



spare part 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

Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
From power supply L+, typ.	150 mA
from backplane bus 5 V DC, max.	90 mA
Power loss	
Power loss, typ.	4.5 W
Analog inputs	
Number of 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	
• 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.	16 bit; 15 bit + sign
• 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
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			
required front connector	20-pin		
Dimensions			
Width	40 mm		
Height	125 mm		
Depth	120 mm		
Weights			
Weight, approx.	350 g		
Classifications			
		Version	Classification
	eClass	16	27-24-22-01
	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	10	EC001420
	ETIM	9	EC001420
	ETIM	8	EC001420
	ETIM	7	EC001420
	IDEA	4	3562
	UNSPSC	15	32-15-17-05
Approvals / Certificates			
General Product Approval			

[Miscellaneous](#)



[Metrological Approval](#)



General Product Approval	EMV	For use in hazardous locations
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[China RoHS](#)



[EM](#)



For use in hazardous locations	Functional Safety
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[Miscellaneous](#)

[CCC-Ex](#)

[TUEV](#)

[Type Examination Certificate](#)

Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application



[CCS \(China Classification Society\)](#)

last modified: 4/7/2025