



## AI, 12 Bit, U, ±10V

AI 2x U, ±10 V, 0-10 V, 1-5 V, 12 Bit

- Measuring ranges 0 ... 10 V, 1 ... 5 V, ±10 V, ±5 V, ±2.5 V, individually configurable for each channel
- Measurement resolution: 11 bit + sign
- Diagnostic messages
- Wire break detection (for 1 ... 5 V)
- Limit value alarms for each channel
- A bi-color LED (blue/red) indicates the module operating status and any malfunctions
- 2 analog inputs for measuring voltage, electrically isolated from the backplane bus
- 2 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)

## Technical specifications

| General information                |  |
|------------------------------------|--|
| Order number                       | 600-252-4AB01  |
| Article name                       | AI 2x U, ±10 V, 0-10 V, 1-5 V, 12 bits   |
| Scope of delivery                  | AI 2x U, ±10 V, 0-10 V, 1-5 V, 12 bits   |
| Dimensions (DxWxH)                 | 110 x 14 x 73 mm   |
| Weight                             | Approx. 70 g   |
| <b>Number of inputs</b>            | 2  |
| Electrical isolation               |  |
| from the backplane bus             | Yes  |
| Between the channels               | No   |
| Internal                           |  |
|                                    | Max. 95 mA   |
| Power dissipation                  |  |
|                                    | Max. 0.7 W   |
| Measuring ranges / load resistance |  |
|                                    | 0 ... 10 V/30 kohm, 1 ... 5 V/30 kohm, ±10 V/30 kohm, ±5 V/30 kohm, ±2,5 V/30 kohm |
| Measuring method                   |  |
|                                    | Integration  |
| Measurement resolution             |  |
|                                    | 11 bit + sign  |

|   |  |
|---|--|
| <b>Values presentation</b>                              | SIMATIC* S7   SIMATIC* S5   INT16  |
| <b>Interference frequency suppression</b>               | None   10 Hz   50 Hz   60 Hz   400 Hz  |
| <b>Refresh rate / conversion rate</b>                   | Number of active channels x conversion time +16 ms for wire break detection for each channel when activated.<br>The conversion time will depend on the interference frequency suppression:<br>None: 8 ms<br>400 Hz: 45 ms<br>60 Hz: 109 ms<br>50 Hz: 128 ms<br>10 Hz: 342 ms |
| <b>Diagnoses</b>  | Upper measuring range limit exceeded (overflow), lower measuring range limit fallen below (underflow), wire break (for 1 ... 5 V only), parameter assignment error   |
| <b>Process alarms</b>                                   | Upper and lower limit per channel  |
| <b>Error limits</b>                                     |  |
| 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 rangesv  |
| Repeating accuracy in steady state at 25 °C             | ±0.05 %/K relative to the nominal range  |
| <b>Parameter configuration length</b>                   | 12 bytes   |
| <b>General error indicator</b>                          | Red LED  |
| <b>Hot-swap capable</b>                                 | Yes  |
| <b>Ambient conditions</b>                               |  |
| Ambient temperature                                     | 0 °C ... +60 °C  |
| Transport and storage temperature                       | -20 °C ... +80 °C  |
| Relative air humidity                                   | -20 °C ... +80 °C 95 % r H without condensation  |
| Protection rating                                       | IP 20  |
| Certifications  | CE, UL   |
| <b>UL</b>   |  |
| Surrounding Air Temperature                             | 0 °C ... +60 °C  |
| Pollution degree  | 2  |
| <b>CE</b>   |  |
| 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  |