



Figure similar

SIMATIC S7-1200, Digital I/O SB 1223, 2 DI/2 DQ, 5V DC 200kHz

| General information                                    |                                                                                                                                              |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Product type designation                               | SB 1223, DI 2x5 V DC/DQ 2x5 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                                                                                                                                            |
| Input voltage                                          |                                                                                                                                              |
| • Rated value (DC)                                     | 5 V                                                                                                                                          |
| • for signal "0"                                       | (L+ minus 1.0 V DC) ... L+                                                                                                                   |
| • for signal "1"                                       | 0 V ... (L+ minus 2.0 V DC)                                                                                                                  |
| Input current                                          |                                                                                                                                              |
| • for signal "0", max. (permissible quiescent current) | 2.2 mA                                                                                                                                       |
| • for signal "1", min.                                 | 5.1 mA                                                                                                                                       |
| • for signal "1", typ.                                 | 15 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                                                                                                                                        |
| Load resistance range                                  |                                                                                                                                              |
| • upper limit                                          | 7 Ω                                                                                                                                          |
| Output voltage                                         |                                                                                                                                              |
| • Rated value (DC)                                     | 5 V                                                                                                                                          |
| • for signal "0", max.                                 | 0.2 V                                                                                                                                        |
| • for signal "1", min.                                 | L+ minus 0.7 V DC                                                                                                                            |

|                                                   |                                       |
|---------------------------------------------------|---------------------------------------|
| • for signal "1", max.                            | 6 V                                   |
| Output current                                    |                                       |
| • for signal "1" rated value                      | 0.1 A                                 |
| • for signal "1" permissible range, max.          | 0.1 A                                 |
| Cable length                                      |                                       |
| • shielded, max.                                  | 50 m                                  |
| Interrupts/diagnostics/status information         |                                       |
| 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.                                   | 35 g                                  |

last modified: 3/12/2024 