

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 loss  |        |
| 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 +5V       |
| • for signal "1"  | 13 to 30V        |
| <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           |
| — at "1" to "0", min.   | 1.2 ms           |
| — at "1" to "0", max.   | 4.8 ms           |
| <b>Cable length</b>   |                  |
| • shielded, max.  | 1 000 m          |
| • 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>                |                  |
| Diagnostic functions  | No               |
| <b>Alarms</b>   |                  |
| • Diagnostic alarm  | No               |
| • Hardware interrupt  | No               |
| <b>Diagnostics indication LED</b>                               |                  |
| • Status indicator digital input (green)                        | Yes              |
| <b>Potential separation</b>                                     |                  |
| Potential separation digital inputs                             |                  |
| • between the channels  | No               |
| • between the channels, in groups of                            | 16               |
| • between the channels and backplane bus                        | Yes; Optocoupler |
| <b>Isolation</b>  |                  |
| Isolation tested 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

**last modified:** 03/23/2017