Data sheet

6ES7222-1HF32-0XB0

SIMATIC S7-1200, Digital output SM 1222, 8 DO, 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. | 120 mA | |
| Digital outputs | | |
| • from load voltage L+, max. | 11 mA/relay coil | |
| Power loss | | |
| Power loss, typ. | 4.5 W | |
| Digital outputs | | |
| Number of digital outputs | 8 | |
| • in groups of | 2 | |
| 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 (AC) S V AC to 250 V AC Output current of or signal "1" rated value 2 A Output delay with resistive load o"0" to "1", max. 10 ms 10 ms 10 ms Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs Number of relay outputs Rated supply voltage of relay coil L+ (DC) Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. — with resistive load, max. — sheledd, max. 150 m Interrupts (diagnostics/status information) Alarms Diagnostics indication LED of or status of the outputs Potential separation Potential separation digital outputs between the channels in groups of between difference between difference between difference between difference between difference Degree of protection Degree of protection Degree of protection acc, to EN 60529 of Poen CSA approval Ves UL approval Ves UL approval | Rated value (DC) | 5 V DC to 30 V DC |
|--|--|--|
| • for signal "1" rated value Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 10 ms • "1" to "0", max. 10 ms Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Rated supply voltage of relay coil L+ (DC) • Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. • shelded, max. • shelded, max. • unshielded, max. • unshielded, max. • Diagnostic alarm Diagnostic indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels, in groups of • between the channels, in groups of • between the channels, in groups of • between difference between difference between difference between difference between difference between of protection Degree and class of protection Degree of protection acc. to EN 60529 • P20 • P20 • Yes Standards, approvals, certificates CE mark Yes CSA approval | • Rated value (AC) | 5 V AC to 250 V AC |
| Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 10 ms Total current of the outputs (per group) horizontal installation — up to 50 "C, max. Relay outputs • Number of relay outputs • Rated supply voltage of relay coil L+ (DC) • Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. — to lamp load, max. — with possible load, max. 150 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels, in groups of • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between ofference between ofference or protection Degree and class of protection Degree and class of protection Degree of protection acc. to EN 60529 • P20 • Yes CSA approval Yes CSA approval | Output current | |
| * "0" to "1", max. * "1" to "0", max. * "1" to "0", max. * "1" to "0", max. * 10 ms Total current of the outputs (per group) horizontal installation — up to 50 "C, max. Relay outputs * Number of relay outputs * Rated supply voltage of relay coil L+ (DC) * Number of operating cycles, max. * Rated supply voltage of relay coil L+ (DC) * Number of operating cycles, max. * with inductive load, max. * on lamp load, max. * with resistive load, max. * with resistive load, max. * with resistive load, max. * unshielded, max. * unshielded, max. * lagnostic alarm * Diagnostic alarm * Diagnostic sindication LED * for status of the outputs Potential separation Potential separation Potential separation digital outputs * between the channels, in groups of * between the channels, in groups of * between the channels, in groups of * between difference between difference between difference Degree and class of protection Degree of protection acc. to EN 60529 * iP20 * Yes CSA approval * Yes CSA approval | • for signal "1" rated value | 2 A |
| • "1" to "0", max. Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Number of relay outputs • Number of perating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. • shielded, max. • shielded, max. • unshielded, max. • Diagnostics Indication LED • for status of the outputs • between the channels and backplane bus • between the channels and backplane bus Permissible potential difference between different circuits Person Potential separation Degree of protection acc. to EN 60529 • IP20 Yes Standards, approval Yes CSA approval | Output delay with resistive load | |
| Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Number of relay outputs • Number of operating cycles, max. with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. — with resistive load, max. — with resistive load, max. — on lamp load, max. — on lamp load, max. — on lamp load, max. — on shielded, max. • shielded, max. • unshielded, max. • the shielded is a shielded in the shielded is a shielded in the shielded is a shielded in the shield | • "0" to "1", max. | 10 ms |
| horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Rated supply voltage of relay coil L+ (DC) • Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — with resistive load, max. — with resistive load, max. — with resistive load, max. — with shielded, max. • shielded, max. • unshielded, max. • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels, in groups of • between the channels and backplane bus Potential separation difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 • P20 Yes Standards, approvals, certificates CE mark Yes CSA approval | • "1" to "0", max. | 10 ms |
