



SIMATIC S7-300, Digital input SM 321, Isolated 32 DI, 24 V DC, 1x 40-pole

| 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          |
| Input voltage                                                   |             |
| • Type of input voltage                                         | DC          |
| • Rated value (DC)                                              | 24 V        |
| • for signal "0"                                                | -30 to +5 V |
| • for signal "1"                                                | 13 to 30V   |
| 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      |
| — at "1" to "0", min.                                           | 1.2 ms      |
| — at "1" to "0", max.                                           | 4.8 ms      |
| Cable length                                                    |             |
| • shielded, max.                                                | 1 000 m     |
| • unshielded, max.                                              | 600 m       |
| Encoder                                                         |             |

|                                                                                            |                                                                                                |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <b>Connectable encoders</b>                                                                |                                                                                                |
| <ul style="list-style-type: none"> <li>• 2-wire sensor</li> </ul>                          | Yes                                                                                            |
| — permissible quiescent current (2-wire sensor), max.                                      | 1.5 mA                                                                                         |
| <b>Interrupts/diagnostics/status information</b>                                           |                                                                                                |
| Alarms                                                                                     | No                                                                                             |
| Diagnostics function                                                                       | No                                                                                             |
| <b>Alarms</b>                                                                              |                                                                                                |
| <ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>                       | No                                                                                             |
| <ul style="list-style-type: none"> <li>• Hardware interrupt</li> </ul>                     | No                                                                                             |
| <b>Diagnostics indication LED</b>                                                          |                                                                                                |
| <ul style="list-style-type: none"> <li>• Status indicator digital input (green)</li> </ul> | Yes                                                                                            |
| <b>Potential separation</b>                                                                |                                                                                                |
| <b>Potential separation digital inputs</b>                                                 |                                                                                                |
| <ul style="list-style-type: none"> <li>• between the channels</li> </ul>                   | No                                                                                             |
| <ul style="list-style-type: none"> <li>• between the channels, in groups of</li> </ul>     | 16                                                                                             |
| <ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul> | Yes; Optocoupler                                                                               |
| <b>Isolation</b>                                                                           |                                                                                                |
| Isolation tested with                                                                      | 500 V DC                                                                                       |
| <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                                                                                          |
| <b>last modified:</b>                                                                      | 12/16/2020  |