



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

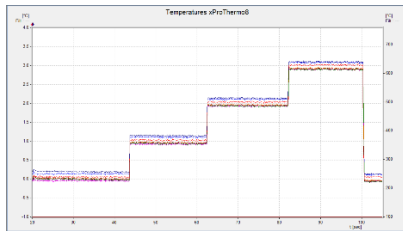
XPRO_THERMO8 - THERMOCOUPLE SIGNAL CONDITIONING WITH HIGHEST PRECISION

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 1/10th of a degree due to the reduced noise level of the circuit. An additional smoothing filter gives results of around 1/100th 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