| up to 50 °C, max. Relay outputs • Number of relay outputs • Number of poretating cycles, max. Switching capacity of contacts with inductive load, max on lamp load, max with resistive load, wax with resistive load with AC wit | Total current of the outputs (per group) | |
| Relay outputs Number of relay outputs Rated supply voltage of relay coil L+ (DC) Number of operating cycles, max. Switching capacity of contacts - with inductive load, max on lamp load, max with resistive load, max. 2 A Cable length Shielded, max. Solo m Shielded, max. 150 m Interrupts/diagnostics/status information Alarms Diagnostic alarm Potential separation digital outputs Potential separation digital outputs Between the channels Between the channels and backplane bus Permissible potential difference between different circuits Page and class of protection Degree of protection acc. to EN 60529 Pige 3 Permiss CE mark Pes CSA approval Pes Standards, approvals, certificates CE mark Pes Standards, approvals | horizontal installation | |
| Number of relay outputs Rated supply voltage of relay coil L+ (DC) Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — with resistive load, max. Shielded, max. — with resistive load, max. Solo m shielded, max. unshielded, max. Diagnostics latrus Diagnostics indication LED for status of the outputs Potential separation Potential separation Potential separation digital outputs between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree and class of protection Degree of protection acc. to EN 60529 Interrupts / Graphoval Pegree and class of certificates CE mark Yes 2 4 2 A 2 A 2 A 2 A 2 A 2 A 2 A | — up to 50 °C, max. | 10 A; Current per mass |
| Rated supply voltage of relay coil L+ (DC) Number of operating cycles, max. Number of operating cycles, max. Switching capacity of contacts - with inductive load, max on lamp load, max with resistive load, max. 2 A Sale length shielded, max. Interrupts/diagnostics/status information Alarms Diagnostic alarm Potential separation Potential separation Potential separation digital outputs Between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 Interrupts (Pess Poss Poss Poss Poss Poss Poss Poss | Relay outputs | |
| Number of operating cycles, max. Switching capacity of contacts - with inductive load, max. - on lamp load, max. - with resistive load, max. - bold length - shielded, max. - unshielded, max. - unshielded, max. - unshielded, max. - biagnostics/status information Alarms - Diagnostic alarm - Ves Diagnostics indication LED - for status of the outputs - Ves Potential separation Potential separation digital outputs - between the channels - between the channels, in groups of - between the channels and backplane bus Permissible potential difference between different circuits - Ves Standards, approvals, certificates CE mark - Ves CSA approval - Ves - Ve | Number of relay outputs | 8 |
| 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 Interrupts/diagnostics/status information Alarms • Diagnostic alarm Yes Diagnostic indication LED • for status of the outputs Yes Potential separation Potential separation digital outputs • between the channels Relays • between the channels, in groups of 2 • between the channels and backplane bus 1500 V AC for 1 minute Permissible potential difference between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 • iP20 Yes Standards, approvals, certificates CE mark Yes CSA approval | Rated supply voltage of relay coil L+ (DC) | 24 V |
| - with inductive load, max on lamp load, max with resistive load, max with resistive load, max with resistive load, max with resistive load, max. 2 A Cable length • shielded, max. • unshielded, max. 1500 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm Polagnostic indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval | Number of operating cycles, max. | mechanically 10 million, at rated load voltage 100 000 |
| - on lamp load, max. - with resistive load, max. 2 A Cable length • shielded, max. • unshielded, max. • Unique load, max. • Diagnostics/status information Alarms • Diagnostic alarm Potential separation Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus • between different circuits Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark Yes Standards, approval | Switching capacity of contacts | |
| — with resistive load, max. Cable length shielded, max. unshielded, max. 150 m Interrupts/diagnostics/status information Alarms Diagnostic alarm Yes Diagnostics indication LED for status of the outputs Potential separation Potential separation digital outputs between the channels between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Permissible potential control Degree of protection Degree of protection acc. to EN 60529 IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval | — with inductive load, max. | 2 A |
| Cable length • shielded, max. • unshielded, max. • unshielded, max. 150 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm • Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval | — on lamp load, max. | 30 W with DC, 200 W with AC |
