## SIEMENS

## Data sheet

## 6ES7332-5HB01-0AB0



SIMATIC S7-300, Analog output SM 332, isolated, 2 AO, U/I; resolution 11/12 bits, 20-pole, Removing/inserting with active backplane bus possible

Supply voltage	
Load voltage L+	
Rated value (DC)	24 V
<ul> <li>Reverse polarity protection</li> </ul>	Yes
Input current	
from load voltage L+ (without load), max.	135 mA
from backplane bus 5 V DC, max.	60 mA
Power loss	
Power loss, typ.	3 W
Analog outputs	
Number of analog outputs	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	25 mA
Current output, no-load voltage, max.	18 V
Output ranges, voltage	
• 0 to 10 V	Yes
• 1 V to 5 V	Yes
• -10 V to +10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes
• -20 mA to +20 mA	Yes
• 4 mA to 20 mA	Yes
Load impedance (in rated range of output)	
<ul> <li>with voltage outputs, min.</li> </ul>	1 κΩ
<ul> <li>with voltage outputs, capacitive load, max.</li> </ul>	1 µF
<ul> <li>with current outputs, max.</li> </ul>	500 Ω
<ul> <li>with current outputs, inductive load, max.</li> </ul>	10 mH
Cable length	
• shielded, max.	200 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit; ±10 V, ±20 mA, 4 mA to 20 mA, 1 V to 5 V: 11 bit + sign; 0 V to 10 V, 0 mA to 20 mA: 12 bit
Conversion time (per channel)	0.8 ms
Settling time	
<ul> <li>for resistive load</li> </ul>	0.2 ms
<ul> <li>for capacitive load</li> </ul>	3.3 ms
<ul> <li>for inductive load</li> </ul>	0.5 ms; 0.5 ms (1 mH); 3.3 ms (10 mH)
Errors/accuracies	

Operational error limit in overall temperature range	
<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	0.5 %
<ul> <li>Current, relative to output range, (+/-)</li> </ul>	0.6 %
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	0.4 %
<ul> <li>Current, relative to output range, (+/-)</li> </ul>	0.5 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes; Parameterizable
Alarms	
Diagnostic alarm	Yes; Parameterizable
Diagnoses	
<ul> <li>Diagnostic information readable</li> </ul>	Yes
Diagnostics indication LED	
Group error SF (red)	Yes
Potential separation	
Potential separation analog outputs	
• between the channels	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
<ul> <li>Between the channels and load voltage L+</li> </ul>	Yes
<ul> <li>between the channels and the power supply of the electronics</li> </ul>	Yes
Isolation	
Isolation tested with	500 V DC
connection method	
required front connector	20-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	117 mm
Weights	
Weight, approx.	220 g

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