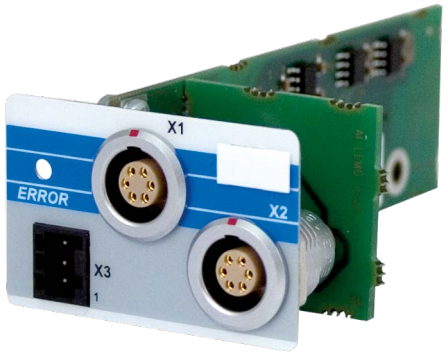
AI-Einsteckmodul
MSR 223



This analog insert module is used to detect temperatures in the range of -200 ... +250 °C (-328 ... +482 °F). A Pt100 resistance thermometer is used as the temperature sen-sor in a 2 or 4-wire configuration. The module has two channels. Additionally, each channel has a switchable 24 V supply voltage.

On the diagnostic connector, the processed input signals can be measured. The signals on the diagnostic connector are for diagnostic purposes only and cannot be calibrated.

Analog Channel Specifications

Number of channels	2
Measurement range	-200 ... +250 °C An open input returns 9999.99 °C
Resolution	0,01 K
Resolution [Bit]	16
Sensor break detection	yes
Conversion time per channel	≤ 25 µs
Sensor current Sensor voltage	typically 0.34 mA maximum 10 V
Analog channel accuracy from end value 0 ... 60 °C	typically 0.3 K
Status display	ERROR (red) (located on the base)
Converter	18-bit Serial SAR
Galvanic isolation	500 V DC

Analog Channel Accuracy

Accuracy	typically ±0.095 K	maximum ±0.15 K
Noise	typically ±0.1 K	maximum ±0.14 K
Temperature input 0 ... 40 °C 0 ... 60 °C	 typically ±0.05 K typically ±0.1 K	 maximum ±0.1 K maximum ±0.2 K
Cross talk from previous channel. -200 ... +250 °C	typically ±0.005 K	maximum ±0.01 K
Total error 0 ... 40 °C 0 ... 60 °C	 typically ±0.25 K typically ±0.3 K	 maximum ±0.4 K maximum ±0.5 K
Long-term drift 1000 h	typically ±0.03 K	

Supply Voltage 0 ... +60 °C

Output voltage	+23,343 V ... 24,330 V ... 25,127 V
Output current/channel	100 mA maximum, short-circuit proof
Total current/base module	maximum 800 mA
Galvanic isolation	500 V DC

Diagnostic Connector

Voltage range with cable break	circa 0.5 V to 5 V, 0 V or circa 7 V
Load capacity	10 mA
Short-circuit proof	yes

Article Number and Miscellaneous

Article number	18-001-223
Hardware version	1.x

Environmental Conditions

Storage temperature	-30 ... +85 °C	
Operating temperature	0 ... +60 °C	
Humidity	0-95 %, non-condensing	
EMC stability	in accordance with EN 61000-6-2:2001 (industrial area)	
Shock resistance	EN 60068-2-27	150 m/s²
Protection type	EN 60529	IP00