • in groups of | 1 |
| Short-circuit protection | No |
| Switching capacity of the outputs | |
| • with resistive load, max. | 0.5 A |
| • on lamp load, max. | 5 W |
| Load resistance range | |
| • upper limit | 0.6 Ω |
| Output voltage | |
| • Rated value (DC) | 24 V |
| • for signal "0", max. | 0.1 V; with 10 kOhm load |
| • for signal "1", min. | 20 V |
| Output current | |
| • for signal "1" permissible range, max. | 0.5 A |
| • for signal "0" residual current, max. | 10 μA |
| Cable length | |
| • shielded, max. | 50 m |
| Interrupts/diagnostics/status information | |
| Alarms | Yes |
| Diagnostics function | Yes |
| Diagnostics indication LED | |
| • for status of the inputs | Yes |
| • for status of the outputs | Yes |
| Ambient conditions | |
| Free fall | |
| • Fall height, max. | 0.3 m; five times, in product package |
| Ambient temperature during operation | |
| • min. | -20 °C; = Tmin (incl. condensation/frost) |
| • max. | 60 °C; = Tmax |
| Ambient temperature during storage/transportation | |
| • min. | -40 °C |
| • max. | 70 °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 permitted (no commissioning in bedewed state) |
| 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 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 | Yes; Class 6S3 incl. sand, dust; * |

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| EN 60721-3-6 | |
| Usage in industrial process technology | |
| — 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) |
| 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 | |
| <ul style="list-style-type: none"> ● Coatings for printed circuit board assemblies acc. to EN 61086 ● Protection against fouling acc. to EN 60664-3 ● Military testing according to MIL-I-46058C, Amendment 7 ● Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | <p>Yes; Class 2 for high reliability</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p> |
| Mechanics/material | |
| Enclosure material (front) <ul style="list-style-type: none"> ● Plastic | Yes |
| Dimensions | |
| Width | 38 mm |
| Height | 62 mm |
| Depth | 21 mm |
| Weights | |
| Weight, approx. | 40 g |
| last modified: | 4/1/2022  |