

SIMATIC S7-1200, Digital output SM 1222, 16 DO, relay 2 A



## General information

Product type designation SM 1222, DQ 16x relay/2 A

## Supply voltage

permissible range, lower limit (DC) 20.4 V

permissible range, upper limit (DC) 28.8 V

## Input current

from backplane bus 5 V DC, max. 135 mA

## Digital outputs

- from load voltage L+, max. 11 mA/relay coil

## Power loss

Power loss, typ. 8.5 W

## Digital outputs

Number of digital outputs 16

- in groups of 1

Short-circuit protection No; to be provided externally

## Switching capacity of the outputs

- with resistive load, max. 2 A

|  |  |
|--|--|
| • on lamp load, max.                             | 30 W with DC, 200 W with AC                            |
| <b>Output voltage</b>                            |  |
| • Rated value (DC)                               | 5 V DC to 30 V DC                                      |
| • Rated value (AC)                               | 5 V AC to 250 V AC                                     |
| <b>Output current</b>                            |  |
| • for signal "1" rated value                     | 2 A  |
| <b>Output delay with resistive load</b>          |  |
| • "0" to "1", max.                               | 10 ms  |
| • "1" to "0", max.                               | 10 ms  |
| <b>Total current of the outputs (per group)</b>  |  |
| horizontal installation                          |  |
| — up to 50 °C, max.                              | 10 A; Current per mass                                 |
| <b>Relay outputs</b>                             |  |
| • Number of relay outputs                        | 16   |
| • Rated supply voltage of relay coil L+ (DC)     | 24 V   |
| • Number of operating cycles, max.               | mechanically 10 million, at rated load voltage 100 000 |
| <b>Switching capacity of contacts</b>            |  |
| — with inductive load, max.                      | 2 A  |
| — on lamp load, max.                             | 30 W with DC, 200 W with AC                            |
| — with resistive load, max.                      | 2 A  |
| <b>Cable length</b>                              |  |
| • shielded, max.                                 | 500 m  |
| • unshielded, max.                               | 150 m  |
| <b>Interrupts/diagnostics/status information</b> |  |
| <b>Alarms</b>                                    |  |
| • Diagnostic alarm                               | Yes  |
| <b>Diagnostics indication LED</b>                |  |
| • for status of the outputs                      | Yes  |
| <b>Potential separation</b>                      |  |
| <b>Potential separation digital outputs</b>      |  |
| • between the channels                           | Relays   |
| • between the channels, in groups of             | 4  |
| • between the channels and backplane bus         | 1500 V AC for 1 minute                                 |
| <b>Permissible potential difference</b>          |  |
| between different circuits                       | 750 V AC for 1 minute                                  |
| <b>Degree and class of protection</b>            |  |
| IP degree of protection                          | IP20   |
| <b>Standards, approvals, certificates</b>        |  |
| CE mark  | Yes  |
| CSA approval                                     | Yes  |

|                       |     |
|-----------------------|-----|
| UL approval           | Yes |
| cULus                 | Yes |
| FM approval           | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval           | Yes |
| Marine approval       | Yes |

### Ambient conditions

#### Free fall

- Fall height, max. 0.3 m; five times, in product package

#### Ambient temperature during operation

- min. -20 °C
- max. 60 °C; Number of simultaneously activated outputs: 8 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 16 at 55 °C horizontal or 45 °C vertical
- horizontal installation, min. -20 °C
- horizontal installation, max. 60 °C
- vertical installation, min. -20 °C
- vertical installation, max. 50 °C
- permissible temperature change 5°C to 55°C, 3°C / minute

#### Ambient temperature during storage/transportation

- min. -40 °C
- max. 70 °C

#### Air pressure acc. to IEC 60068-2-13

- Storage/transport, min. 660 hPa
- Storage/transport, max. 1 080 hPa

#### Relative humidity

- Operation at 25 °C without condensation, max. 95 %

### Connection method

|                          |     |
|--------------------------|-----|
| required front connector | Yes |
|--------------------------|-----|

### Mechanics/material

|                            |     |
|----------------------------|-----|
| Enclosure material (front) |     |
| • Plastic                  | Yes |

### Dimensions

|        |        |
|--------|--------|
| Width  | 45 mm  |
| Height | 100 mm |
| Depth  | 75 mm  |

### Weights

|                 |       |
|-----------------|-------|
| Weight, approx. | 260 g |
|-----------------|-------|

**last modified:** 11/16/2019