



Figure similar

SIPLUS S7-300 SM 322-20-pole based on 6ES7322-1BH01-0AA0 with conformal coating, -25...+70 °C, digital output isolated 16 DQ, 24 V DC, 0.5 A, total current 4 A/group (8 A/module)

| Supply voltage   |                 |
|--|-----------------|
| Load voltage L+  |                 |
| • Rated value (DC)                                       | 24 V            |
| • permissible range, lower limit (DC)                    | 20.4 V          |
| • permissible range, upper limit (DC)                    | 28.8 V          |
| Input current  |                 |
| from load voltage L+ (without load), max.                | 80 mA           |
| from backplane bus 5 V DC, max.                          | 80 mA           |
| Power loss   |                 |
| Power loss, typ.   | 4.9 W           |
| Digital outputs  |                 |
| Number of digital outputs                                | 16              |
| Short-circuit protection                                 | Yes; Electronic |
| • Response threshold, typ.                               | 1 A             |
| Limitation of inductive shutdown voltage to              | L+ (-53 V)      |
| Controlling a digital input                              | Yes             |
| Switching capacity of the outputs                        |                 |
| • on lamp load, max.                                     | 5 W             |
| Load resistance range                                    |                 |
| • lower limit  | 48 Ω            |
| • upper limit  | 4 kΩ            |
| Output voltage   |                 |
| • for signal "1", min.                                   | L+ (-0.8 V)     |
| Output current   |                 |
| • for signal "1" rated value                             | 0.5 A           |
| • for signal "1" permissible range for 0 to 40 °C, min.  | 5 mA            |
| • for signal "1" permissible range for 0 to 40 °C, max.  | 0.6 A           |
| • for signal "1" permissible range for 40 to 60 °C, min. | 5 mA            |
| • for signal "1" permissible range for 40 to 60 °C, max. | 0.6 A           |
| • for signal "1" minimum load current                    | 5 mA            |
| • for signal "0" residual current, max.                  | 0.5 mA          |
| Output delay with resistive load                         |                 |
| • "0" to "1", max.                                       | 100 µs          |
| • "1" to "0", max.                                       | 500 µs          |
| Parallel switching of two outputs                        |                 |
| • for uprating   | No              |
| • for redundant control of a load                        | Yes             |
| Switching frequency                                      |                 |
| • with resistive load, max.                              | 100 Hz          |

|   |   |
|---|---|
| • with inductive load, max.   | 0.5 Hz  |
| • with inductive load (acc. to IEC 60947-5-1, DC13), max.           | 0.5 Hz  |
| • on lamp load, max.  | 10 Hz   |
| Total current of the outputs (per group)                            |   |
| horizontal installation   |   |
| — up to 40 °C, max.   | 4 A   |
| — up to 60 °C, max.   | 3 A   |
| — up to 70 °C, max.   | 3 A   |
| vertical installation   |   |
| — up to 40 °C, max.   | 2 A   |
| Cable length  |   |
| • shielded, max.  | 1 000 m   |
| • unshielded, max.  | 600 m   |
| Interrupts/diagnostics/status information                           |   |
| Alarms  | No  |
| Diagnostics function  | No  |
| Alarms  |   |
| • Diagnostic alarm  | No  |
| Diagnoses   |   |
| • Wire-break  | No  |
| • Short-circuit   | No  |
| • Fuse blown  | No  |
| • missing load voltage  | No  |
| Diagnostics indication LED  |   |
| • Rated load voltage PWR (green)                                    | No  |
| • Fuse OK FSG (green)   | No  |
| • Status indicator digital output (green)                           | Yes   |
| Potential separation  |   |
| Potential separation digital outputs                                |   |
| • between the channels  | Yes   |
| • between the channels, in groups of                                | 8   |
| • between the channels and backplane bus                            | Yes; Optocoupler  |
| Isolation   |   |
| Isolation tested with   | 500 V DC  |
| Standards, approvals, certificates                                  |   |
| CE mark   | Yes   |
| UL approval   | Yes; File E239877   |
| RCM (formerly C-TICK)   | Yes   |
| KC approval   | Yes   |
| EAC (formerly Gost-R)   | Yes   |
| Railway application   |   |
| • EN 50155  | Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 (see SIOS entry 109755985)   |
| Ambient conditions  |   |
| Ambient temperature during operation                                |   |
| • min.  | -25 °C; = Tmin  |
| • max.  | 70 °C; = Tmax; for use on railway vehicles according to EN50155, the rated temperature range -25 ... +55 °C (T1) or 60 °C @ UL/ULhaz/ATEX/FM use applies  |
| Ambient temperature during storage/transportation                   |   |
| • min.  | -40 °C  |
| • max.  | 70 °C   |
| Altitude during operation relating to sea level                     |   |
| • Installation altitude above sea level, max.                       | 5 000 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) |
| Relative humidity   |   |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation/frost (no commissioning under condensation conditions)   |
| Resistance  |   |
| Use in stationary industrial systems                                |   |

|  |   |
|--|---|
| — 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 land craft, rail vehicles and special-purpose vehicles</b>                         |   |
| — to biologically active substances according to EN 60721-3-5                                | Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request  |
| — to chemically active substances according to EN 60721-3-5                                  | Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); *   |
| — to mechanically active substances according to EN 60721-3-5                                | Yes; Class 5S3 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>  | * The supplied plug covers must remain in place over the unused interfaces during operation!  |
| <b>connection method</b>   |   |
| required front connector   | 20-pin  |
| <b>Dimensions</b>  |   |
| Width  | 40 mm   |
| Height   | 125 mm  |
| Depth  | 120 mm  |
| <b>Weights</b>   |   |
| Weight, approx.  | 190 g   |

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