




SIMATIC S7-1200, Digital I/O SB 1223, 2 DI/2 DO, 2 DI 24 V DC/2 DO 24 V DC

| General information | |
|---|---|
| Product type designation | SB 1223, DI 2x24 V DC/DQ 2x24 V DC |
| 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 | |
| • Supply current, max. | 4 mA; per channel |
| Power loss | |
| Power loss, typ. | 1 W |
| Digital inputs | |
| Number of digital inputs | 2; Current-sinking |
| • 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 | |
| • Rated value (DC) | 24 V |
| • for signal "0" | 0 to 5 V |
| • for signal "1" | +15 to +30 V |
| Input current | |
| • for signal "0", max. (permissible quiescent current) | 1 mA |
| • for signal "1", typ. | 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 |
| 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" rated value | 0.5 A |
| • 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 |
| Standards, approvals, certificates | |
| CE mark | Yes |
| CSA approval | Yes |
| UL approval | Yes |
| cULus | Yes |
| FM approval | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| Marine approval | Yes |
| Ambient conditions | |
| Free fall | |
| • Fall height, max. | 0.3 m; five times, in product package |
| Ambient temperature during operation | |
| • min. | -20 °C |
| • max. | 60 °C |
| • horizontal installation, min. | -20 °C |
| • horizontal installation, max. | 60 °C |
| • vertical installation, min. | -20 °C |
| • vertical installation, max. | 50 °C |
| Ambient temperature during storage/transportation | |
| • min. | -40 °C |
| • max. | 70 °C |
| Air pressure acc. to IEC 60068-2-13 | |
| • Storage/transport, min. | 660 hPa |
| • Storage/transport, max. | 1 080 hPa |
| Relative humidity | |
| • Operation at 25 °C without condensation, max. | 95 % |
| Mechanics/material | |
| Enclosure material (front) | |
| • Plastic | Yes |
| Dimensions | |
| Width | 38 mm |
| Height | 62 mm |
| Depth | 21 mm |
| Weights | |
| Weight, approx. | 40 g |
| last modified: | 3/12/2024  |

