

SIPLUS S7-300 SM 334 4AI 2AO -25...+70 °C with conformal coating based on 6ES7334-0KE00-0ab0 . Analog module isolated, 4 AI/2 AO, 12 bit, 0-10 V for Pt100 (climatic range -120-155 degrees) and 10 kOhm measuring range, 1x 20-pole



Figure similar

| Supply voltage  |  |
|---|--|
| Load voltage L+   |  |
| • Rated value (DC)  | 24 V   |
| • Reverse polarity protection   | Yes  |
| Input current   |  |
| from supply and load voltage L+ (without load), max.                  | 80 mA  |
| from backplane bus 5 V DC, max.                                       | 60 mA  |
| Power loss  |  |
| Power loss, typ.  | 2 W  |
| Analog inputs   |  |
| Number of analog inputs   | 4  |
| • For voltage measurement   | 2  |
| • For resistance measurement  | 4  |
| permissible input voltage for voltage input (destruction limit), max. | 20 V; continuous; 75 V for max. 1 s (mark to space ratio 1:20) |
| Cycle time (all channels) max.  | 85 ms  |

| Input ranges   |                          |
|--|--------------------------|
| • Voltage  | Yes                      |
| • Current  | No                       |
| • Thermocouple   | No                       |
| • Resistance thermometer                               | Yes                      |
| • Resistance   | Yes                      |
| Input ranges (rated values), voltages                  |                          |
| • 0 to +10 V   | Yes                      |
| • Input resistance (0 to 10 V)                         | 100 kΩ                   |
| Input ranges (rated values), resistance thermometer    |                          |
| • Pt 100   | Yes; only climatic range |
| Input ranges (rated values), resistors                 |                          |
| • 0 to 10000 ohms                                      | Yes                      |
| Characteristic linearization                           |                          |
| • parameterizable<br>— for resistance thermometer      | Yes<br>Pt100 (climate)   |
| Cable length   |                          |
| • shielded, max.                                       | 100 m                    |
| Analog outputs   |                          |
| Number of analog outputs                               | 2                        |
| Voltage output, short-circuit protection               | Yes                      |
| Voltage output, short-circuit current, max.            | 10 mA                    |
| Output ranges, voltage                                 |                          |
| • 0 to 10 V  | Yes                      |
| Load impedance (in rated range of output)              |                          |
| • with voltage outputs, min.                           | 2.5 kΩ                   |
| • with voltage outputs, capacitive load, max.          | 1 μF                     |
| Cable length   |                          |
| • shielded, max.                                       | 100 m                    |
| Analog value generation for the inputs                 |                          |
| Integration and conversion time/resolution per channel |                          |
| • Resolution with overrange (bit including sign), max. | 12 bit                   |
| • Integration time (ms)                                | 16,67 / 20 ms            |
| Analog value generation for the outputs                |                          |
| Integration and conversion time/resolution per channel |                          |
| • Resolution with overrange (bit including sign), max. | 12 bit                   |
| Settling time  |                          |
| • for resistive load                                   | 0.8 ms                   |
| • for capacitive load                                  | 0.8 ms                   |

## Encoder

### Connection of signal encoders

- |   |     |
|---|-----|
| • for resistance measurement with two-wire connection   | Yes |
| • for resistance measurement with three-wire connection | Yes |
| • for resistance measurement with four-wire connection  | Yes |

## Errors/accuracies

### Operational error limit in overall temperature range

- |  |                 |
|--|-----------------|
| • Voltage, relative to input range, (+/-)                | 0.8 %; 0 to 10V |
| • Resistance, relative to input range, (+/-)             | 3.7 %; 10 kOhm  |
| • Resistance thermometer, relative to input range, (+/-) | 1.1 %           |
| • Voltage, relative to output range, (+/-)               | 1.1 %           |

### Basic error limit (operational limit at 25 °C)

- |  |                 |
|--|-----------------|
| • Voltage, relative to input range, (+/-)                | 0.5 %; 0 to 10V |
| • Resistance, relative to input range, (+/-)             | 2.8 %; 10 kOhm  |
| • Resistance thermometer, relative to input range, (+/-) | 0.8 %           |
| • Voltage, relative to output range, (+/-)               | 0.85 %          |

## Interrupts/diagnostics/status information

- |                      |    |
|----------------------|----|
| Alarms               | No |
| Diagnostics function | No |

## Potential separation

### Potential separation analog inputs

- |  |     |
|--|-----|
| • between the channels and backplane bus | Yes |
|--|-----|

### Potential separation analog outputs

- |  |     |
|--|-----|
| • between the channels and backplane bus | Yes |
|--|-----|

## 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               |

## Ambient conditions

### Ambient temperature during operation

- |        |  |
|--------|--|
| • min. | -25 °C; = Tmin                                 |
| • max. | 70 °C; = Tmax; 60 °C @ UL/cUL, ATEX and FM use |

|   |   |
|---|---|
| <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>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>Remark</b>   |   |
| — Note regarding classification of environmental conditions acc. to EN 60721  | * 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 availability  |
| • 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>Connection method</b>  |   |
| required front connector  | 20-pin  |
| <b>Dimensions</b>   |   |
| Width   | 40 mm   |
| Height  | 125 mm  |
| Depth   | 117 mm  |

## Weights

Weight, approx.

200 g

**last modified:**

12/14/2018