



SIMATIC S7-1200 G2: SM 1222 digital output, 16 DO; outputs: 16x DO, 24 V DC 0.5 A, sourcing transistor

Figure similar





| General information | |
|--|---|
| Product type designation | SM 1222, DQ 16x 24 V DC/0.5 A |
| Supply voltage | |
| Rated value (DC) | 24 V |
| 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 |
| Digital outputs | |
| <ul style="list-style-type: none"> from load voltage L+, max. | 45 mA |
| Power loss | |
| Power loss, typ. | 3.5 W |
| Digital outputs | |
| Number of digital outputs | 16 |
| <ul style="list-style-type: none"> in groups of | 8 |
| Short-circuit protection | No; to be provided externally |
| Limitation of inductive shutdown voltage to | typ. (L+) -40 V, 1 W dissipation |
| Switching capacity of the outputs | |
| <ul style="list-style-type: none"> with resistive load, max. on lamp load, max. | 0.5 A 5 W |
| Output voltage | |
| <ul style="list-style-type: none"> Rated value (DC) for signal "0", max. for signal "1", min. | 24 V 0.1 V; with 10 kOhm load L+ (-0.5 V) |
| Output current | |
| <ul style="list-style-type: none"> for signal "1" rated value for signal "0" residual current, max. | 0.5 A 10 µA |
| Output delay with resistive load | |
| <ul style="list-style-type: none"> "0" to "1", max. "1" to "0", max. | 50 µs 200 µs |
| Total current of the outputs (per group) | |
| horizontal installation | |
| — up to 50 °C, max. | 4 A; Current per mass (Group of 8) |
| Cable length | |
| <ul style="list-style-type: none"> shielded, max. unshielded, max. | 500 m 150 m |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Alarms | |




| | |
|---|---|
| • Diagnostic alarm | Yes |
| Diagnoses | |
| • Monitoring the supply voltage | Yes |
| Diagnostics indication LED | |
| • DIAG LED | Yes |
| • for status of the outputs | Yes |
| Potential separation | |
| Potential separation digital outputs | |
| • between the channels, in groups of | 8 |
| • between the channels and backplane bus | 707 V DC (type test) |
| Isolation | |
| Isolation tested with | 707 V DC (type test) |
| Degree and class of protection | |
| IP degree of protection | IP20 |
| Standards, approvals, certificates | |
| CE mark | Yes |
| CSA approval | No |
| UL approval | Yes |
| cULus | Yes |
| FM approval | No |
| RCM (formerly C-TICK) | Yes |
| KC approval | No |
| Marine approval | No |
| Ambient conditions | |
| Free fall | |
| • Fall height, max. | 0.3 m; five times, in product package |
| Ambient temperature during operation | |
| • horizontal installation, min. | -20 °C |
| • horizontal installation, max. | 60 °C; at max. voltages and max. specification |
| • vertical installation, min. | -20 °C |
| • vertical installation, max. | 50 °C; at max. voltages and max. specification |
| • 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 | |
| • Operation, min. | 540 hPa |
| • Operation, max. | 1 140 hPa |
| • Storage/transport, min. | 540 hPa |
| • Storage/transport, max. | 1 140 hPa |
| Altitude during operation relating to sea level | |
| • Installation altitude, min. | -1 000 m |
| • Installation altitude, max. | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
| Relative humidity | |
| • Operation at 25 °C without condensation, max. | 95 % |
| Vibrations | |
| • Vibration resistance during operation acc. to IEC 60068-2-6 | 3.5 mm from 5 - 8.4 Hz, 1g from 8.4 - 150 Hz |
| • Operation, tested according to IEC 60068-2-6 | Yes |
| Shock testing | |
| • tested according to IEC 60068-2-27 | Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms |
| Pollutant concentrations | |
| • SO2 at RH < 60% without condensation | SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free |
| connection method | |
| required front connector | No |
| Mechanics/material | |
| Enclosure material (front) | |
| • Plastic | Yes |
| Dimensions | |
| Width | 30 mm |

| | |
|-----------------|--------|
| Height | 125 mm |
| Depth | 100 mm |
| Weights | |
| Weight, approx. | 173 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 |

Approvals / Certificates

| General Product Approval | EMV | For use in hazardous locations |
|--|--------------------|---|
|   KC  | KC |  |

| For use in hazardous locations | Environment |
|---|--|
|   | CCC-Ex  |

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