



Figure similar

SIMATIC S7-300, Digital module SM 323, isolated, 8DI and 8DO, 24 V DC, 0.5 A  
Total current 2A, 1x 20-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 load voltage L+ (without load), max.                       | 40 mA       |
| from backplane bus 5 V DC, max.                                 | 40 mA       |
| Power loss                                                      |             |
| Power loss, typ.                                                | 3.5 W       |
| Digital inputs                                                  |             |
| Number of digital inputs                                        | 8           |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes         |
| Number of simultaneously controllable inputs                    |             |
| horizontal installation                                         |             |
| — up to 60 °C, max.                                             | 8           |
| vertical installation                                           |             |
| — up to 40 °C, max.                                             | 8           |
| 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                                             |             |
| — 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           |
| Short-circuit protection                                        | Yes         |
| • Response threshold, typ.                                      | 1 A         |
| Limitation of inductive shutdown voltage to                     | L+ (-53 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+ (-0.8 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 "1" minimum load current                     | 5 mA                                |
| • for signal "0" residual current, max.                   | 0.5 mA                              |
| Output delay with resistive load                          |                                     |
| • "0" to "1", max.                                        | 100 $\mu$ 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.                                       | 4 A                                 |
| vertical installation                                     |                                     |
| — up to 40 °C, max.                                       | 4 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.     | 2 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                                    | Yes                                 |
| • between the channels, in groups of                      | 8                                   |
| • between the channels and backplane bus                  | Yes; Optocoupler                    |
| Potential separation digital outputs                      |                                     |
| • between the channels                                    | Yes                                 |
| • between the channels, in groups of                      | 8                                   |
| • 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                                                                              |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Weights                                                                             |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Weight, approx.                                                                     | 220 g                                                                               |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| Classifications                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|                                                                                     |                                                                                     | Version                                                                             | Classification                                                                      |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 14                                                                                  | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 12                                                                                  | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 9.1                                                                                 | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 9                                                                                   | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 8                                                                                   | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 7.1                                                                                 | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | eClass                                                                              | 6                                                                                   | 27-24-22-04                                                                         |                                                                                       |                                                                                       |
|                                                                                     | ETIM                                                                                | 9                                                                                   | EC001419                                                                            |                                                                                       |                                                                                       |
|                                                                                     | ETIM                                                                                | 8                                                                                   | EC001419                                                                            |                                                                                       |                                                                                       |
|                                                                                     | ETIM                                                                                | 7                                                                                   | EC001419                                                                            |                                                                                       |                                                                                       |
|                                                                                     | IDEA                                                                                | 4                                                                                   | 3566                                                                                |                                                                                       |                                                                                       |
|                                                                                     | UNSPSC                                                                              | 15                                                                                  | 32-15-17-05                                                                         |                                                                                       |                                                                                       |
| Approvals / Certificates                                                            |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
| General Product Approval                                                            |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|    | <a href="#">Miscellaneous</a>                                                       |    | <a href="#">Manufacturer Declaration</a>                                            |    |    |
| EMV                                                                                 |                                                                                     | For use in hazardous locations                                                      |                                                                                     |                                                                                       |                                                                                       |
|  |  |  |  | <a href="#">FM</a>                                                                    |  |
| For use in hazardous locations                                                      |                                                                                     |                                                                                     | Maritime application                                                                |                                                                                       |                                                                                       |
|  | <a href="#">Miscellaneous</a>                                                       |  | <a href="#">CCC-Ex</a>                                                              |  |  |
| Maritime application                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|  | <a href="#">NK / Nippon Kaiji Kyokai</a>                                            |  |  | <a href="#">CCS (China Classification Society)</a>                                    |                                                                                       |

last modified: 4/7/2025 