



Figure similar

\*\*\*Spare part\*\*\* SIMATIC S7-200, Digital I/O EM 223, only for S7-22X CPU, 8 DI 24 V DC, Sink/Source, 8 DO relay, 2 A/channel

| 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; 24V AC to 230V AC            |
| • permissible range, lower limit (AC)          | 5 V                                 |
| • permissible range, upper limit (AC)          | 250 V                               |
| Input current                                  |                                     |
| from external supply (24 V DC), max.           | 72 mA                               |
| from backplane bus 5 V DC, max.                | 80 mA                               |
| from coil current, max.                        | 9 mA; for each output on signal "1" |
| Power loss                                     |                                     |
| Power loss, typ.                               | 3 W                                 |
| Digital inputs                                 |                                     |
| Number of digital inputs                       | 8                                   |
| Input voltage                                  |                                     |
| • Type of input voltage                        | DC                                  |
| • Rated value (DC)                             | 24 V                                |
| • for signal "0"                               | 0 to 5 V                            |
| • for signal "1"                               | 15 V DC to 30 V 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                            |
| Total current of the 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; each output                                                |                |
| — on lamp load, max.                                  |        | 200 W; 30 W with DC, 200 W with AC                                 |                |
| — with resistive load, max.                           |        | 0.75 A; each 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 tested 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                                                              |                |
| 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 Ap-<br>proval                         | other  | Environment                                                        |                |



[Confirmation](#)

[Environmental Con-  
firmations](#)

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