

Data sheet

6AG1321-7TH00-4AB0



Figure similar

spare part SIPLUS PCS 7 SM 321 16 DI based on 6ES7321-7TH00-0AB0 with conformal coating, 0...+60 °C, digital input 16 DI; 24 V DC, 1x 40-pole, diagnostics-capable, for contacts (wired/ not wired), NAMUR encoder, 3/4-wire BERO, with chatter monitoring; pulse stretching, open-circuit detection connection IM 153-2 required

| General information | |
|--|--|
| based on | 6ES7321-7TH00-0AB0 |
| Supply voltage | |
| Load voltage L+ | |
| <ul style="list-style-type: none"> • Rated value (DC) • Reverse polarity protection | 24 V Yes |
| Input current | |
| from load voltage L+ (without load), max. | 100 mA |
| from backplane bus 5 V DC, max. | 100 mA |
| Encoder supply | |
| Number of outputs | 4 |
| Type of output voltage | 1Vs1/2Vs1: 18 V, 1Vs2/2Vs2: 8.2 V |
| Short-circuit protection | Yes; Electronic |
| additional (redundant) feed | No |
| Output current | |
| <ul style="list-style-type: none"> • Rated value • permissible range, upper limit | 190 mA; at 18V: 190mA, at 8.2V: 60mA Up to 60 degree: at 18V: 0 to 110mA, at 8.2V: 0 to 60mA; Up to 40 degree: at 18V: 0 to 190mA, at 8.2V: 0 to 60mA |
| Power loss | |
| Power loss, typ. | 11 W |
| Digital inputs | |
| Number of digital inputs | 16 |
| Input characteristic curve in accordance with IEC 61131, type 1 | No |
| Input characteristic curve in accordance with IEC 61131, type 2 | Yes |
| Number of simultaneously controllable inputs | |
| horizontal installation | |
| — up to 60 °C, max. | 16 |
| vertical installation | |
| — up to 40 °C, max. | 16 |
| Input voltage | |
| <ul style="list-style-type: none"> • Type of input voltage • Rated value (DC) | DC 8.2 V; 8.2V/18V |
| Input current | |
| <ul style="list-style-type: none"> • for signal "0", min. • for signal "0", max. (permissible quiescent current) • for signal "1", typ. | 0.35 mA 1.2 mA 10 mA; for NAMUR: 2.1 to 7 mA, for 10k ohm/47k ohm contact: typical 10mA, for 4 wire BEROs: typical 10 mA |
| Input delay (for rated value of input voltage) | |

| | |
|---|---|
| for standard inputs | |
| — at "0" to "1", min. | 2.5 ms |
| — at "0" to "1", max. | 3.5 ms |
| — at "1" to "0", min. | 2.5 ms |
| — at "1" to "0", max. | 3.5 ms |
| Cable length | |
| • shielded, max. | 400 m; max. 200m with 8.2 V sensor, max. 400m with 18 V sensor |
| • unshielded, max. | Not permitted |
| Interrupts/diagnostics/status information | |
| Alarms | Yes |
| Diagnostics function | Yes |
| Alarms | |
| • Diagnostic alarm | Yes |
| • Hardware interrupt | Yes |
| Diagnoses | |
| • Diagnostic information readable | Yes |
| • Wire-break | Yes |
| Diagnostics indication LED | |
| • Group error SF (red) | Yes |
| • Status indicator digital input (green) | Yes |
| • Encoder supply Vs (green) | Yes |
| Potential separation | |
| Potential separation digital inputs | |
| • between the channels | Yes |
| • between the channels, in groups of | 8 |
| • between the channels and backplane bus | Yes |
| Isolation | |
| Isolation tested with | 600 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 |
| Ambient conditions | |
| Ambient temperature during operation | |
| • min. | 0 °C |
| • max. | 60 °C |
| 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 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 | Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity |

60721-3-6
— to mechanically active substances according to EN
60721-3-6

degree 3); *
Yes; Class 6S3 incl. sand, dust; *

Usage in industrial process technology

- Against chemically active substances acc. to EN 60654-4
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04

Yes; Class 3 (excluding trichlorethylene)
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 40-pin

Dimensions

| | |
|--------|--------|
| Width | 40 mm |
| Height | 125 mm |
| Depth | 120 mm |

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 EMV



[Manufacturer Declaration](#)



[China RoHS](#)



[KC](#)

EMV

For use in hazardous locations



[CCC-Ex](#)

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