



SIMATIC S7-1200, Digital input SB 1221, 4 DI, 24 V DC 200 kHz, Sourcing input

| General information                                    |                                                                                                                                              |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Product type designation                               | SB 1221, DI 4x24 V DC 200 kHz                                                                                                                |
| Input current                                          |                                                                                                                                              |
| from backplane bus 5 V DC, typ.                        | 40 mA                                                                                                                                        |
| Power loss                                             |                                                                                                                                              |
| Power loss, typ.                                       | 1 W                                                                                                                                          |
| Digital inputs                                         |                                                                                                                                              |
| Number of digital inputs                               | 4; Current-sourcing                                                                                                                          |
| • in groups of                                         | 4                                                                                                                                            |
| Input voltage                                          |                                                                                                                                              |
| • Type of input voltage                                | DC                                                                                                                                           |
| • Rated value (DC)                                     | 24 V                                                                                                                                         |
| • for signal "0"                                       | (L+ minus 5.0 V DC) ... L+ (1.4 ... 0 mA)                                                                                                    |
| • for signal "1"                                       | 0 V ... (L+ minus 10 V DC (10 ... 2.9 mA))                                                                                                   |
| 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                                                                                                                 |
| Interrupts/diagnostics/status information              |                                                                                                                                              |
| Diagnostics indication LED                             |                                                                                                                                              |
| • for status of the inputs                             | 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                                                                                           |
| <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                                                                                          |
| <b>last modified:</b>                             | 2/26/2021  |