



SIMATIC S7-300, Digital module SM 327, isolated, 8DI and 8DX, 24 V DC, 0.5 A  
1x 20-pole; 8DX by individual channels Can be parameterized as DI or DO

| 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 load voltage L+ (without load), max.                       | 20 mA  |
| from backplane bus 5 V DC, max.                                 | 60 mA  |
| Power loss  |  |
| Power loss, typ.  | 3 W  |
| Digital inputs  |  |
| Number of digital inputs  | 8; 8 hard-wired, 8 others individually parameterizable |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes  |
| Number of simultaneously controllable inputs                    |  |
| horizontal installation   |  |
| — 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"  | +15 to +30 V   |
| Input current   |  |
| • for signal "1", typ.  | 6 mA   |
| Input delay (for rated value of input voltage)                  |  |
| for standard inputs   |  |
| — 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  |
| Digital outputs   |  |
| Number of digital outputs                                       | 8; can also be parameterized individually as DI        |
| Short-circuit protection  | Yes  |
| • Response threshold, typ.                                      | 1 A  |
| Limitation of inductive shutdown voltage to                     | L+ (-54 V)   |
| Controlling a digital input                                     | Yes  |

|   |                                     |
|---|-------------------------------------|
| Switching capacity of the outputs                         |                                     |
| • on lamp load, max.                                      | 5 W                                 |
| Load resistance range                                     |                                     |
| • lower limit   | 48 $\Omega$                         |
| • upper limit   | 4 k $\Omega$                        |
| Output voltage  |                                     |
| • for signal "1", min.                                    | L+ (-1.5 V)                         |
| Output current  |                                     |
| • for signal "1" rated value                              | 0.5 A                               |
| • for signal "1" permissible range, min.                  | 5 mA                                |
| • for signal "1" permissible range, max.                  | 0.6 A                               |
| • for signal "0" residual current, max.                   | 0.5 mA                              |
| Output delay with resistive load                          |                                     |
| • "0" to "1", max.  | 350 $\mu$ s                         |
| • "1" to "0", max.  | 500 $\mu$ s                         |
| Parallel switching of two outputs                         |                                     |
| • for uprating  | No                                  |
| • for redundant control of a load                         | Yes; only outputs of the same group |
| Switching frequency                                       |                                     |
| • with resistive load, max.                               | 100 Hz                              |
| • with inductive load, max.                               | 0.5 Hz                              |
| • with inductive load (acc. to IEC 60947-5-1, DC13), max. | 0.5 Hz                              |
| • on lamp load, max.                                      | 10 Hz                               |
| Total current of the outputs (per group)                  |                                     |
| horizontal installation                                   |                                     |
| — up to 40 °C, max.                                       | 4 A                                 |
| — up to 60 °C, max.                                       | 3 A                                 |
| vertical installation                                     |                                     |
| — up to 40 °C, max.                                       | 2 A                                 |
| 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.     | 1.5 mA                              |
| <b>Interrupts/diagnostics/status information</b>          |                                     |
| Alarms  | No                                  |
| Diagnostics function                                      | No                                  |
| Diagnostics indication LED                                |                                     |
| • Status indicator digital input (green)                  | Yes                                 |
| • Status indicator digital output (green)                 | Yes                                 |
| <b>Potential separation</b>                               |                                     |
| Potential separation digital inputs                       |                                     |
| • between the channels                                    | No                                  |
| • between the channels and backplane bus                  | Yes; Optocoupler                    |
| Potential separation digital outputs                      |                                     |
| • between the channels                                    | No                                  |
| • between the channels and backplane bus                  | Yes; Optocoupler                    |
| <b>Isolation</b>  |                                     |
| Isolation tested with                                     | 500 V DC                            |
| <b>connection method</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                               |

last modified:



