



Features

- ✓ Measuring ranges 0 ... 24 V, ± 24 V, individually configurable for each channel
- ✓ Measurement resolution: up to 11 bits + sign
- ✓ Diagnostic messages
- ✓ 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

Analog-input-module, U 24V, 12 Bit 4x

Analog input modules for the modular fieldbus IO system TB20.

Note: Individual modules cannot be combined with IO systems from other manufacturers.

The scope of delivery already includes the appropriate front connector for the cabling and a base module. The module has 4 analog inputs.

Parameters for the module:

Diagnostic alarm: On | Off

Overflow / underflow diagnosis: On | Off

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

Parameters for each channel:

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

Measuring ranges: Deactivated | 0 ... 24 V | ± 24 V

Limit value alarms enabled: On | Off

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

* SIMATIC is a registered trademark of Siemens AG.

General information

Order number

600-252-4CD01

Article name	AI 4x U, ± 24 V, 0-24 V, 12 bits
Scope of delivery	AI 4x U, ± 24 V, 0-24 V, 12 bits
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
Number of inputs	4
Internal	Max. 95 mA
Power dissipation	Max. 0.7 W
Parameter configuration length	22 bytes
General error indicator	Red LED
Hot-swap capable	Yes
Hot-swap capable	Yes

Electrical isolation

from the backplane bus	Yes
Between the channels	No

Measuring

Measuring ranges / load resistance	0 ... 24 V/30 kohm, ± 24 V/30 kohm
Measuring method	Integration
Measurement resolution	11 bit + sign
Interference frequency suppression	None 10 Hz 50 Hz 60 Hz 400 Hz
Refresh rate / conversion rate	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
Diagnoses	Upper measuring range limit exceeded (overflow), lower measuring range limit fallen below (underflow), parameter assignment error
Process alarms	Upper and lower limit per channel

Error limits

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 range

Repeating accuracy in steady state at 25 °C

±0.05 %/K relative to the nominal range

Ambient conditions

Ambient temperature

0 °C ... +60 °C

Transport and storage temperature

-20 °C ... +80 °C

Relative air humidity

95 % r H without condensation

Protection rating

IP 20

Certifications

CE, UL

UL

Surrounding Air Temperature

0 °C ... +60°C

Pollution degree

2

CE

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“

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