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

Figure similar

mA to 20 mA: 12 bit	Figure similar	
Rated value (DC) Reverse polarity protection Yes Input current From load voltage L+ (without load), max. 135 mA If rom backplane bus 5 V DC, max. 60 mA Power loss Power loss, typ. 3 W Analog outputs Voltage output, short-circuit protection Yes Output ranges, voltage • 0 to 10 V Yes • 10 V to 5 V Yes • 10 V to +10 V Yes • 10 V to +10 V Yes • 20 m A to +20 mA Yes • 20 m A to +20 mA Yes • 20 m A to +20 mA Yes • 4 mA to 20 mA Yes Load impedance (in rated range of output) • with voltage outputs, min. 1 kΩ • with voltage outputs, capacitive load, max. 500 Ω • with current outputs, pax. 500 Ω • with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit	Supply voltage	
Reverse polarity protection Yes	Load voltage L+	
Input current from load voltage L+ (without load), max. from backplane bus 5 V DC, max. Power loss Power loss Power loss, typ. Analog outputs Number of analog outputs Voltage output, short-circuit protection Ves Current output, no-load voltage, max. Current output, no-load voltage, max. Output ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V • 10 to 20 mA • -20 mA to +20 mA • 4 mA to 20 mA • with voltage outputs, min. • with voltage outputs, min. • with voltage output, short-circuit current, max. 1 kΩ • with current outputs, max. • with current outputs, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • which current outputs, inductive load,	 Rated value (DC) 	24 V
from load voltage L+ (without load), max. from backplane bus 5 V DC, max. Power loss, Power loss, typ. Analog outputs Number of analog outputs Voltage output, short-circuit current, max. Current output, no-load voltage, max. Output ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V Output ranges, current • 0 to 20 mA • -20 m A to +20 mA • 4 mA to 20 mA • with voltage outputs, min. • with current outputs, min. • with current outputs, min. • with voltage outputs, inductive load, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • where it is inductive load, max. • with current outputs, inductive load, max. • where it is inductive load, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • where it is inductive load, max. • with current outputs, inductive load, wax. • with current outputs, inductive load, wax. •	Reverse polarity protection	Yes
from backplane bus 5 V DC, max. Power loss Power loss, typ. Analog outputs Number of analog outputs Voltage output, short-circuit protection Voltage output, short-circuit current, max. 25 mA Current output, no-load voltage, max. Output ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V Output ranges, current • 0 to 20 mA • -20 mA (yes • -20 mA (yes • 4 mA to 20 mA • with voltage outputs, min. • with voltage outputs, max. • with current outputs, nax. • with current outputs, nax. • with current outputs, inductive load, max. • with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit	Input current	
Power loss, typ. 3 W 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 • 1 V to 5 V Yes • -10 V to +10 V Yes • -10 V to +10 V Yes • 20 mA Yes • 20 mA to +20 mA Yes • 4 mA to 20 mA Yes Load impedance (in rated range of output) Integration and conversion time/resolutive load, max. • with voltage outputs, capacitive load, max. 1 μF • with current outputs, max. 500 Ω • with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit	from load voltage L+ (without load), max.	135 mA
Power loss, typ. Analog outputs Number of analog outputs 2 Voltage output, short-circuit protection Yes Voltage output, no-load voltage, max. 25 mA Current output, no-load voltage, max. 18 V Output ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V Output ranges, current • 0 to 20 mA • -20 mA to +20 mA • 4 mA to 20 mA Ves • 4 mA to 20 mA • with voltage outputs, min. • with voltage outputs, min. • with voltage outputs, min. • with outper outputs, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. 10 mH Cable length • shielded, max. 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, mA to 20 mA: 12 bit	from backplane bus 5 V DC, max.	60 mA
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 • 1 V to 5 V Yes • -10 V to +10 V Yes Output ranges, current • 0 to 20 mA • 20 mA to +20 mA Yes • 4 mA to 20 mA Yes Load impedance (in rated range of output) *** • with voltage outputs, min. 1 kΩ • with voltage outputs, capacitive load, max. 1 μF • with current outputs, max. 500 Ω • with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit	Power loss	
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 • 0 to 10 V Yes • -10 V to +10 V Yes • -10 V to +10 V Yes Output ranges, current • 0 to 20 mA • 20 mA Yes • 4 mA to 20 mA Yes Load impedance (in rated range of output) • with voltage outputs, min. 1 kΩ • with voltage outputs, capacitive load, max. 1 μF • with current outputs, max. 500 Ω • with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit	Power loss, typ.	3 W
Voltage output, short-circuit protection Voltage output, short-circuit current, max. 25 mA Current output, no-load voltage, max. 0utput ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V Output ranges, current • 0 to 20 mA • 20 mA to +20 mA • with voltage outputs, max. • with current outputs, range. • with current outputs, max. • with current outputs, sinductive load, max. • shielded, max. 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, mA to 20 mA: 12 bit	Analog outputs	
Voltage output, short-circuit current, max. Current output, no-load voltage, max. Output ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V Output ranges, current • 0 to 20 mA • -20 mA to +20 mA • -20 mA to +20 mA • with voltage outputs, min. • with voltage outputs, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • shielded, max. Analog value generation for the outputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. 25 mA 25 mA 26 mA 27 mA 28 mA 29 mA 20 mA	Number of analog outputs	2
