



AI, 16 Bit, U, $\pm 10V$

AI 4x U, $\pm 10V$, 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, $\pm 10V$, $\pm 5V$, $\pm 2.5V$, 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 | $\pm 10V$ | $\pm 5V$ | $\pm 2.5V$

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, $\pm 10V$, 0-10 V, 1-5 V, Iso., 16 bit |
| Scope of delivery | AI 4x U, $\pm 10V$, 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 |