



SIMATIC S7-1200, Digital output SM 1222, 16 DO, 24 V DC, transistor 0.5 A

| General information | |
|---|-------------------------------|
| Product type designation | SM 1222, DQ 16x24 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. | 140 mA |
| Power loss | |
| Power loss, typ. | 2.5 W |
| Digital outputs | |
| Number of digital outputs | 16 |
| • 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. | 8 A; Current per mass |
| Cable length | |
| • shielded, max. | 500 m |
| • unshielded, max. | 150 m |
| Interrupts/diagnostics/status information | |
| Alarms | |
| • Diagnostic alarm | Yes |
| Diagnostics indication LED | |
| • for status of the outputs | Yes |
| Potential separation | |

| | | | |
|--|---------------------------------------|----------------|-----------------------|
| Potential separation digital outputs | | | |
| • between the channels, in groups of | 1 | | |
| • between the channels and backplane bus | 500 V AC | | |
| Degree and class of protection | | | |
| IP degree of protection | IP20 | | |
| Standards, approvals, certificates | | | |
| 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 | | |
| Ecological footprint | | | |
| • environmental product declaration | Yes | | |
| Global warming potential | | | |
| — global warming potential, (total) [CO2 eq] | 68.6 kg | | |
| — global warming potential, (during production) [CO2 eq] | 8.16 kg | | |
| — global warming potential, (during operation) [CO2 eq] | 60.7 kg | | |
| — global warming potential, (after end of life cycle) [CO2 eq] | -0.334 kg | | |
| 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 | | |
| • 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. | 220 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 | 10 | EC001419 |
| ETIM | 9 | EC001419 |
| ETIM | 8 | EC001419 |
| ETIM | 7 | EC001419 |
| IDEA | 4 | 3566 |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval



[Miscellaneous](#)

[Manufacturer Declaration](#)



General Product Approval

EMV

For use in hazardous locations



[China RoHS](#)

[Manufacturer Declaration](#)



For use in hazardous locations

Maritime application

[EM](#)



[Miscellaneous](#)

[CCC-Ex](#)



Maritime application

Environment

[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



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