Current output, no-load voltage, max. Output ranges, voltage • 0 to 10 V	Voltage output, short-circuit protection	Yes
Output ranges, voltage • 0 to 10 V • 1 V to 5 V • -10 V to +10 V Output ranges, current • 0 to 20 mA • -20 mA to +20 mA • 4 mA to 20 mA • with voltage outputs, min. • with voltage outputs, capacitive load, max. • with current outputs, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. • shielded, max. 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, mA to 20 mA: 12 bit	Voltage output, short-circuit current, max.	25 mA
 0 to 10 V 1 V to 5 V -10 V to +10 V Output ranges, current 0 to 20 mA -20 mA to +20 mA 4 mA to 20 mA with voltage outputs, min. with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. with current outputs, inductive load, max. with current outputs, inductive load, max. a with current outputs, inductive load, max. b with current outputs, inductive load, max. cable length shielded, max. 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, mA to 20 mA: 12 bit 	Current output, no-load voltage, max.	18 V
 1 V to 5 V -10 V to +10 V Yes Output ranges, current 0 to 20 mA -20 mA to +20 mA 4 mA to 20 mA with voltage outputs, min. with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. a with current outputs, inductive load, max. The material outputs inductive load, max. With current outputs inductive load, max. To 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, mA to 20 mA: 12 bit 	Output ranges, voltage	
 • -10 V to +10 V Output ranges, current • 0 to 20 mA • -20 mA to +20 mA • 4 mA to 20 mA • with voltage outputs, min. • with voltage outputs, capacitive load, max. • with current outputs, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. 10 mH Cable length • shielded, max. 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, mA to 20 mA: 12 bit 	• 0 to 10 V	Yes
Output ranges, current • 0 to 20 mA • -20 mA to +20 mA • 4 mA to 20 mA Yes Load impedance (in rated range of output) • with voltage outputs, min. • with voltage outputs, capacitive load, max. • with current outputs, max. • with current outputs, inductive load, max. • with current outputs, inductive load, max. 10 mH Cable length • shielded, max. 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, mA to 20 mA: 12 bit	• 1 V to 5 V	Yes
 0 to 20 mA -20 mA to +20 mA 4 mA to 20 mA 9 with voltage outputs, min. with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. with current outputs, inductive load, max. 10 mH Cable length shielded, max. 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, mA to 20 mA: 12 bit 	• -10 V to +10 V	Yes
 -20 mA to +20 mA 4 mA to 20 mA 5 with voltage outputs, min. with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. with current outputs, inductive load, max. with current outputs, inductive load, max. 10 mH Cable length shielded, max. 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, mA to 20 mA: 12 bit 	Output ranges, current	
 4 mA to 20 mA Load impedance (in rated range of output) with voltage outputs, min. with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. with current outputs, inductive load, max. To mH Cable length shielded, max. 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, mA to 20 mA: 12 bit 	• 0 to 20 mA	Yes
Load impedance (in rated range of output) • with voltage outputs, min. • with voltage outputs, capacitive load, max. • with current outputs, max. • with current outputs, inductive load, max. 1 μ F • with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit	• -20 mA to +20 mA	Yes
 with voltage outputs, min. with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. with current outputs, inductive load, max. 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, mA to 20 mA: 12 bit 	• 4 mA to 20 mA	Yes
 with voltage outputs, capacitive load, max. with current outputs, max. with current outputs, inductive load, max. to mH Cable length shielded, max. Analog value generation for the outputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. to mH 10 mH 200 m Analog value generation for the outputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. to bit; ±10 V, ±20 mA, 4 mA to 20 mA, 1 V to 5 V: 11 bit + sign; 0 V to 10 V, mA to 20 mA: 12 bit 	Load impedance (in rated range of output)	
 with current outputs, max. with current outputs, inductive load, max. 10 mH Cable length shielded, max. 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, mA to 20 mA: 12 bit 	with voltage outputs, min.	1 kΩ
 with current outputs, inductive load, max. Cable length shielded, max. 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, mA to 20 mA: 12 bit 	 with voltage outputs, capacitive load, max. 	1 μF
Cable length • shielded, max. 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, mA to 20 mA: 12 bit	with current outputs, max.	500 Ω
 shielded, max. 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, mA to 20 mA: 12 bit 	 with current outputs, inductive load, max. 	10 mH
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, mA to 20 mA: 12 bit	Cable length	
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, mA to 20 mA: 12 bit	• shielded, max.	200 m
• 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, mA to 20 mA: 12 bit	Analog value generation for the outputs	
mA to 20 mA: 12 bit	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	Conversion time (per channel)	0.8 ms
Settling time	Settling time	
• for resistive load 0.2 ms	 for resistive load 	0.2 ms
• for capacitive load 3.3 ms	 for capacitive load 	3.3 ms
• for inductive load 0.5 ms; 0.5 ms (1 mH); 3.3 ms (10 mH)	for inductive load	0.5 ms; 0.5 ms (1 mH); 3.3 ms (10 mH)
Errors/accuracies	Errors/accuracies	

0.5 %		
0.6 %		
0.4 %		
0.5 %		
Interrupts/diagnostics/status information		
Yes; Parameterizable		
Yes; Parameterizable		
Yes		
Yes		
No		
Yes		
Yes		
Yes		
500 V DC		
20-pin		
40 mm		
125 mm		
117 mm		
220 g		

last modified:

