

## μ-THERMO K8



### 8-Channel Temperature Measurement for Thermocouples Type K

- ▶ 8 measurement inputs for thermocouples type K (NiCr/NiAl) through single connective connector
- ▶ RTD (PT100) for the reference temperature (cold junction compensation)
- ▶ Measurement data output to CAN
- ▶ Complete galvanic isolation (inputs, CAN, power supply, enclosure)
- ▶ Designed for engine compartment applications
- ▶ Toolless module to module connection

<b>Measurement range</b>	<b>-60 °C to 1370 °C (-76 °F to 2498 °F)</b>
Input voltage	max. ±50 V
Channel sample rates	1/ 2/ 5/ 10/ 20 Hz
Voltage supply	9 V <sub>DC</sub> to 36 V <sub>DC</sub> Switch-off for voltage < 6 V
Power consumption, typical	1.1 W
Working temperature range	-40 °C ... +125 °C (-40 °F ... +257 °F)
Storage temperature range	-55 °C ... +150 °C (-67 °F ... +302 °F)
IP-Code	IP 67 (ISO 20653 - 2013)
Dimensions	L118 mm x W32 mm x H46 mm (L4.65 in x W1.26 in x H1.81 in)
Weight	218 g (0.48 lb)

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<b>Voltage input</b>	
Galvanic isolation input ↔ module power supply input ↔ CAN input ↔ input	±100 V, short-time (1 ms) ±200 V ±100 V, short-time (1 ms) ±200 V ±100 V, short-time (1 ms) ±200 V
<b>Measuring range type K (Ni10Cr/NiAl)</b>	
<b>-60 °C to 1370 °C (-76 °F to 2498 °F)</b>	
AD converter resolution	16 Bit
Linearization look-up table resolution	≥ 13 Bit / better than 0.174 °C (0.31 °F)
Cold junction compensation	RTD (PT100) to measure the reference temperature
Accuracy at ambient temperature Ta = 25 °C (77 °F) and measured temperature -60 °C to 1000 °C (-76 °F to 1832 °F) 1000 °C to 1370 °C (1832 °F to 2498 °F)	±0.035 % of full temperature range ±0.035 % of full temperature range ±2 Kelvin
Drift over ambient temperature: -40 °C to +85 °C +85 °C to +120 °C	±20 ppm/K ±30 ppm/K
Input resistance	approx. 1 MΩ with activated sensor break detection approx. 10 MΩ with inactivated sensor break detection
Align of the AD converter	before processing each measuring value
Sensor break detection	activated per software on command
Hardware filter	1.0 Hz, filter type single pole RC low-pass
Aggregate sampling rate	max. 160 Hz
Single connective female connector	Lemo HGG 2B 316, Ni/CrNi pins
<b>CAN output</b>	
Selectable data transfer rate (bit rate)	up to 1 MBit/s according to ISO11898-2
CAN message data format (signal) Resolution (Format) Sign	8 Bit (Byte) and 16 Bit (Word) selectable signed, unsigned
Configuration interface	CAN