

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
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
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 • Input resistance (4 mA to 20 mA)	Yes 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. • Integration time (ms) • Interference voltage suppression for interference frequency f1 in Hz	16 bit; 15 bit + sign 20 ms @ 50 Hz, 16.7 ms @ 60 Hz $f=n \times (f1 \pm 0.5 \%)$
Encoder	
Connection of signal encoders	
• for current measurement as 2-wire transducer • for current measurement as 4-wire transducer	Yes 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	
Diagnostic functions	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnostic messages	
• Diagnostic information readable	Yes
Diagnostics indication LED	
• Fail-safe operation • Group error SF (red) • Encoder supply Vs (green)	Yes Yes No
Potential separation	
Potential separation analog inputs	
• between the channels • between the channels and backplane bus • between the channels and the power supply of the electronics	Yes Yes Yes
Isolation	
Isolation tested with	370V for 1 min
Standards, approvals, certificates	
Highest safety class achievable in safety mode	

- acc. to EN 954
- SIL acc. to IEC 61508

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SIL 3

Connection method

required front connector 20-pin

Dimensions

Width	40 mm
Height	125 mm
Depth	120 mm

Weights

Weight, approx. 350 g

last modified: 04/06/2018