



SIMATIC S7-300, DIGITAL INPUT SM 321, OPTICALLY ISOLATED,  
16DI, 24 V DC, 1 X 20 PIN

| Supply voltage                                                  |        |
|-----------------------------------------------------------------|--------|
| Load voltage L+                                                 |        |
| • Rated value (DC)                                              | 24 V   |
| • permissible range, lower limit (DC)                           | 20.4 V |
| • permissible range, upper limit (DC)                           | 28.8 V |
| Input current                                                   |        |
| from backplane bus 5 V DC, max.                                 | 10 mA  |
| Power loss                                                      |        |
| Power loss, typ.                                                | 3.5 W  |
| Digital inputs                                                  |        |
| Number of digital inputs                                        | 16     |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes    |
| Number of simultaneously controllable inputs                    |        |
| horizontal installation                                         |        |

|                                                            |             |
|------------------------------------------------------------|-------------|
| — up to 40 °C, max.                                        | 16          |
| — up to 60 °C, max.                                        | 16          |
| vertical installation                                      |             |
| — up to 40 °C, max.                                        | 16          |
| Input voltage                                              |             |
| • Type of input voltage                                    | DC          |
| • Rated value, DC                                          | 24 V        |
| • for signal "0"                                           | -30 to +5 V |
| • for signal "1"                                           | 13 to 30 V  |
| Input current                                              |             |
| • for signal "1", typ.                                     | 7 mA        |
| Input delay (for rated value of input voltage)             |             |
| for standard inputs                                        |             |
| — parameterizable                                          | No          |
| — at "0" to "1", min.                                      | 1.2 ms      |
| — at "0" to "1", max.                                      | 4.8 ms      |
| Cable length                                               |             |
| • Cable length, shielded, max.                             | 1 000 m     |
| • Cable length unshielded, max.                            | 600 m       |
| Encoder                                                    |             |
| Connectable encoders                                       |             |
| • 2-wire sensor                                            | Yes         |
| — permissible quiescent current (2-wire sensor), max.      | 1.5 mA      |
| Isochronous mode                                           |             |
| Isochronous mode (application synchronized up to terminal) | No          |
| Interrupts/diagnostics/status information                  |             |
| Alarms                                                     |             |
| • Alarms                                                   | No          |
| • Diagnostic alarm                                         | No          |
| • Hardware interrupt                                       | No          |
| Diagnostic messages                                        |             |
| • Diagnostic functions                                     | No          |
| Diagnostics indication LED                                 |             |
| • Status indicator digital input (green)                   | Yes         |
| Galvanic isolation                                         |             |

|                                              |                  |
|----------------------------------------------|------------------|
| Galvanic isolation digital inputs            |                  |
| • between the channels                       | No               |
| • between the channels, in groups of         | 16               |
| • between the channels and the backplane bus | Yes; Optocoupler |
| Permissible potential difference             |                  |
| between different circuits                   | 75 VDC / 60 VAC  |
| Isolation                                    |                  |
| Isolation tested with                        | 500 V DC         |
| Connection method                            |                  |
| required front connector                     | 20-pin           |
| Dimensions                                   |                  |
| Width                                        | 40 mm            |
| Height                                       | 125 mm           |
| Depth                                        | 120 mm           |
| Weights                                      |                  |
| Weight, approx.                              | 200 g            |
| <b>last modified:</b>                        | 31.07.2014       |