6ES7336-4GE00-0AB0





SIMATIC S7, Analog input SM 336, 6 AI; 15 bit; fail-safe analog inputs for SIMATIC Safety, with HART support, up to Category 4 (EN 954-1)/ SIL3 (IEC61508)/PLE (ISO13849), 1x 20-pole

Rated value (DC) Reverse polarity protection Yes Load voltage L+ Rated value (DC) Reverse polarity protection Reverse polarity protection Reverse polarity protection Yes Input current From power supply L+, typ. 150 mA from backplane bus 5 V DC, max. Power loss Power loss, typ. Analog inputs Number of analog inputs Permissible input current for current input (destruction limit), max. Input ranges Voltage Voltage Voltage Current Resistance themometer No Resistance themometer Resistance Resistance Resistance Input ranges (rated values), currents 150 0; typ. 150 ohms max. 175 ohms 26ble length Shielded, max. 1000 m Analog value generation for the inputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration sing denoment as 2-wire transducer Froncelecture Froncelecture Connection of signal encoders For current measurement as 2-wire transducer For current measurement as 4-wire transducer	Supply voltage	
Load voltage L+ Rated value (DC) Reverse polarity protection From power supply L+, typ. From power supply L+, typ. From power supply L+, typ. From Power los, typ. From A From Power los, typ. From A From	Rated value (DC)	24 V
Rated value (DC) Reverse polarity protection Yes From power supply L+, typ. From backplane bus 5 V DC, max. Power loss Power loss, typ. Analog inputs Number of analog inputs Number of analog inputs Analog input current for current input (destruction limit), max. Iinput ranges Voltage Voltage Voltage Resistance thermometer Resistance thermometer Resistance thermometer Resistance thermometer Resistance thermometer Resistance (4 mA to 20 mA) Finput resistance (4 mA to 20 mA) Input resistance (4 mA to 20 mA) Resistance quarter for the inputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration and conversion time/resolution per channel Resolution with overrange (bit i	Reverse polarity protection	Yes
Reverse polarity protection Yes	Load voltage L+	
Input current From power supply L+, typ. 150 mA 90 mA Power loss VP. 4.5 W Analog inputs 6 Power loss VP. 4.5 W Analog inputs 40 mA Power loss VP. V	Rated value (DC)	24 V
From power supply L+, typ. 150 mA from backplane bus 5 V DC, max. 90 mA Power loss Power loss Power loss, typ. 4.5 W Analog inputs Number of analog inputs Power loss input current for current input (destruction limit), max. Input ranges • Voltage No • Current Yes • Thermocouple No • Resistance thermometer No • Resistance thermometer No • Input ranges (rated values), currents • 0 to 20 mA Yes — Input resistance (0 to 20 mA) 150 \Omega; typ. 150 ohms max. 175 ohms • 4 mA to 20 mA Yes — Input resistance (4 mA to 20 mA) 150 \Omega; typ. 150 ohms max. 175 ohms Cable length • shielded, max. 1000 m Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) 20 ms © 50 Hz, 16.7 ms © 60 Hz fen x (f1 ± 0.5 %) Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer • Yes	 Reverse polarity protection 	Yes
from backplane bus 5 V DC, max. Power loss Power loss, typ. Analog inputs Number of analog inputs permissible input current for current input (destruction limit), max. Input ranges • Voltage • Current • Resistance thermometer • Resistance thermometer • No Input ranges (rated values), currents • 0 to 20 mA — Input resistance (0 to 20 mA) • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) • shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Integrence voltage suppression for interference frequency ff in Hz Encodor Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer	Input current	
Power loss, typ. Analog inputs Number of analog inputs 6 permissible input current for current input (destruction limit), max. Input ranges • Voltage • Current • Resistance thermometer • Resistance • No Input ranges (rated values), currents • 0 to 20 mA — Input resistance (0 to 20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (4 mA to 20 mA) — Input resistance (4 mA to 20 mA) • Shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer	From power supply L+, typ.	150 mA
Power loss, typ. Analog inputs Number of analog inputs permissible input current for current input (destruction limit), max. Input ranges • Voltage • Current • Thermocouple • Resistance thermometer • Resistance (and the survey of the	from backplane bus 5 V DC, max.	90 mA
Analog inputs 6 permissible input current for current input (destruction limit), max. 40 mA Input ranges • Voltage No • Current Yes • Thermocouple No • Resistance thermometer No • Resistance No Input ranges (rated values), currents • 0 to 20 mA Yes — Input resistance (0 to 20 mA) 150 Ω; typ. 150 ohms max. 175 ohms • 4 mA to 20 mA Yes — Input resistance (4 mA to 20 mA) 150 Ω; typ. 150 ohms max. 175 ohms Cable length 1000 m • shielded, max. 1 000 m Analog value generation for the inputs 16 bit; 15 bit + sign Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) 20 ms @ 50 Hz, 16.7 ms @ 60 Hz • Interference voltage suppression for interference frequency f1 in Hz f=n x (f1 ±0.5 %) Encoder Connection of signal encoders • for current measurement as 2-wire transducer Yes • for current measurement as 4-wire transducer Yes	Power loss	
Number of analog inputs 6	Power loss, typ.	4.5 W
permissible input current for current input (destruction limit), max. Input ranges • Voltage • Current • Thermocouple • Resistance thermometer • Resistance (a mA to 20 mA) - Input resistance (4 mA to 20 mA) • Shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer • for current measurement as 4-wire transducer • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer • for current measurement as 4-wire transducer • for current measurement as 4-wire transducer	Analog inputs	