| * shielded, max. * unshielded, max. * unshielded, max. * unshielded, max. Interrupts/diagnostics/status information Alarms * Diagnostic alarm * Poignostic indication LED * for status of the outputs Potential separation Potential separation digital outputs * between the channels * between the channels, in groups of * between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 * IP20 Yes Standards, approvals, certificates CE mark CSA approval Pegree and class of provential contains a province of the contains and province of the contains a province of the contains and pro | — with resistive load, max. | 2 A |
| unshielded, max. Interrupts/diagnostics/status information Alarms Diagnostic alarm Yes Diagnostics indication LED for status of the outputs Potential separation Potential separation digital outputs between the channels between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval Yes | Cable length | |
| Interrupts/diagnostics/status information Alarms • Diagnostic alarm Potential separation Potential separation digital outputs • between the channels • between the channels in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark CSA approval Yes Yes Yes Yes | • shielded, max. | 500 m |
| Alarms Diagnostic alarm Poing Diagnostic indication LED for status of the outputs Potential separation Potential separation digital outputs between the channels between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Permissible potential county and the protection Degree and class of protection Degree of protection acc. to EN 60529 IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval | • unshielded, max. | 150 m |
| Alarms Diagnostic alarm Poing Diagnostic indication LED for status of the outputs Potential separation Potential separation digital outputs between the channels between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval Yes | Interrupts/diagnostics/status information | |
| Diagnostics indication LED • for status of the outputs Potential separation Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark Yes CSA approval Yes | | |
| • for status of the outputs Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark Yes CSA approval Potential separation Relays 2 1500 V AC for 1 minute 750 V AC for 1 minute Yes Yes Yes | Diagnostic alarm | Yes |
| Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark CSA approval Pelays Relays 2 750 V AC for 1 minute 750 V AC for 1 minute | Diagnostics indication LED | |
| Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark CSA approval Relays 2 750 V AC for 1 minute 750 V AC for 1 minute Yes Yes | • for status of the outputs | Yes |
| Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark CSA approval Relays 2 750 V AC for 1 minute 750 V AC for 1 minute Yes Yes | Potential separation | |
| between the channels, in groups of between the channels and backplane bus 1500 V AC for 1 minute Permissible potential difference between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 IP20 Yes Standards, approvals, certificates CE mark CSA approval Yes | T Olemlar Separation | |
| between the channels and backplane bus Permissible potential difference between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark CSA approval Yes | <u>·</u> | |
| Permissible potential difference between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval Yes | Potential separation digital outputs | Relays |
| between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 IP20 Ves Standards, approvals, certificates CE mark Yes CSA approval Yes | Potential separation digital outputs • between the channels | |
| between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 IP20 Standards, approvals, certificates CE mark CSA approval Yes Yes | Potential separation digital outputs • between the channels • between the channels, in groups of | 2 |
| Degree of protection acc. to EN 60529 | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus | 2 |
| Degree of protection acc. to EN 60529 | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference | 2 1500 V AC for 1 minute |
| Standards, approvals, certificates CE mark CSA approval Yes Yes | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits | 2 1500 V AC for 1 minute |
| CE mark Yes CSA approval Yes | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection | 2 1500 V AC for 1 minute |
| CE mark Yes CSA approval Yes | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 | 2 1500 V AC for 1 minute 750 V AC for 1 minute |
| | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 | 2 1500 V AC for 1 minute 750 V AC for 1 minute |
| UL approval Yes | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates | 2 1500 V AC for 1 minute 750 V AC for 1 minute Yes |
| | Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark | 2 1500 V AC for 1 minute 750 V AC for 1 minute Yes |

| cULus | Yes |
|---|---------------------------------------|
| FM approval | Yes |
| RCM (formerly C-TICK) | 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 |
| • 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. | 190 g |
| last modified: | 01/31/2019 |