



SIMATIC S7-300, Digital input SM 321, isolated, 16 DI, 24-48 V AC/DC with single routing, 1x 40-pole

| Supply voltage                                                  |                                        |
|-----------------------------------------------------------------|----------------------------------------|
| Load voltage L+                                                 |                                        |
| • Rated value (DC)                                              | 24 V                                   |
| • permissible range, lower limit (DC)                           | 24 V                                   |
| • permissible range, upper limit (DC)                           | 48 V                                   |
| Load voltage L1                                                 |                                        |
| • Rated value (AC)                                              | 24 V                                   |
| • permissible range, lower limit (AC)                           | 24 V                                   |
| • permissible range, upper limit (AC)                           | 48 V                                   |
| Input current                                                   |                                        |
| from backplane bus 5 V DC, max.                                 | 100 mA                                 |
| Power loss                                                      |                                        |
| Power loss, typ.                                                | 1.5 W; at 24 V; 2,8 W at 48 V          |
| 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                                         | AC/DC                                  |
| • Rated value (DC)                                              | 24 V; DC 24 or 48 V                    |
| • Rated value (AC)                                              | 24 V; 24 V AC or 48 V AC (0 ... 63 Hz) |
| • for signal "0"                                                | -5V AC to +5V AC                       |
| • for signal "1"                                                | 14V AC to 60V AC                       |
| Input current                                                   |                                        |
| • for signal "0", min.                                          | -1 mA                                  |
| • for signal "0", max. (permissible quiescent current)          | 1 mA                                   |
| • for signal "1", typ.                                          | 2.7 mA                                 |
| Input delay (for rated value of input voltage)                  |                                        |
| for standard inputs                                             |                                        |
| — parameterizable                                               | No                                     |
| — at "0" to "1", min.                                           | 16 ms                                  |
| — at "0" to "1", max.                                           | 16 ms                                  |
| — at "1" to "0", max.                                           | 16 ms                                  |
| Cable length                                                    |                                        |
| • 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 mA             |
| <b>Interrupts/diagnostics/status information</b>      |                  |
| Alarms                                                | No               |
| Diagnostics function                                  | No               |
| Alarms                                                |                  |
| • Diagnostic alarm                                    | No               |
| • Hardware interrupt                                  | No               |
| Diagnostics indication LED                            |                  |
| • Group error SF (red)                                | No               |
| • Status indicator digital input (green)              | Yes              |
| <b>Potential separation</b>                           |                  |
| Potential separation digital inputs                   |                  |
| • between the channels                                | Yes              |
| • between the channels, in groups of                  | 1                |
| • between the channels and backplane bus              | Yes; Optocoupler |
| <b>Isolation</b>                                      |                  |
| Isolation tested with                                 | 1 500 V AC       |
| <b>connection method</b>                              |                  |
| required front connector                              | 40-pin           |
| <b>Dimensions</b>                                     |                  |
| Width                                                 | 40 mm            |
| Height                                                | 125 mm           |
| Depth                                                 | 120 mm           |
| <b>Weights</b>                                        |                  |
| Weight, approx.                                       | 260 g            |

last modified: 3/12/2024 