



## AI, R, RTD, 16 bit

AI 8 x R, RTD, 16 Bit, 2 wire

- Measuring ranges: 150 ohms, 300 ohms, 600 ohms, 3,000 ohms, 6,000 ohms, Pt100, Pt1000, Ni100, Ni1000, LG-Ni1000, individually configurable for each channel
- Can accommodate 2/3/4-wire sensors
- Measurement resolution: 15 bits + sign
- Diagnostic messages
- Wire break detection
- A bi-color LED (blue/red) indicates the module operating status and any malfunctions
- 2 wire connection
- 8 inputs for resistance measurement, isolated to the backplane bus
- 8 process input words

Parameters for the module

Diagnostic alarm: On | Off

Overflow/underflow diagnosis: On | Off

Representation values: SIMATIC\* S7 | SIMATIC\* S5

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

### Technical specifications

General information	
Order number	600-253-4BH21
Article name	AI 8 x R, RTD, 16 bit, 2 wire
Scope of delivery	AI 8 x R, RTD, 16 bit, 2 wire
Number of inputs	8
Electrical isolation	
from the backplane bus	Yes
Between the channels	No
Internal	Max. 140 mA
Power dissipation	Max. 1 W
Measuring ranges	150 Ohm / 300 Ohm / 600 Ohm / 3000 Ohm / 6000 Ohm PT 100 / PT 1000 Ni 100 / Ni 1000 LGNi 1000 PT 100 Klima / PT 1000 Klima
Measuring method	Integration
Measurement resolution	15 bits + sign
Interference frequency suppression	None   10 Hz   50 Hz   60 Hz   400 Hz
Refresh rate / conversion rate	Number of active channels x conversion time +16 ms for wire break detection for each channel when activated. The conversion time will depend on the interference frequency suppression: None: 8 ms 400 Hz: 45 ms 60 Hz: 109 ms 50 Hz: 128 ms 10 Hz: 342 ms

<b>Diagnoses</b>	Upper measuring range limit exceeded (overflow), lower measuring range limit fallen below (underflow), wire break, 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>	10 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