



Figure similar

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                            |
| Output voltage                               |                                                        |
| • Rated value (DC)                           | 5 V DC to 30 V DC                                      |
| • Rated value (AC)                           | 5 V AC to 250 V AC                                     |
| Output current                               |                                                        |
| • for signal "1" rated value                 | 2 A                                                    |
| Output delay with resistive load             |                                                        |
| • "0" to "1", max.                           | 10 ms                                                  |
| • "1" to "0", max.                           | 10 ms                                                  |
| Total current of the outputs (per group)     |                                                        |
| horizontal installation                      |                                                        |
| — up to 50 °C, max.                          | 10 A; Current per mass                                 |
| Relay outputs                                |                                                        |
| • 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 |
| Switching capacity of contacts               |                                                        |
| — with inductive load, max.                  | 2 A                                                    |
| — on lamp load, max.                         | 30 W with DC, 200 W with AC                            |
| — with resistive load, max.                  | 2 A                                                    |
| Cable length                                 |                                                        |
| • 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                 | 1 500 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                                                                                                                                                       |
| <b>Ambient conditions</b>                                |                                                                                                                                                           |
| <b>Free fall</b>                                         |                                                                                                                                                           |
| • Fall height, max.                                      | 0.3 m; five times, in product package                                                                                                                     |
| <b>Ambient temperature during operation</b>              |                                                                                                                                                           |
| • 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                                                                                                                                 |
| <b>Ambient temperature during storage/transportation</b> |                                                                                                                                                           |
| • min.                                                   | -40 °C                                                                                                                                                    |
| • max.                                                   | 70 °C                                                                                                                                                     |
| <b>Air pressure acc. to IEC 60068-2-13</b>               |                                                                                                                                                           |
| • Storage/transport, min.                                | 660 hPa                                                                                                                                                   |
| • Storage/transport, max.                                | 1 080 hPa                                                                                                                                                 |
| <b>Relative humidity</b>                                 |                                                                                                                                                           |
| • Operation at 25 °C without condensation, max.          | 95 %                                                                                                                                                      |
| <b>connection method</b>                                 |                                                                                                                                                           |
| required front connector                                 | Yes                                                                                                                                                       |
| <b>Mechanics/material</b>                                |                                                                                                                                                           |
| <b>Enclosure material (front)</b>                        |                                                                                                                                                           |
| • Plastic                                                | Yes                                                                                                                                                       |
| <b>Dimensions</b>                                        |                                                                                                                                                           |
| Width                                                    | 45 mm                                                                                                                                                     |
| Height                                                   | 100 mm                                                                                                                                                    |
| Depth                                                    | 75 mm                                                                                                                                                     |
| <b>Weights</b>                                           |                                                                                                                                                           |
| Weight, approx.                                          | 260 g                                                                                                                                                     |

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