

SIPLUS S7-300 SM322 - 20-POLE -25...+70°C with conformal coating with conformity EN50155 T1 CAT 1 KL A/B based on 6ES7322-1BH01-0AA0 . DIGITAL OUTPUT OPTIC. ISOLATED 16DO, 24V DC, 0.5A, SUM OF CURRENTS 4A/GROUP (8A/MODULE)



Figure similar

| 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         |
| Limitation of inductive shutdown voltage to | L+ (-53 V) |
| 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" minimum load current     | 5 mA             |
| • for signal "0" residual current, max.   | 0.5 mA           |
| Switching frequency                       |                  |
| • with resistive load, max.               | 100 Hz           |
| • with inductive load, 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 |                  |
| Diagnostics function                      | No               |
| Alarms                                    |                  |
| • Diagnostic alarm                        | No               |
| Diagnostic messages                       |                  |
| • 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 |

|                                                                     |                                                                                                                                                                                                                  |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Permissible potential difference                                    |                                                                                                                                                                                                                  |
| between different circuits                                          | 75 V DC/60 V AC                                                                                                                                                                                                  |
| 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                                                                                                                 |
| Ambient conditions                                                  |                                                                                                                                                                                                                  |
| Ambient temperature during operation                                |                                                                                                                                                                                                                  |
| • min.                                                              | -25 °C                                                                                                                                                                                                           |
| • 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, *                                                                                                                                                                               |
| Use on land craft, rail vehicles and special-purpose vehicles       |                                                                                                                                                                                                                  |
| — 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                                                                                          |
| — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04                | Yes                                                                                          |
| <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>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                                                                                        |
| <b>last modified:</b>                                                                                       | 08/16/2019                                                                                   |