



## AI, 12 Bit, U, ±10V

AI 4x U, ±10 V, 0-10 V, 1-5 V, 12 Bit

- Measuring ranges 0 ... 10 V, 1 ... 5 V, ±10 V, ±5 V, ±2.5 V, individually configurable for each channel
- Measurement resolution: 11 bit + sign
- Diagnostic messages
- Wire break detection (for 1 ... 5 V)
- Limit value alarms for each channel
- A bi-color LED (blue/red) indicates the module operating status and any malfunctions
- 4 analog inputs for measuring voltage, electrically isolated from the backplane bus
- 4 process input words

Parameters for the module

Diagnostic alarm: On | Off

Overflow/underflow diagnosis: On | Off

Representation values: SIMATIC\* S7 | SIMATIC\* S5 | INT16

Parameters for each channel

Wire break detection (only for 1 ... 5 V): On | Off

Interference frequency suppression: None | 10 Hz | 50 Hz | 60 Hz | 400 Hz

Measuring ranges: Deactivated | 0 ... 10 V | 1 ... 5 V | ±10 V | ±5 V | ±2.5 V

Limit value alarms enabled: On | Off

Upper/lower limit: 16 bit analog value (±27648)

## Technical specifications

General information	
Order number	600-252-4AD01
Article name	AI 4x U, ±10 V, 0-10 V, 1-5 V, 12 bits
Scope of delivery	AI 4x U, ±10 V, 0-10 V, 1-5 V, 12 bits
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
<b>Number of inputs</b>	4
Electrical isolation	
from the backplane bus	Yes
Between the channels	No
Internal	
	Max. 95 mA
Power dissipation	
	Max. 0.7 W
Measuring ranges / load resistance	
	0 ... 10 V/30 kohm, 1 ... 5 V/30 kohm, ±10 V/30 kohm, ±5 V/30 kohm, ±2,5 V/30 kohm
Measuring method	
	Integration
Measurement resolution	
	11 bit + sign

<b>Values presentation</b>	SIMATIC* S7   SIMATIC* S5   INT16
<b>Interference frequency suppression</b>	None   10 Hz   50 Hz   60 Hz   400 Hz
<b>Refresh rate / conversion rate</b>	Number of active channels x conversion time +16 ms for wire break detection for each channel when activated. The conversion time will depend on the interference frequency suppression: None: 8 ms 400 Hz: 45 ms 60 Hz: 109 ms 50 Hz: 128 ms 10 Hz: 342 ms
<b>Diagnoses</b>	Upper measuring range limit exceeded (overflow), lower measuring range limit fallen below (underflow), wire break (for 1 ... 5 V only), parameter assignment error
<b>Process alarms</b>	Upper and lower limit per channel
<b>Error limits</b>	
Operational error limit in the entire temperature range	±0.5 % relative to the nominal range
Basic error limit at 25 °C	±0.3 % relative to the nominal range
Temperature error	±0.005 %/K relative to the nominal range
Linearity error	±0.05 %/K relative to the nominal rangesv
Repeating accuracy in steady state at 25 °C	±0.05 %/K relative to the nominal range
<b>Parameter configuration length</b>	22 bytes
<b>General error indicator</b>	Red LED
<b>Hot-swap capable</b>	Yes
<b>Ambient conditions</b>	
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	-20 °C ... +80 °C 95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL
<b>UL</b>	
Surrounding Air Temperature	0 °C ... +60 °C
Pollution degree	2
<b>CE</b>	
Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration“, DIN EN 60068-2-27:2010 „Shock"
RoHS	Yes
REACH	Yes