



Figure similar

spare part SIPLUS S7-300 SM 321 20-pole based on 6ES7321-1FF01-0AA0 with conformal coating, -40...+70 °C, digital input isolated 8 DI, 120 V/230 V AC

| General information | |
|---|------------------------------------|
| based on | 6ES7321-1FF01-0AA0 |
| Product function | |
| • Isochronous mode | No |
| Supply voltage | |
| Load voltage L1 | |
| • Rated value (AC) | 230 V; 120/230 V AC |
| Input current | |
| from backplane bus 5 V DC, max. | 29 mA |
| Power loss | |
| Power loss, typ. | 4.9 W |
| Digital inputs | |
| Number of digital inputs | 8 |
| Input characteristic curve in accordance with IEC 61131, type 1 | Yes |
| Number of simultaneously controllable inputs | |
| horizontal installation | |
| — up to 60 °C, max. | 8; up to 70 °C |
| vertical installation | |
| — up to 40 °C, max. | 8 |
| Input voltage | |
| • Type of input voltage | AC |
| • Rated value (AC) | 230 V; 120/230 V AC (47 ... 63 Hz) |
| • for signal "0" | 0 to 40V |
| • for signal "1" | 79 to 264V |
| Input current | |
| • for signal "1", typ. | 6.5 mA; (120 V); 11 mA (230 V) |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — parameterizable | No |
| — at "0" to "1", max. | 25 ms |
| — at "1" to "0", max. | 25 ms |
| Cable length | |
| • shielded, max. | 1 000 m |
| • unshielded, max. | 600 m |
| Encoder | |
| Connectable encoders | |
| • 2-wire sensor | Yes |
| — permissible quiescent current (2-wire sensor), max. | 2 mA |

| Interrupts/diagnostics/status information | |
|--|---|
| Alarms | No |
| Diagnostics function | No |
| Alarms | |
| • Diagnostic alarm | No |
| • Hardware interrupt | No |
| Diagnostics indication LED | |
| • Group error SF (red) | No |
| • Status indicator digital input (green) | Yes |
| Potential separation | |
| Potential separation digital inputs | |
| • between the channels | No |
| • between the channels, in groups of | 2 |
| • between the channels and backplane bus | Yes; Optocoupler |
| Isolation | |
| Isolation tested with | 4 000 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. | -40 °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. | 2 000 m |
| • Ambient air temperature-barometric pressure-altitude | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 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 ships/at sea | |
| — 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; * |
| Usage in industrial process technology | |
| — 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) |
| Remark | |

— 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!

Connection method

required front connector 20-pin

Dimensions

Width 40 mm
 Height 125 mm
 Depth 120 mm

Weights

Weight, approx. 240 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 | 10 | EC001419 |
| ETIM | 9 | EC001419 |
| ETIM | 8 | EC001419 |
| ETIM | 7 | EC001419 |
| IDEA | 4 | 3566 |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)

[Declaration of Conformity](#)



[China RoHS](#)



General Product Approval EMV



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