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
- 2 analog inputs for measuring current
- 2 process input words

Analog-input-module, I, 16 Bit, Iso. 2x

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 2 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	600-250-7BB01
Article name	AI 2 x I, 0/4-20 mA, ±20 mA, Iso., 16 bit
Scope of delivery	AI 2 x I, 0/4-20 mA, ±20 mA, Iso., 16 bit
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
Number of inputs	2
Power dissipation	Max. 1 W
Parameter configuration length	14 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 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"

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