



Figure similar

SIMATIC S7-1200, Digital I/O SB 1223, 2 DI/2 DQ, 24 V DC 200 kHz

| General information                                    |                                                                                                                                              |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Product type designation                               | SB 1223, DI 2x24 V DC/DQ 2x24 V DC 200 kHz                                                                                                   |
| Input current                                          |                                                                                                                                              |
| from backplane bus 5 V DC, typ.                        | 35 mA                                                                                                                                        |
| Power loss                                             |                                                                                                                                              |
| Power loss, typ.                                       | 0.5 W                                                                                                                                        |
| Digital inputs                                         |                                                                                                                                              |
| Number of digital inputs                               | 2; Current-sourcing                                                                                                                          |
| • in groups of                                         | 2                                                                                                                                            |
| Number of simultaneously controllable inputs           |                                                                                                                                              |
| all mounting positions                                 |                                                                                                                                              |
| — up to 40 °C, max.                                    | 2                                                                                                                                            |
| Input voltage                                          |                                                                                                                                              |
| • Type of input voltage                                | DC                                                                                                                                           |
| • Rated value (DC)                                     | 24 V                                                                                                                                         |
| • for signal "0"                                       | (L+ minus 5.0 V DC) ... L+                                                                                                                   |
| • for signal "1"                                       | 0 V ... (L+ minus 10 V DC)                                                                                                                   |
| Input current                                          |                                                                                                                                              |
| • for signal "0", max. (permissible quiescent current) | 1.4 mA                                                                                                                                       |
| • for signal "1", min.                                 | 2.9 mA                                                                                                                                       |
| • for signal "1", typ.                                 | 7 mA                                                                                                                                         |
| Input delay (for rated value of input voltage)         |                                                                                                                                              |
| for standard inputs                                    |                                                                                                                                              |
| — parameterizable                                      | Yes; 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 µs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 ms |
| for interrupt inputs                                   |                                                                                                                                              |
| — parameterizable                                      | Yes                                                                                                                                          |
| for technological functions                            |                                                                                                                                              |
| — parameterizable                                      | Yes                                                                                                                                          |
| Cable length                                           |                                                                                                                                              |
| • shielded, max.                                       | 50 m; shielded, twisted pair                                                                                                                 |
| Digital outputs                                        |                                                                                                                                              |
| Number of digital outputs                              | 2; MOSFET, solid-state (current-sinking/current-sourcing)                                                                                    |
| • in groups of                                         | 2                                                                                                                                            |
| Short-circuit protection                               | No                                                                                                                                           |
| Switching capacity of the outputs                      |                                                                                                                                              |
| • with resistive load, max.                            | 0.1 A                                                                                                                                        |
| Output voltage                                         |                                                                                                                                              |
| • Rated value (DC)                                     | 24 V                                                                                                                                         |

|                                                   |                                       |
|---------------------------------------------------|---------------------------------------|
| • for signal "0", max.                            | 1 V                                   |
| • for signal "1", min.                            | L+ (-1.5 V)                           |
| Output current                                    |                                       |
| • for signal "1" permissible range, max.          | 0.1 A                                 |
| Cable length                                      |                                       |
| • shielded, max.                                  | 50 m                                  |
| <b>Interrupts/diagnostics/status information</b>  |                                       |
| Diagnostics indication LED                        |                                       |
| • for status of the inputs                        | Yes                                   |
| • for status of the outputs                       | Yes                                   |
| <b>Standards, approvals, certificates</b>         |                                       |
| 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                                   |
| <b>Ambient conditions</b>                         |                                       |
| 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 %                                  |
| <b>Mechanics/material</b>                         |                                       |
| Enclosure material (front)                        |                                       |
| • Plastic                                         | Yes                                   |
| <b>Dimensions</b>                                 |                                       |
| Width                                             | 38 mm                                 |
| Height                                            | 62 mm                                 |
| Depth                                             | 21 mm                                 |
| <b>Weights</b>                                    |                                       |
| Weight, approx.                                   | 35 g                                  |

last modified: 8/16/2023 