imit), max. Input ranges • Voltage • Current • Thermocouple • Resistance thermometer • Resistance (a values), currents • 10 to 20 mA — Input resistance (0 to 20 mA) • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) • Shielded, max. Cable length • shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer • Yes • for current measurement as 4-wire transducer • Yes • for current measurement as 4-wire transducer • Yes	Number of analog inputs	6
 Voltage Current Thermocouple Resistance thermometer No Resistance thermometer No Input ranges (rated values), currents 0 to 20 mA — Input resistance (0 to 20 mA) 4 mA to 20 mA — Input resistance (4 mA to 20 mA) 4 mA to 20 mA — Input resistance (4 mA to 20 mA) 50 Ω; typ. 150 ohms max. 175 ohms Cable length shielded, max. 1 000 m Analog value generation for the inputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer Yes 		40 mA
Current Thermocouple No Resistance thermometer No Resistance No Input ranges (rated values), currents O to 20 mA Input resistance (0 to 20 mA) Analog value generation for the inputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration time (ms) Integration and conversion time/resolution per channel Integration and conversion time/res	Input ranges	
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 Resistance thermometer Resistance No Input ranges (rated values), currents 0 to 20 mA Input resistance (0 to 20 mA) 4 mA to 20 mA Input resistance (4 mA to 20 mA) 5to Ω; typ. 150 ohms max. 175 ohms Input resistance (4 mA to 20 mA) Shielded, max. Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration time (ms) Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Integration of signal encoders for current measurement as 2-wire transducer for current measurement as 4-wire transducer Yes Integration of signal encoders for current measurement as 4-wire transducer fen x (f1 ±0.5 %) Integration of signal encoders Integration of signal encoders for current measurement as 2-wire transducer fen current measurement as 4-wire transducer Integration of signal encoders for current measurement as 4-wire transducer for current measurement as 4-wire transducer Integration of signal encoders for current measurement as 4-wire transducer fen current measurement as 4-wire transducer Integration of signal encoders for current measurement as 4-wire transducer fen current measurement as 4-wire transducer Integration of signal encoders for current measurement as 4-wire transducer fen current measurement as 4-wire transducer Integration of signal encoders for current measurement as 4-wire transducer Integration of signal encoders Integration of signal encoders for current measurement as 4-wire transducer Integration of signal encoders Integration of signal encoders Integration o	Current	Yes
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• 0 to 20 mA — Input resistance (0 to 20 mA) • 4 mA to 20 mA — Input resistance (4 mA to 20 mA) • Shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer • for current measurement as 4-wire transducer Yes	Resistance	No
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- Input resistance (4 mA to 20 mA) Cable length • shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer Yes	— Input resistance (0 to 20 mA)	150 Ω ; typ. 150 ohms max. 175 ohms
Cable length • shielded, max. Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer Yes	• 4 mA to 20 mA	Yes
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Analog value generation for the inputs Integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer Yes	Cable length	
Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders Integration time (ms) Integrati	• shielded, max.	1 000 m
 Resolution with overrange (bit including sign), max. Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders for current measurement as 2-wire transducer for current measurement as 4-wire transducer Yes 	Analog value generation for the inputs	
 Integration time (ms) Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders for current measurement as 2-wire transducer for current measurement as 4-wire transducer Yes 	Integration and conversion time/resolution per channel	
 Interference voltage suppression for interference frequency f1 in Hz Encoder Connection of signal encoders for current measurement as 2-wire transducer for current measurement as 4-wire transducer Yes 	 Resolution with overrange (bit including sign), max. 	16 bit; 15 bit + sign
frequency f1 in Hz Encoder Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer Yes Yes	Integration time (ms)	20 ms @ 50 Hz, 16.7 ms @ 60 Hz
Connection of signal encoders • for current measurement as 2-wire transducer • for current measurement as 4-wire transducer Yes Yes	0 11	f=n x (f1 ±0.5 %)
 for current measurement as 2-wire transducer for current measurement as 4-wire transducer Yes Yes	Encoder	
• for current measurement as 4-wire transducer Yes	Connection of signal encoders	
	 for current measurement as 2-wire transducer 	Yes
Errors/accuracies	 for current measurement as 4-wire transducer 	Yes
	Errors/accuracies	

Operational error limit in overall temperature range	
 Current, relative to input range, (+/-) 	0.2 %; 40 μA
Basic error limit (operational limit at 25 °C)	
 Current, relative to input range, (+/-) 	0.1 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
Diagnostic information readable	Yes
Diagnostics indication LED	
 Fail-safe operation 	Yes
 Group error SF (red) 	Yes
Encoder supply Vs (green)	No
Potential separation	
Potential separation analog inputs	
 between the channels 	Yes
 between the channels and backplane bus 	Yes
 between the channels and the power supply of the electronics 	Yes
Isolation	
Isolation tested with	370V for 1 min
Standards, approvals, certificates	
Highest safety class achievable in safety mode	
 acc. to EN 954 	4
 Performance level according to ISO 13849-1 	e
 SIL acc. to IEC 61508 	SIL 3
connection method / header	
required front connector	20-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	350 g

last modified: