




Figure similar

SIMATIC S7/PCS7 Digital input SM 321, 16 DI; 24 V DC, 1 x 40-pole, diagnostics-capable, for contacts (wired/ not wired), NAMUR encoder, 3/4-wire Bero, with chatter monitoring; Pulse extension, open-circuit detection Interface module IM 153-2 HF or IM 153-4 HF possible

| Supply voltage  |  |
|---|--|
| Load voltage L+   |  |
| • Rated value (DC)  | 24 V   |
| • Reverse polarity protection                                   | Yes  |
| Input current   |  |
| from load voltage L+ (without load), max.                       | 100 mA   |
| from backplane bus 5 V DC, max.                                 | 100 mA   |
| Encoder supply  |  |
| Number of outputs   | 4  |
| Type of output voltage  | 1Vs1/2Vs1: 18 V, 1Vs2/2Vs2: 8.2 V  |
| Short-circuit protection  | Yes; Electronic  |
| additional (redundant) feed                                     | No   |
| Output current  |  |
| • Rated value   | 190 mA; at 18V: 190mA, at 8.2V: 60mA   |
| • permissible range, upper limit                                | Up to 60 degree: at 18V: 0 to 110mA, at 8.2V: 0 to 60mA; Up to 40 degree: at 18V: 0 to 190mA, at 8.2V: 0 to 60mA |
| Power loss  |  |
| Power loss, typ.  | 11 W   |
| Digital inputs  |  |
| Number of digital inputs  | 16   |
| Input characteristic curve in accordance with IEC 61131, type 1 | No   |
| Input characteristic curve in accordance with IEC 61131, type 2 | 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)  | 8.2 V; 8.2V/18V  |
| Input current   |  |
| • for signal "0", min.  | 0.35 mA  |
| • for signal "0", max. (permissible quiescent current)          | 1.2 mA   |
| • for signal "1", typ.  | 10 mA; for NAMUR: 2.1 to 7 mA, for 10k ohm/47k ohm contact: typical 10mA, for 4 wire BEROs: typical 10 mA        |

|   |  |
|---|--|
| <b>Input delay (for rated value of input voltage)</b> |  |
| for standard inputs                                   |  |
| — at "0" to "1", min.                                 | 2.5 ms   |
| — at "0" to "1", max.                                 | 3.5 ms   |
| — at "1" to "0", min.                                 | 2.5 ms   |
| — at "1" to "0", max.                                 | 3.5 ms   |
| <b>Cable length</b>                                   |  |
| • shielded, max.                                      | 400 m; max. 200m with 8.2 V sensor, max. 400m with 18 V sensor                                 |
| • unshielded, max.                                    | Not permitted  |
| <b>Interrupts/diagnostics/status information</b>      |  |
| Alarms  | Yes  |
| Diagnostics function                                  | Yes  |
| <b>Alarms</b>   |  |
| • Diagnostic alarm                                    | Yes  |
| • Hardware interrupt                                  | Yes  |
| <b>Diagnoses</b>                                      |  |
| • Diagnostic information readable                     | Yes  |
| • Wire-break  | Yes  |
| <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>                           |  |
| Potential separation digital inputs                   |  |
| • between the channels                                | Yes  |
| • between the channels, in groups of                  | 8  |
| • between the channels and backplane bus              | Yes  |
| <b>Isolation</b>                                      |  |
| Isolation tested with                                 | 600 V DC   |
| <b>Ambient conditions</b>                             |  |
| Ambient temperature during operation                  |  |
| • min.  | 0 °C   |
| • max.  | 60 °C  |
| <b>Connection method</b>                              |  |
| required front connector                              | 1x 40-pin  |
| <b>Dimensions</b>                                     |  |
| Width   | 40 mm  |
| Height  | 125 mm   |
| Depth   | 120 mm   |
| <b>last modified:</b>                                 | 12/16/2020  |