



SIMATIC S7-300, Analog module SM 334, Non-isolated 4 AI/2 AO, 1x 20-pole, Removing and inserting possible with active backplane bus

Figure similar

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
Input current	
from supply and load voltage L+ (without load), max.	110 mA
from backplane bus 5 V DC, max.	55 mA
Power loss	
Power loss, typ.	3 W
Analog inputs	
Number of analog inputs	4
• For voltage measurement	4
permissible input voltage for voltage input (destruction limit), max.	20 V
permissible input current for current input (destruction limit), max.	40 mA
Cycle time (all channels) max.	5 ms
Input ranges	
• Voltage	Yes
• Current	Yes
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
— Input resistance (0 to 10 V)	100 kΩ
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
— Input resistance (0 to 20 mA)	50 Ω
Cable length	
• shielded, max.	200 m
Analog outputs	
Number of analog outputs	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	11 mA
Current output, no-load voltage, max.	15 V
Output ranges, voltage	
• 0 to 10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes
Load impedance (in rated range of output)	

<ul style="list-style-type: none"> <li>• with voltage outputs, min.</li> </ul>	5 kΩ
<ul style="list-style-type: none"> <li>• with voltage outputs, capacitive load, max.</li> </ul>	1 μF
<ul style="list-style-type: none"> <li>• with current outputs, max.</li> </ul>	300 Ω
<ul style="list-style-type: none"> <li>• with current outputs, inductive load, max.</li> </ul>	1 mH
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	200 m
<b>Analog value generation for the inputs</b>	
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> <li>• Resolution with overrange (bit including sign), max.</li> </ul>	8 bit
<ul style="list-style-type: none"> <li>• Integration time, parameterizable</li> </ul>	No
<b>Analog value generation for the outputs</b>	
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> <li>• Resolution with overrange (bit including sign), max.</li> </ul>	8 bit
<ul style="list-style-type: none"> <li>• Conversion time (per channel)</li> </ul>	500 μs
<b>Settling time</b>	
<ul style="list-style-type: none"> <li>• for resistive load</li> </ul>	0.3 ms
<ul style="list-style-type: none"> <li>• for capacitive load</li> </ul>	3 ms
<ul style="list-style-type: none"> <li>• for inductive load</li> </ul>	0.3 ms
<b>Encoder</b>	
Connection of signal encoders	
<ul style="list-style-type: none"> <li>• for voltage measurement</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• for current measurement as 2-wire transducer</li> </ul>	No
<ul style="list-style-type: none"> <li>• for current measurement as 4-wire transducer</li> </ul>	Yes
<b>Errors/accuracies</b>	
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> <li>• Voltage, relative to input range, (+/-)</li> </ul>	0.9 %
<ul style="list-style-type: none"> <li>• Current, relative to input range, (+/-)</li> </ul>	0.8 %
<ul style="list-style-type: none"> <li>• Voltage, relative to output range, (+/-)</li> </ul>	0.6 %
<ul style="list-style-type: none"> <li>• Current, relative to output range, (+/-)</li> </ul>	1 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> <li>• Voltage, relative to input range, (+/-)</li> </ul>	0.7 %
<ul style="list-style-type: none"> <li>• Current, relative to input range, (+/-)</li> </ul>	0.6 %
<ul style="list-style-type: none"> <li>• Voltage, relative to output range, (+/-)</li> </ul>	0.5 %
<ul style="list-style-type: none"> <li>• Current, relative to output range, (+/-)</li> </ul>	0.5 %
<b>Interrupts/diagnostics/status information</b>	
Alarms	No
Diagnostics function	No
<b>Potential separation</b>	
Potential separation analog inputs	
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	No
Potential separation analog outputs	
<ul style="list-style-type: none"> <li>• between the channels</li> </ul>	No
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	No
<ul style="list-style-type: none"> <li>• between the channels and the power supply of the electronics</li> </ul>	Yes
<b>Isolation</b>	
Isolation tested with	500 V DC
<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.	285 g

last modified:

1/17/2021 