



# xProThermo8

8 Channel Thermocouple Signal Conditioning  
highest Precision and Resolution



- 8 Input Channels made in 24-Bit Converter Technology
- Super Low Noise Solution
- Look even into 1/100 degree Celsius range
- Red / Green Status LED to signal broken TC
- Channel to Channel galvanic Isolation
- Precision Cold Junction Compensation
- Chaining of multiple Modules to increase Channel number
- CAN Messages for Raw Data, Filtered Data and CJC
- Flexible CAN 2.0B Interface / CAN-FD ready
- Built in CAN-Hub
- Compact Size and robust Alloy Housing

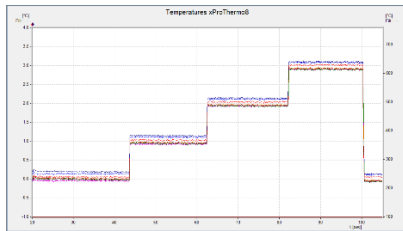
**XPRO\_THERMO8 - THERMOCOUPLE SIGNAL CONDITIONING WITH HIGHEST PRECISION**

**xProThermo8** converts thermocouple signals of 8 input channels into CAN-Bus messages with highest resolution of 24-Bit at a rate of 10 Hz.

**An Input Stage made in Latest Technology**

By applying the very latest circuit technology and all our design experience, we could create an amazing new product which brings temperature measurements based on thermocouples to a completely new level.

As a result, this advanced product gives you a deep look in sub-Celsius temperature measurements for the full specified input range of -200 ... 1200 C. Raw data is already better than 1/10<sup>th</sup> of a degree due to the reduced noise level of the circuit. An additional smoothing filter gives results of around 1/100<sup>th</sup> of a degree.



Because of a special precision Cold Junction Compensation technique overall absolute accuracy is around 1 degree Celsius.

By default **xProThermo8** is prepared for Type K thermoelements. Others can be provided on request.

All input channels do have their own power supply with galvanic isolation from channel to channel.

**Status LEDs to show Open TC Detection**

As an extra very valuable feature, **xProThermo8** detects broken Thermocouples or channels with no sensor fitted and switches the corresponding status LED to "red".

**Flexible CAN-Interface**

Converted and linearized temperature data is sent out via CAN bus in 3 data groups: raw data, filtered data plus the current Cold Junction temperature.

CAN data is formatted along to the .dbc-file which we provide with every system.

As with **xProThermo8** several units can be chained to build a powerful multi-module acquisition unit the CAN-ID-Base address can be set individually by either DIP-SWITCH or Software / CAN message.

Also a 120 Ohm Bus Termination resistor can be activated by DIP-SWITCH or Software.

The necessary CAN-Hub for chaining is already built into every **xProThermo8** module.

From Hardware side **xProThermo8** is already prepared for CAN-FD technology. Software has to be adapted to specific customer specification.

**Rock-Solid Power-Supply**

The extra wide Power-Supply range is 9V ... 32 VDC, so **xProThermo8** can also directly be powered from board supplies of commercial trucks etc.

Of course the galvanically isolated power supply is protected against wrong polarity, over-current, EMI influences.

**Technical Data**

- Thermocouple Type K range -200 ... 1200 C
- Max. Resolution 0.01 degree Celsius
- Output Data Rate 10 Hz
- Cold Junction Sensor accuracy 0.5 C
- Open TC detection
- Power supply 9 ... 32 VDC @ 80mA
- Physical Dimensions 117 \* 39 \* 35 mm
- Weight appx. 200 g
- Temperature Range -40 to +80 C