



SIMATIC S7-1200, Digital output SM 1222, 8 DO, 24 V DC, transistor 0.5 A

| General information                         |                               |
|---------------------------------------------|-------------------------------|
| Product type designation                    | SM 1222, DQ 8x24 V DC/0.5 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.             | 120 mA                        |
| Power loss                                  |                               |
| Power loss, typ.                            | 1.5 W                         |
| Digital outputs                             |                               |
| Number of digital outputs                   | 8                             |
| • in groups of                              | 1                             |
| Short-circuit protection                    | No; to be provided externally |
| Limitation of inductive shutdown voltage to | typ. (L+) -48 V               |
| Switching capacity of the outputs           |                               |
| • with resistive load, max.                 | 0.5 A                         |
| • on lamp load, max.                        | 5 W                           |
| Output voltage                              |                               |
| • Rated value (DC)                          | 24 V                          |
| • for signal "0", max.                      | 0.1 V; with 10 kOhm load      |
| • for signal "1", min.                      | 20 V DC                       |
| Output current                              |                               |
| • for signal "1" rated value                | 0.5 A                         |
| • for signal "0" residual current, max.     | 10 µA                         |
| Output delay with resistive load            |                               |
| • "0" to "1", max.                          | 50 µs                         |
| • "1" to "0", max.                          | 200 µs                        |
| Total current of the outputs (per group)    |                               |
| horizontal installation                     |                               |
| — up to 50 °C, max.                         | 4 A; Current per mass         |
| Relay outputs                               |                               |
| Switching capacity of contacts              |                               |
| — with inductive load, max.                 | 0.5 A                         |
| — on lamp load, max.                        | 5 W                           |
| — with resistive load, max.                 | 0.5 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, in groups of                     | 1                                                                                             |
| • between the channels and backplane bus                 | 500 V AC                                                                                      |
| <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                                                                                         |
| • horizontal installation, min.                          | -20 °C                                                                                        |
| • horizontal installation, max.                          | 60 °C                                                                                         |
| • vertical installation, min.                            | -20 °C                                                                                        |
| • vertical installation, max.                            | 50 °C                                                                                         |
| <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.                                          | 180 g                                                                                         |
| <b>last modified:</b>                                    | 3/14/2020  |