



SIPLUS S7-300 SM 334 4AI 2AQ based on 6ES7334-0KE00-0AB0 with conformal coating, -25...+70 °C, analog module isolated, 4 AI/2 AQ, 12 bit, 0-10 V for Pt100 (climatic range -120-155 degrees) and 10 kOhm measuring range, 1x 20-pole

Figure similar

General information	
based on	<a href="#">6ES7334-0KE00-0AB0</a>
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>Reverse polarity protection</li> </ul>	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
<ul style="list-style-type: none"> <li>For voltage measurement</li> </ul>	2
<ul style="list-style-type: none"> <li>For resistance measurement</li> </ul>	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)
Constant measurement current for resistance-type transmitter, typ.	490 µA; at PT100 (490 µA), at 10 kOhm (105 µA)
Cycle time (all channels) max.	85 ms
Input ranges	
<ul style="list-style-type: none"> <li>Voltage</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Current</li> </ul>	No
<ul style="list-style-type: none"> <li>Thermocouple</li> </ul>	No
<ul style="list-style-type: none"> <li>Resistance thermometer</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Resistance</li> </ul>	Yes
Input ranges (rated values), voltages	
<ul style="list-style-type: none"> <li>0 to +10 V</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— Input resistance (0 to 10 V)</li> </ul>	100 kΩ
Input ranges (rated values), resistance thermometer	
<ul style="list-style-type: none"> <li>Pt 100</li> </ul>	Yes; only climatic range
Input ranges (rated values), resistors	
<ul style="list-style-type: none"> <li>0 to 10000 ohms</li> </ul>	Yes
Characteristic linearization	
<ul style="list-style-type: none"> <li>parameterizable</li> </ul>	Yes
<ul style="list-style-type: none"> <li>— for resistance thermometer</li> </ul>	Pt100 (climate)
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	100 m
Analog outputs	

Number of analog outputs	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	10 mA
<b>Output ranges, voltage</b>	
• 0 to 10 V	Yes
<b>Load impedance (in rated range of output)</b>	
• with voltage outputs, min.	2.5 kΩ
• with voltage outputs, capacitive load, max.	1 μF
<b>Cable length</b>	
• shielded, max.	100 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.	12 bit
• Integration time, parameterizable	Yes
• Integration time (ms)	16,67 / 20 ms
• Interference voltage suppression for interference frequency f1 in Hz	50 / 60 Hz
<b>Analog value generation for the outputs</b>	
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	12 bit
• Conversion time (per channel)	500 μs
<b>Settling time</b>	
• for resistive load	0.8 ms
• for capacitive load	0.8 ms
<b>Encoder</b>	
<b>Connection of signal encoders</b>	
• for voltage measurement	Yes
• for resistance measurement with two-wire connection	Yes
• for resistance measurement with three-wire connection	Yes
• for resistance measurement with four-wire connection	Yes
<b>Errors/accuracies</b>	
<b>Operational error limit in overall temperature range</b>	
• 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 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• 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 %
<b>Interrupts/diagnostics/status information</b>	
Alarms	No
Diagnostics function	No
<b>Potential separation</b>	
<b>Potential separation analog inputs</b>	
• between the channels and backplane bus	Yes
<b>Potential separation analog outputs</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	Yes
<b>Isolation</b>	
Isolation tested with	500 V DC
<b>Standards, approvals, certificates</b>	
CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
<b>Ambient conditions</b>	

<b>Ambient temperature during operation</b>		
• 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>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	117 mm	
<b>Weights</b>		
Weight, approx.	200 g	
<b>Classifications</b>		
	<b>Version</b>	<b>Classification</b>
eClass	14	27-24-22-01
eClass	12	27-24-22-01
eClass	9.1	27-24-22-01
eClass	9	27-24-22-01
eClass	8	27-24-22-01
eClass	7.1	27-24-22-01
eClass	6	27-24-22-01
ETIM	9	EC001420
ETIM	8	EC001420
ETIM	7	EC001420
IDEA	4	3562
UNSPSC	15	32-15-17-05
<b>Approvals / Certificates</b>		

[Miscellaneous](#)



[Manufacturer Declaration](#)



[KC](#)

EMV

For use in hazardous locations



[CCC-Ex](#)

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