



SIMATIC S7-300, Analog output SM 332, isolated by channel, 4 AI, Resolution 16 bit, 0-10 V, 1-5 V, +/-10 V, +/-20 mA, 0/4-20mA, 20-pole, suitable for isochronous mode improved bus cycle times for the isochronous mode

Figure similar

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 load voltage L+ (without load), max.	290 mA
from backplane bus 5 V DC, max.	120 mA
Power loss	
Power loss, typ.	3 W
Analog outputs	
Number of analog outputs	4; Isochronous mode
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	40 mA
Current output, no-load voltage, max.	18 V
Output ranges, voltage	
<ul style="list-style-type: none"> <li>0 to 10 V</li> </ul>	Yes
<ul style="list-style-type: none"> <li>1 V to 5 V</li> </ul>	Yes
<ul style="list-style-type: none"> <li>-10 V to +10 V</li> </ul>	Yes
Output ranges, current	
<ul style="list-style-type: none"> <li>0 to 20 mA</li> </ul>	Yes
<ul style="list-style-type: none"> <li>-20 mA to +20 mA</li> </ul>	Yes
<ul style="list-style-type: none"> <li>4 mA to 20 mA</li> </ul>	Yes
Load impedance (in rated range of output)	
<ul style="list-style-type: none"> <li>with voltage outputs, min.</li> </ul>	1 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>	500 Ω
<ul style="list-style-type: none"> <li>with current outputs, inductive load, max.</li> </ul>	1 mH
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	200 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> <li>Resolution with overrange (bit including sign), max.</li> </ul>	16 bit
<ul style="list-style-type: none"> <li>Conversion time (per channel)</li> </ul>	200 μs; in isochronous mode 640 μs
Settling time	
<ul style="list-style-type: none"> <li>for resistive load</li> </ul>	0.2 ms
<ul style="list-style-type: none"> <li>for capacitive load</li> </ul>	3.3 ms
<ul style="list-style-type: none"> <li>for inductive load</li> </ul>	0.5 ms
Errors/accuracies	
Operational error limit in overall temperature range	

• Voltage, relative to output range, (+/-)	0.12 %
• Current, relative to output range, (+/-)	0.18 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Voltage, relative to output range, (+/-)	0.02 %
• Current, relative to output range, (+/-)	0.02 %
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes; Parameterizable
<b>Alarms</b>	
• Diagnostic alarm	Yes; Parameterizable
<b>Diagnoses</b>	
• Diagnostic information readable	Yes
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes
<b>Potential separation</b>	
<b>Potential separation analog outputs</b>	
• between the channels	Yes
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	Yes
<b>Isolation</b>	
Isolation tested with	1 500 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.	220 g
<b>Classifications</b>	

	Version	Classification
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

**Approvals / Certificates**

General Product Approval

[Manufacturer Declaration](#)



[Miscellaneous](#)



[Metrological Approval](#)

General Product Approval

EMV

For use in hazardous locations



[FM](#)

For use in hazardous locations

Marine / Shipping



IECEX



ATEX

[Miscellaneous](#)

[CCC-Ex](#)



ABS



BUREAU  
VERITAS

Marine / Shipping



DNV



LRS

[NK / Nippon Kaiji Ky-  
okai](#)



PRS



RINA

[CCS \(China Classifica-  
tion Society\)](#)

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