



SIMATIC S7-300, DIGITAL INPUT SM 321,  
OPTICALLY ISOLATED 32DI, 24 V DC,  
1 X 40 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.                                 | 15 mA  |
| Power losses                                                    |        |
| Power loss, typ.                                                | 6.5 W  |
| Digital inputs                                                  |        |
| Number of digital inputs                                        | 32     |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes    |
| Number of simultaneously controllable inputs                    |        |
| horizontal installation                                         |        |
| up to 40 °C, max.                                               | 32     |
| up to 60 °C, max.                                               | 16     |
| vertical installation                                           |        |
| up to 40 °C, max.                                               | 32     |

|                                                                 |                   |
|-----------------------------------------------------------------|-------------------|
| <b>Input voltage</b>                                            |                   |
| Type of input voltage                                           | DC                |
| Rated value, DC                                                 | 24 V              |
| for signal "0"                                                  | -30 to +5 V       |
| for signal "1"                                                  | 13 to 30 V        |
| <b>Input current</b>                                            |                   |
| for signal "1", typ.                                            | 7 mA              |
| <b>Input delay (for rated value of input voltage)</b>           |                   |
| for standard inputs                                             |                   |
| Parameterizable                                                 | No                |
| at "0" to "1", min.                                             | 1.2 ms            |
| at "0" to "1", max.                                             | 4.8 ms            |
| <b>Cable length</b>                                             |                   |
| Cable length, shielded, max.                                    | 1000 m            |
| Cable length unshielded, max.                                   | 600 m             |
| <b>Encoder</b>                                                  |                   |
| Connectable encoders                                            |                   |
| 2-wire sensor                                                   | Yes               |
| Permissible quiescent current (2-wire sensor), max.             | 1.5 mA            |
| <b>Isochronous mode</b>                                         |                   |
| Isochronous operation (application synchronized up to terminal) | No                |
| <b>Interrupts/diagnostics/status information</b>                |                   |
| Alarms                                                          |                   |
| Alarms                                                          | No                |
| Diagnostic alarm                                                | No                |
| Hardware interrupt                                              | No                |
| <b>Diagnostic messages</b>                                      |                   |
| Diagnostic functions                                            | No                |
| <b>Diagnostics indication LED</b>                               |                   |
| Status indicator digital input (green)                          | Yes               |
| <b>Galvanic isolation</b>                                       |                   |
| Galvanic isolation digital inputs                               |                   |
| between the channels                                            | No                |
| between the channels, in groups of                              | 16                |
| between the channels and the backplane bus                      | Yes ; Optocoupler |
| <b>Isolation</b>                                                |                   |
| Isolation checked with                                          | 500 V DC          |

| Connection method        |              |
|--------------------------|--------------|
| required front connector | 40-pin       |
| Dimensions               |              |
| Width                    | 40 mm        |
| Height                   | 125 mm       |
| Depth                    | 120 mm       |
| Weights                  |              |
| Weight, approx.          | 260 g        |
| Status                   | Jan 23, 2014 |