



## AI, 16 Bit, TC, Iso.

AI 4x TC, Iso., 16 Bit

- Measuring range  $\pm 80$  mV
- Supported thermocouples: E, J, K, N, R, S, T, B, C, L
- Measurement resolution: 15 bits + sign
- External or internal temperature compensation
- Wire break detection
- Diagnostic messages
- 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 inputs, electrically isolated from the backplane bus
- 4 process input words
- 4 process output words (for temperature compensation)

### Parameters for the module

Diagnostic alarm: On | Off

Overflow/underflow diagnosis: On | Off

Representation values: SIMATIC\* S7 | SIMATIC\* S5 (for  $\pm 80$  mV only)

Temperature unit: Celsius x 10 | Fahrenheit x 10 | Kelvin x 10

### Parameters for each channel

Wire break detection: On | Off

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

Measuring ranges:  $\pm 80$  mV

Thermocouples: E | J | K | N | R | S | T | B | C | L

Temperature compensation: Internal | External | Process data-based

Limit value alarms enabled: On | Off

Upper/lower limit: 16 bit analog value ( $\pm 27648$ )

### 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 Kanal deaktiviert oder Baugruppe noch nicht parametrier

## Technical specifications

General information	
Order number	600-254-4AD02
Article name	AI 4x TC, Iso., 16 bit
Scope of delivery	AI 4x TC, Iso., 16 bit

Dimensions (DxWxH)	110 x 14 x 73 mm
Weight	Approx. 70 g
Number of inputs	4
<b>Electrical isolation</b>	
from the backplane bus	Yes
Between the channels	Yes
<b>Internal</b>	Max. 95 mA
<b>Power dissipation</b>	Max. 0.7 W
<b>Measuring ranges</b>	± 80 mV
<b>Thermocouples</b>	E (-270 °C ... 990 °C) J (-210 °C ... 1200 °C) K (-270 °C ... 1380 °C) N (-270 °C ... 1320 °C) R (-50 °C ... 1775 °C) S (-50 °C ... 1775 °C) T (-270 °C ... 405 °C) B (0 °C ... 1800 °C) C (0 °C ... 2320 °C) L (0 °C ... 900 °C)
<b>Measuring method</b>	Integration
<b>Measurement resolution</b>	15 bits + sign
<b>Interference frequency suppression</b>	None   10 Hz   50 Hz   60 Hz   400 Hz
<b>Refresh rate / conversion rate</b>	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
<b>Diagnoses</b>	Upper measuring range limit exceeded (overflow), lower measuring range limit fallen below (underflow), 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 range
Repeating accuracy in steady state at 25 °C	±0.05 %/K relative to the nominal range
<b>Parameter configuration length</b>	26 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	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