




Figure similar

SIMATIC S7-300, Digital input SM 321, isolated, 16 DI; 24 V DC, 1x 20-pole, process interrupt, diagnostics, suitable for isochronous mode

| 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          |
| • Reverse polarity protection                                   | Yes             |
| Input current   |                 |
| from load voltage L+ (without load), max.                       | 90 mA           |
| from backplane bus 5 V DC, max.                                 | 130 mA          |
| Encoder supply  |                 |
| Number of outputs   | 2               |
| Type of output voltage  | L+ (-2.5 V)     |
| Short-circuit protection  | Yes; Electronic |
| additional (redundant) feed                                     | Yes             |
| Output current  |                 |
| • Rated value   | 120 mA          |
| • permissible range, lower limit                                | 0 mA            |
| • permissible range, upper limit                                | 150 mA          |
| Power loss  |                 |
| Power loss, typ.  | 4 W             |
| Digital inputs  |                 |
| Number of digital inputs  | 16              |
| Input characteristic curve in accordance with IEC 61131, type 2 | 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 30V       |
| Input current   |                 |
| • for signal "1", typ.  | 7 mA            |
| Input delay (for rated value of input voltage)                  |                 |

|  |   |
|--|---|
| for standard inputs  |   |
| — parameterizable  | Yes; 0.1 / 0.5 / 3 / 15 / 20 ms   |
| <b>Encoder connection</b>                                  |   |
| • Fixed current limitation for wire-break monitoring, min. | 10 kΩ   |
| • Fixed current limitation for wire-break monitoring, max. | 18 kΩ   |
| <b>Cable length</b>  |   |
| • shielded, max.   | 1 000 m   |
| • unshielded, max.   | 600 m   |
| <b>Encoder</b>   |   |
| <b>Connectable encoders</b>                                |   |
| • 2-wire sensor  | Yes   |
| — permissible quiescent current (2-wire sensor), max.      | 2 mA  |
| <b>Interrupts/diagnostics/status information</b>           |   |
| Alarms   | Yes   |
| Diagnostics function                                       | Yes; Parameterizable  |
| <b>Alarms</b>  |   |
| • Diagnostic alarm   | Yes; Parameterizable  |
| • Hardware interrupt                                       | Yes; Parameterizable  |
| <b>Diagnoses</b>   |   |
| • Diagnostic information readable                          | Yes   |
| • Wire-break   | Yes; to I < 1 mA  |
| <b>Diagnostics indication LED</b>                          |   |
| • Group error SF (red)                                     | Yes   |
| • Status indicator digital input (green)                   | Yes   |
| • Encoder supply Vs (green)                                | Yes   |
| <b>Potential separation</b>                                |   |
| <b>Potential separation digital inputs</b>                 |   |
| • 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  |
| <b>connection method / header</b>                          |   |
| required front connector                                   | 20-pin  |
| <b>Dimensions</b>  |   |
| Width  | 40 mm   |
| Height   | 125 mm  |
| Depth  | 120 mm  |
| <b>Weights</b>   |   |
| Weight, approx.  | 200 g   |
| <b>last modified:</b>                                      | 1/16/2021  |