



Features

- ✓ Channels electrically isolated from each other and from the backplane bus
- ✓ Measuring ranges 0 ... 20 mA, 4 ... 20 mA, ± 20 mA, individually configurable for each channel
- ✓ Measurement resolution: up to 15 bits + sign
- ✓ Suitable for 2- and 4-wire transmitters
- ✓ Diagnostic messages
- ✓ Wire break detection (for 4 ... 20 mA)
- ✓ Limit value alarms for each channel
- ✓ A bi-color LED (blue/red) indicates the module operating status and any malfunctions
- ✓ Red/green bi-color LEDs (one for each channel) indicate the channel status
- ✓ 4 analog inputs for measuring current
- ✓ 4 process input words

Analog-input-module, I, 16 Bit, Iso. 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:

Wire break detection (only for 4 ... 20 mA): On | Off

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

Measuring ranges: Deactivated | 0 ... 20 mA | 4 ... 20 mA | ± 20 mA

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	600-250-7BD01
Article name	AI 4 x I, 0/4-20 mA, ± 20 mA, Iso., 16 bit
Scope of delivery	AI 4 x I, 0/4-20 mA, ± 20 mA, Iso., 16 bit
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 80 g
Number of inputs	4
Power dissipation	Max. 1 W
Parameter configuration length	24 Bytes
General error indicator	Red LED
Hot-swap capable	Yes
Hot-swap capable	Yes

Electrical isolation

from the backplane bus	Yes
Between the channels	Yes

Current draw

External	Not needed
Internal	Max. 140 mA

Measuring

Measuring ranges / load resistance	0 ... 20 mA / 50 ohms,
	4 ... 20 mA / 50 ohms,
	± 20 mA / 50 ohms
Measuring method	Integration
Measurement resolution	15 bits + sign
Interference frequency suppression	None 10 Hz 50 Hz 60 Hz 400 Hz
Refresh rate / conversion rate	The conversion time will depend on the interference frequency suppression:
	None: 2.5 ms,
	400 Hz: 8 ms,
	60 Hz: 51 ms,
	50 Hz: 60 ms,
	10 Hz: 160 ms
Diagnoses	Upper measuring range limit exceeded (overflow), lower measuring range limit fallen below (underflow), wire break (for 4

	... 20 mA only), parameter assignment error
Process alarms	Upper and lower limit per channel

Error limits

Operational error limit in the entire temperature range

±0.2 % relative to the nominal range

Basic error limit at 25 °C

±0.1 % 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"