



SIMATIC S7, ANALOG INPUT SM336 6 AI; 15 BIT; FAILSAFE ANALOG INPUTS FOR SIMATIC SAFETY, WITH HART SUPPORT, UP TO CATEGORY 4 (EN954-1)/ SIL3 (IEC61508)/PLE (ISO13849), 1 X 20 PIN,

Input current

from supply voltage L+, max.	150 mA; Typical
from backplane bus 5 V DC, max.	90 mA

Power losses

Power loss, typ.	4.5 W
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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	Yes
• Input resistance (4 mA to 20 mA)	150 Ω; typ. 150 ohms max. 175 ohms

Cable length

• shielded, max.	1 000 m
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Analog value generation for the inputs

Integration and conversion time/resolution per channel

• Resolution with overrange (bit including sign), max.	16 bit; 15 bits + sign
• Integration time (ms)	20 ms @ 50 Hz, 16.7 ms @ 60 Hz

- Interference voltage suppression for interference frequency f_1 in Hz

$$f = n \times (f_1 \pm 0.5\%)$$

Encoder

Connection of signal encoders

- for current measurement as 2-wire transducer
- for current measurement as 4-wire transducer

Yes

Yes

Errors/accuracies

Operational limit in overall temperature range

- Current, relative to input area, (+/-) 0.2 %; 40 μ A

Basic error limit (operational limit at 25 °C)

- Current, relative to input area, (+/-) 0.1 %

Interrupts/diagnostics/status information

Alarms

- Diagnostic alarm

Yes

Diagnostic messages

- Diagnostic functions
- Diagnostic information readable

Yes

Yes

Diagnostics indication LED

- Fail-safe operation
- Group error SF (red)

Yes

Yes

Potential separation

Galvanic isolation analog inputs

- between the channels
- between the channels and the backplane bus
- between the channels and the power supply of the electronics

Yes

Yes

Yes

Isolation

Isolation checked with

370V for 1 min

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:

23.04.2015