



SIPLUS S7-1200 SB 1232 1AQ based on 6ES7232-4HA30-0XB0 with conformal coating, -40...+60 °C, start up -25 °C, analog output 1 AQ, +/-10 V DC (12 bit resolution) or 0-20 mA (11 bit resolution)

| General information                                    |   |
|--|---|
| Product type designation                               | SB 1232, AQ 1x12 bit  |
| based on   | <a href="#">6ES7232-4HA30-0XB0</a>                                      |
| Input current  |   |
| from backplane bus 5 V DC, typ.                        | 15 mA   |
| output voltage / header                                |   |
| supply voltage of the transmitters / header            |   |
| • Supply current, max.                                 | 25 mA   |
| Power loss   |   |
| Power loss, typ.                                       | 1.5 W   |
| Analog inputs  |   |
| Number of analog inputs                                | 0   |
| Analog outputs   |   |
| Number of analog outputs                               | 1   |
| Cycle time (all channels) max.                         | Voltage: 300 µS (R), 750 µS (1 uF) Current: 600 ms (1 mH); 2 ms (10 mH) |
| Output ranges, voltage                                 |   |
| • -10 V to +10 V                                       | Yes   |
| Output ranges, current                                 |   |
| • 0 to 20 mA   | Yes   |
| Load impedance (in rated range of output)              |   |
| • with voltage outputs, min.                           | 1 000 Ω   |
| • with current outputs, max.                           | 600 Ω   |
| Cable length   |   |
| • shielded, max.                                       | 10 m; shielded, twisted pair  |
| Analog value generation for the outputs                |   |
| Conversion principle                                   | Differential  |
| Integration and conversion time/resolution per channel |   |
| • Resolution with overrange (bit including sign), max. | 12 bit  |
| Errors/accuracies                                      |   |
| Temperature error (relative to output range), (+/-)    | 25 °C ±0.5 %, up to 55 °C ±1.8 %  |
| Interrupts/diagnostics/status information              |   |
| Alarms   | Yes   |
| Diagnostics function                                   | Yes   |
| Diagnostics indication LED                             |   |
| • for status of the outputs                            | Yes   |
| Ambient conditions                                     |   |
| Free fall  |   |
| • Fall height, max.                                    | 0.3 m; five times, in product package                                   |
| Ambient temperature during operation                   |   |
| • min.   | -40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C            |

|   |   |
|---|---|
| • max.  | 60 °C; = Tmax   |
| <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.   | 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) |
| <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>  |   |
| • Coatings for printed circuit board assemblies acc. to EN 61086  | Yes; Class 2 for high reliability   |
| • Protection against fouling acc. to EN 60664-3   | Yes; Type 1 protection  |
| • Military testing according to MIL-I-46058C, Amendment 7   | Yes; Discoloration of coating possible during service life  |
| • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | Yes; Conformal coating, Class A   |
| <b>Mechanics/material</b>   |   |
| Enclosure material (front)  |   |
| • Plastic   | Yes   |
| <b>Dimensions</b>   |   |
| Width   | 38 mm   |
| Height  | 62 mm   |
| Depth   | 21 mm   |
| <b>Weights</b>  |   |
| Weight, approx.   | 40 g  |

last modified:

