



AI, 16 Bit, TC, Iso.

AI 8x TC, Iso., 16 Bit

- Measuring range ± 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
- 8 inputs, electrically isolated from the backplane bus
- 8 process input words
- 8 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 ± 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: ± 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 (± 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 | 600-254-4AH22 |
| Article name | AI 8x TC, Iso., 16 bit |
| Scope of delivery | AI 8x TC, Iso., 16 bit |

| | |
|---|--|
| Dimensions (DxWxH) | 110 x 25 x 73 mm |
| Weight | Approx. 110 g |
| Number of inputs | 8 |
| Electrical isolation | |
| from the backplane bus | Yes |
| Between the channels | Yes |
| Internal | Max. 140 mA |
| Power dissipation | Max. 1 W |
| Measuring ranges | ± 80 mV |
| Thermocouples | 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) |
| Measuring method | Integration |
| Measurement resolution | 15 bits + sign |
| 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: 3 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), parameter assignment error |
| Process alarms | Upper and lower limit per channel |
| Error limits | |
| 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 |
| Parameter configuration length | 51 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" |
| | |

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|--------------------------------|---|
| 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 |