

SIMATIC S7-1200, Digital I/O SB 1223, 2 DI/2 DO, 2 DI 24 V DC/2 DO 24 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  |                    |
| Power supply to the transmitters                                |                    |
| • 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   |
| <b>Input voltage</b>                                   |   |
| • Type of input voltage                                | DC  |
| • Rated value (DC)                                     | 24 V  |
| • for signal "0"                                       | 0 to 5 V  |
| • for signal "1"                                       | +15 to +30V   |
| <b>Input current</b>                                   |   |
| • for signal "0", max. (permissible quiescent current) | 1 mA  |
| • for signal "1", typ.                                 | 0.5 A   |
| <b>Input delay (for rated value of input voltage)</b>  |   |
| 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 counter/technological functions                    |   |
| — parameterizable                                      | Yes   |
| <b>Cable length</b>                                    |   |
| • shielded, max.                                       | 500 m   |
| • unshielded, max.                                     | 300 m   |
| <b>Digital outputs</b>                                 |   |
| Number of digital outputs                              | 2; MOSFET, solid-state (current-sinking/current-sourcing)                                     |
| • in groups of   | 1   |
| Short-circuit protection                               | No  |
| <b>Switching capacity of the outputs</b>               |   |
| • with resistive load, max.                            | 0.5 A   |
| • on lamp load, max.                                   | 5 W   |
| <b>Load resistance range</b>                           |   |
| • upper limit  | 0.6 Ω   |
| <b>Output voltage</b>                                  |   |
| • Rated value (DC)                                     | 24 V  |
| • for signal "0", max.                                 | 0.1 V; with 10 kOhm load  |
| • for signal "1", min.                                 | 20 V  |
| <b>Output current</b>                                  |   |
| • for signal "1" permissible range, max.               | 0.5 A   |
| • for signal "0" residual current, max.                | 10 µA   |
| <b>Cable length</b>                                    |   |
| • shielded, max.                                       | 500 m   |
| • unshielded, max.                                     | 150 m   |

| Interrupts/diagnostics/status information         |                                       |
|---|---------------------------------------|
| Alarms  | Yes                                   |
| Diagnostic functions                              | Yes                                   |
| Diagnostics indication LED                        |                                       |
| • for status of the inputs                        | Yes                                   |
| • for status of the outputs                       | Yes                                   |
| Degree and class of protection                    |                                       |
| Degree of protection acc. to EN 60529             |                                       |
| • IP20  | 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                                  |
| <b>last modified:</b>                             | 12/23/2017                            |