




Figure similar

SIPLUS S7-1200 SM 1222 16DQ RLY based on 6ES7222-1HH32-0XB0 with conformal coating, -40...+70 °C, start up -25 °C, digital output 16 DQ, relay 2 A

| General information   |  |
|---|--|
| Product type designation  | SM 1222, DQ 16x relay/2 A  |
| based on  | <a href="#">6ES7222-1HH32-0XB0</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   |  |
| <ul style="list-style-type: none"> <li>from load voltage L+, max.</li> </ul>  | 11 mA/relay coil   |
| Power loss  |  |
| Power loss, typ.  | 8.5 W  |
| Digital outputs   |  |
| Number of digital outputs   | 16   |
| <ul style="list-style-type: none"> <li>in groups of</li> </ul>  | 1  |
| Short-circuit protection  | No; to be provided externally  |
| Switching capacity of the outputs   |  |
| <ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>on lamp load, max.</li> </ul>   | 2 A<br>30 W with DC, 200 W with AC                                   |
| Output voltage  |  |
| <ul style="list-style-type: none"> <li>Rated value (DC)</li> <li>Rated value (AC)</li> </ul>  | 5 V DC to 30 V DC<br>5 V AC to 250 V AC                              |
| Output current  |  |
| <ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>  | 2 A  |
| Output delay with resistive load  |  |
| <ul style="list-style-type: none"> <li>"0" to "1", max.</li> <li>"1" to "0", max.</li> </ul>  | 10 ms<br>10 ms   |
| Total current of the outputs (per group)  |  |
| horizontal installation   |  |
| — up to 50 °C, max.   | 10 A; Current per mass   |
| Relay outputs   |  |
| <ul style="list-style-type: none"> <li>Number of relay outputs</li> <li>Rated supply voltage of relay coil L+ (DC)</li> <li>Number of operating cycles, max.</li> </ul> | 16<br>24 V<br>mechanically 10 million, at rated load voltage 100 000 |
| Switching capacity of contacts  |  |
| <ul style="list-style-type: none"> <li>with inductive load, max.</li> <li>on lamp load, max.</li> <li>with resistive load, max.</li> </ul>                              | 2 A<br>30 W with DC, 200 W with AC<br>2 A                            |
| Cable length  |  |

|   |   |
|---|---|
| • shielded, max.  | 500 m   |
| • unshielded, max.  | 150 m   |
| <b>Interrupts/diagnostics/status information</b>                    |   |
| Diagnostics function  | Yes   |
| <b>Alarms</b>   |   |
| • Diagnostic alarm  | Yes   |
| <b>Diagnoses</b>  |   |
| • Monitoring the supply voltage                                     | Yes   |
| <b>Diagnostics indication LED</b>                                   |   |
| • for status of the outputs   | Yes   |
| • for maintenance   | 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>                           |   |
| <b>Ecological footprint</b>   |   |
| • environmental product declaration                                 | Yes   |
| <b>Global warming potential</b>                                     |   |
| — 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   |
| <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.  | -40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C  |
| • max.  | 70 °C; = Tmax; Tmax > +60 °C number of simultaneously activated outputs 8 (no adjacent points) for horizontal mounting position   |
| • At cold restart, min.   | -25 °C  |
| <b>Ambient temperature during storage/transportation</b>            |   |
| • min.  | -40 °C  |
| • max.  | 70 °C   |
| <b>Altitude during operation relating to sea level</b>              |   |
| • Installation altitude above sea level, max.                       | 2 000 m   |
| • Ambient air temperature-barometric pressure-altitude              | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax - 20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m); above 2 000 m max. 132 V AC |
| <b>Relative humidity</b>  |   |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)   |
| <b>Resistance</b>   |   |
| <b>Coolants and lubricants</b>                                      |   |
| — Resistant to commercially available coolants and lubricants       | Yes; Incl. diesel and oil droplets in the air   |
| <b>Use in stationary industrial systems</b>                         |   |
| — to biologically active substances according to EN 60721-3-3       | Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request  |
| — to chemically active substances according to EN 60721-3-3         | Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  |
| — to mechanically active substances according to EN 60721-3-3       | Yes; Class 3S4 incl. sand, dust, *  |
| <b>Use on ships/at sea</b>  |   |
| — to biologically active substances according to EN 60721-3-6       | Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request   |

|   |   |
|---|---|
| — to chemically active substances according to EN 60721-3-6   | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *  |
| — to mechanically active substances according to EN 60721-3-6   | Yes; Class 6S3 incl. sand, dust; *  |
| <b>Usage in industrial process technology</b>   |   |
| — Against chemically active substances acc. to EN 60654-4   | Yes; Class 3 (excluding trichlorethylene)   |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04  | Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) |
| <b>Remark</b>   |   |
| — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04   | * The supplied plug covers must remain in place over the unused interfaces during operation!  |
| <b>Conformal coating</b>  |   |
| <ul style="list-style-type: none"> <li>• Coatings for printed circuit board assemblies acc. to EN 61086</li> <li>• Protection against fouling acc. to EN 60664-3</li> <li>• Military testing according to MIL-I-46058C, Amendment 7</li> <li>• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul> | <p>Yes; Class 2 for high reliability</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p>     |
| <b>connection method</b>  |   |
| required front connector  | Yes   |
| <b>Mechanics/material</b>   |   |
| Enclosure material (front) <ul style="list-style-type: none"> <li>• Plastic</li> </ul>  | Yes   |
| <b>Dimensions</b>   |   |
| Width   | 45 mm   |
| Height  | 100 mm  |
| Depth   | 75 mm   |
| <b>Weights</b>  |   |
| Weight, approx.   | 260 g   |
| <b>last modified:</b>   | 10/9/2024    |