



SIMATIC S7-200, DIGITAL I/O EM 223, FOR S7-22X CPU ONLY, 8 DI 24 V DC, SINK/SOURCE, 8 DO RELAY, 2A/POINT

Figure similar

| Supply voltage                                                        |                                     |
|-----------------------------------------------------------------------|-------------------------------------|
| Load voltage L+                                                       |                                     |
| • Rated value (DC)                                                    | 24 V                                |
| • permissible range, lower limit (DC)                                 | 5 V                                 |
| • permissible range, upper limit (DC)                                 | 30 V                                |
| Load voltage L1                                                       |                                     |
| • Rated value (AC)                                                    | 230 V; 24 V AC to 230 V AC          |
| • permissible range, lower limit (AC)                                 | 5 V                                 |
| • permissible range, upper limit (AC)                                 | 250 V                               |
| Input current                                                         |                                     |
| from backplane bus 5 V DC, max.                                       | 80 mA                               |
| from coil current, max.                                               | 9 mA; for each output on signal "1" |
| from sensor current supply or external current supply (24 V DC), max. | 72 mA                               |
| Power losses                                                          |                                     |
| Power loss, typ.                                                      | 3 W                                 |
| Digital inputs                                                        |                                     |
| Number of digital inputs                                              | 8                                   |
| Input voltage                                                         |                                     |
| • Type of input voltage                                               | AC/DC                               |
| • Rated value (DC)                                                    | 24 V                                |
| • for signal "0"                                                      | 0 to 5 V                            |
| • for signal "1"                                                      | 15V DC to 30V DC                    |
| Input current                                                         |                                     |

|                                                       |                                                                    |
|-------------------------------------------------------|--------------------------------------------------------------------|
| • for signal "1", typ.                                | 4 mA                                                               |
| Input delay (for rated value of input voltage)        |                                                                    |
| for standard inputs                                   |                                                                    |
| — at "0" to "1", max.                                 | 4.5 ms                                                             |
| Digital outputs                                       |                                                                    |
| Number of digital outputs                             | 8; Relays                                                          |
| short-circuit protection                              | No                                                                 |
| Output voltage                                        |                                                                    |
| • for signal "0", max.                                | 0.1 V; with 10 kOhm load                                           |
| • for signal "1", min.                                | L+/L1                                                              |
| Output current                                        |                                                                    |
| • for signal "1" rated value                          | 2 000 mA                                                           |
| Aggregate current of outputs (per group)              |                                                                    |
| all mounting positions                                |                                                                    |
| — Current per conductor/group, max.                   | 8 A                                                                |
| Relay outputs                                         |                                                                    |
| • Number of operating cycles, max.                    | 10 000 000; mechanically 10 million, at rated load voltage 100,000 |
| Switching capacity of contacts                        |                                                                    |
| — with inductive load, max.                           | 0.75 A; per output                                                 |
| — on lamp load, max.                                  | 200 W; 30 W with DC, 200 W with AC                                 |
| — with resistive load, max.                           | 0.75 A; per output                                                 |
| Cable length                                          |                                                                    |
| • shielded, max.                                      | 500 m                                                              |
| • Unshielded, max.                                    | 150 m                                                              |
| Encoder                                               |                                                                    |
| Connectable encoders                                  |                                                                    |
| • 2-wire sensor                                       | Yes                                                                |
| — Permissible quiescent current (2-wire sensor), max. | 1 mA                                                               |
| Potential separation                                  |                                                                    |
| Potential separation digital inputs                   |                                                                    |
| • Potential separation digital inputs                 | Yes; Optocoupler                                                   |
| • between the channels, in groups of                  | 4                                                                  |
| Potential separation digital outputs                  |                                                                    |
| • Potential separation digital outputs                | Yes; Relays                                                        |
| • between the channels, in groups of                  | 4                                                                  |
| Isolation                                             |                                                                    |
| Isolation checked with                                | 500 V AC                                                           |
| Connection method                                     |                                                                    |
| Plug-in I/O terminals                                 | Yes                                                                |

| Dimensions            |            |
|-----------------------|------------|
| Width                 | 71.2 mm    |
| Height                | 80 mm      |
| Depth                 | 62 mm      |
| Weights               |            |
| Weight, approx.       | 300 g      |
| <b>last modified:</b> | 20.04.2015 |