AI, 16 Bit, U, ±10V

AI 4x U, ±10 V, 0-10 V, 1-5 V, Iso., 16 Bit

- Channels electrically isolated from each other and from the backplane bus
- Measuring ranges 0 ... 10 V, 1 ... 5 V, ±10 V, ±5 V, ±2.5 V, individually configurable for each channel
- Measurement resolution: up to 15 bits + sign
- Diagnostic messages
- Wire break detection (for 1 ... 5V)
- 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 voltage
- 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)

Channel LED signals

Flashing red light Parameter assignment error on channel Solid red light Reading overflow/underflow or wire break Flashing green light Reading within overrange Solid green light Channel configured, normal reading Off Channel disabled or module not yet configured

Technical specifications

General information	
Order number	600-252-7BD01
Article name	AI 4x U ,±10 V, 0–10 V, 1–5 V, Iso., 16 bit
Scope of delivery	AI 4x U ,±10 V, 0–10 V, 1–5 V, Iso., 16 bit
Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 80 g
Number of inputs	4
Electrical isolation	

from the backplane bus	Yes
Between the channels	Yes
Internal	Max. 140 mA
Power dissipation	Max. 1 W
Measuring ranges / load resistance	0 ... 10 V / 2 Mohms, 1 ... 5 V / 2 Mohms, ±10 V / 2 Mohms, ±5 V / 2 Mohms, ±2.5 V / 2 Mohms
Measuring method	Integration
Measurement resolution	15 bits + sign
Values presentation	SIMATIC* S7 | SIMATIC* S5 | INT16
Interference frequency suppression	None | 10 Hz | 50 Hz | 60 Hz | 400 Hz
Refresh rate / conversion rate	Depends on the interference frequency suppression setting being used: 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 1 ... 5 V 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
Parameter configuration length	24 bytes
General error indicator	Red LED
Hot-swap capable	Yes
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"
RoHS	Yes
REACH	Yes