

SIPLUS S7-300 SM 331-20-pole medial exposure with conformal coating based on 6ES7331-7SF00-0AB0 without PTB approval



Figure similar

<b>Supply voltage</b>	
Load voltage L+	
• Rated value (DC)	24 V
<b>Input current</b>	
from backplane bus 5 V DC, max.	120 mA
<b>Power loss</b>	
Power loss, typ.	0.6 W
<b>Analog inputs</b>	
Number of analog inputs	8; 8x thermocouples; 4x RTD thermoresistors
<b>Input ranges</b>	
• Voltage	Yes
• Current	No
• Thermocouple	Yes
• Resistance thermometer	Yes
• Resistance	Yes
Input ranges (rated values), thermocouples	

• Type B	Yes
— Input resistance (Type B)	10 MΩ
• Type E	Yes
— Input resistance (Type E)	10 MΩ
• Type J	Yes
— Input resistance (type J)	10 MΩ
• Type K	Yes
— Input resistance (Type K)	10 MΩ
• Type L	Yes
— Input resistance (Type L)	10 MΩ
• Type N	Yes
— Input resistance (Type N)	10 MΩ
• Type R	Yes
— Input resistance (Type R)	10 MΩ
• Type S	Yes
— Input resistance (Type S)	10 MΩ
• Type T	Yes
— Input resistance (Type T)	10 MΩ
• Type U	Yes
— Input resistance (Type U)	10 MΩ
<b>Input ranges (rated values), resistance thermometer</b>	
• Ni 100	Yes
— Input resistance (Ni 100)	10 MΩ
• Pt 100	Yes
— Input resistance (Pt 100)	10 MΩ
• Pt 200	Yes
— Input resistance (Pt 200)	10 MΩ
<b>Cable length</b>	
• shielded, max.	200 m; TC: 50 m
<b>Analog value generation for the inputs</b>	
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit; 10 bit to 15 bit + sign
• Integration time, parameterizable	Yes; 2.5 to 100 ms
• Interference voltage suppression for interference frequency f1 in Hz	10 to 400 Hz
<b>Encoder</b>	
<b>Connection of signal encoders</b>	
• for current measurement as 2-wire transducer	Yes
• for current measurement as 4-wire transducer	Yes

## Errors/accuracies

### Operational error limit in overall temperature range

- |  |               |
|--|---------------|
| • Resistance thermometer, relative to input range, (+/-) | 0.09 to 0.04% |
|--|---------------|

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

- |  |       |
|--|-------|
| • Resistance thermometer, relative to input range, (+/-) | 0.1 % |
|--|-------|

## Interrupts/diagnostics/status information

Diagnostics function	Yes
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### Diagnoses

- |   |     |
|---|-----|
| • Diagnostic information readable           | Yes |
| • Overrange                                 | Yes |
| • Wire-break in signal transmitter cable    | Yes |
| • Short-circuit of the signal encoder cable | Yes |

### Diagnostics indication LED

- |                                   |     |
|-----------------------------------|-----|
| • Group error SF (red)            | Yes |
| • Channel fault indicator F (red) | Yes |

## Ex(i) characteristics

Module for Ex(i) protection	Yes
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### Max. values of input circuits for gas group IIC (per channel)

- |   |         |
|---|---------|
| • Co (permissible external capacity), max.    | 43 µF   |
| • Io (short-circuit current), max.            | 28.8 mA |
| • Lo (permissible external inductivity), max. | 40 mH   |
| • Po (power of load), max.                    | 41.4 mW |
| • Uo (output no-load voltage), max.           | 5.9 V   |

## Standards, approvals, certificates

CE mark	Yes
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UL approval	Yes; File E239877
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RCM (formerly C-TICK)	Yes
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KC approval	Yes
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EAC (formerly Gost-R)	Yes
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### Use in hazardous areas

- |                    |                    |
|--------------------|--------------------|
| • Test number KEMA | KEMA 09 ATEX 0077X |
|--------------------|--------------------|

### Railway application

- |            |    |
|------------|----|
| • EN 50155 | No |
|------------|----|

## Ambient conditions

### Ambient temperature during operation

- |        |               |
|--------|---------------|
| • min. | 0 °C; = Tmin  |
| • max. | 60 °C; = Tmax |

### Ambient temperature during storage/transportation

- |        |        |
|--------|--------|
| • 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>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>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.	210 g

last modified:

10/09/2020