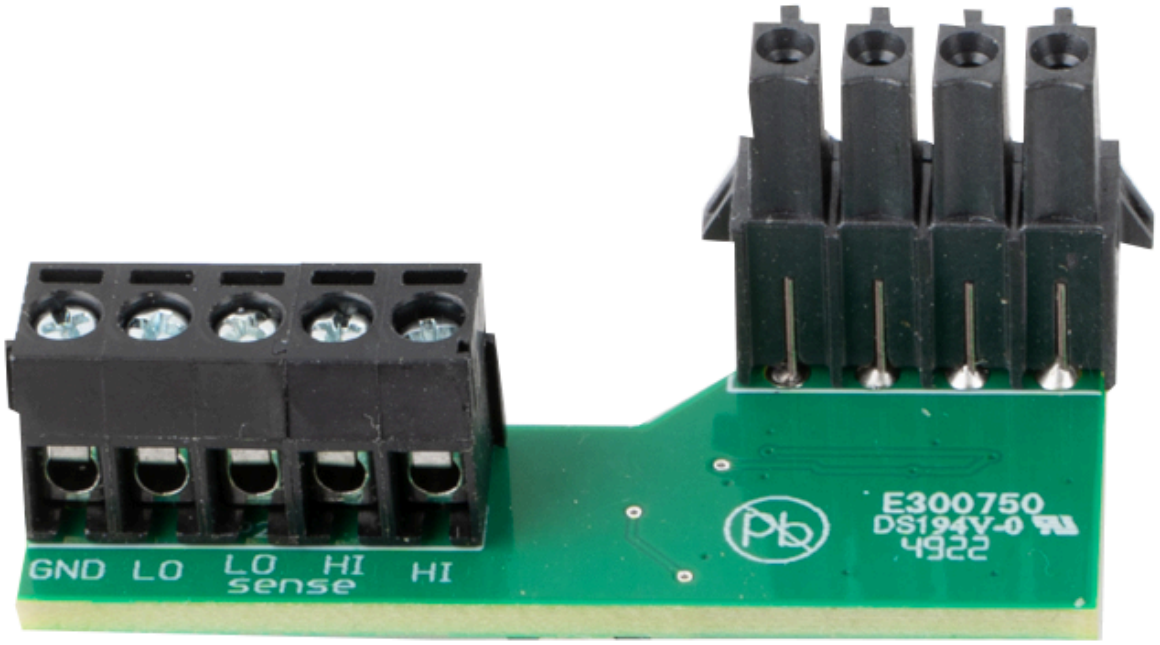
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DATA SHEET

ELT ADC Module

Produal

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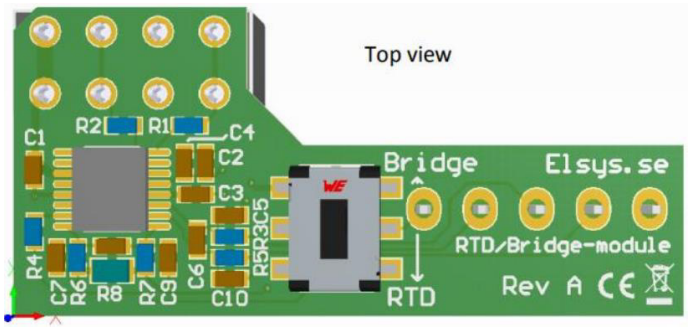
Technical manual
ADC Module

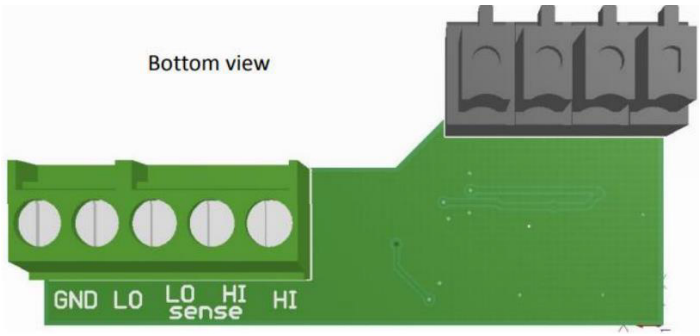
Published: 15 January 2024

The ADC-module is a module that fits inside the ELT2 and is intended for connecting PT1000 platinum sensors or use as a general purpose bridge amplifier (e.g. load cell).

Features

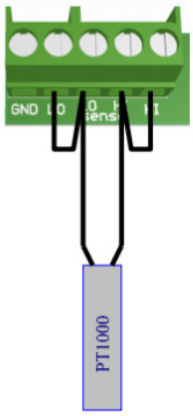
- Easy use with PT-1000 (RTD platinum sensor)
- 2- or 4-wire connection
- Measures -200 to 790 °C
- General high resolution bridge amplifier
- Fits inside the ELT-2 box
- Powered by the ELT-2 internal battery
- Very low energy consumtion
- Terminal block for easy connection



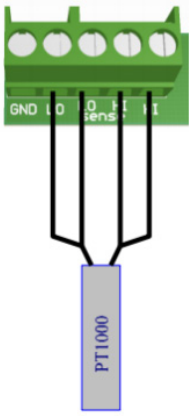


Accuracy (RTD)
± 0.1 °C (-40 to 200°C) + sensor deviation.
± 0.5 °C (full span) + sensor deviation.

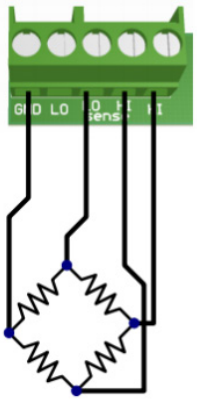
2-wire RTD connection



4-wire RTD connection



Bridge connection



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Using the ADC module with a PT1000 RTD

- Set the switch on the module to “RTD”
- Set external sensor in the ELT2 to “PT1000”
- Read temperature value in degrees Celsius with data type “External temperature” (0x0C)

Using the ADC module with a load cell/measurement bridge

- Set the switch on the module to “Bridge”
- Set external sensor in the ELT2 to “Load cell”
- Read voltage from measurement in micro-volt with data type “External analog (uV)” (0x1B)
- To calculate deflexion of a load cell, also read internal battery voltage (0x07), multiply the 2 voltage measurements to get a value that can be compared to the load cell full scale output.

Calculation example for load cell:

- Load cell full scale is 2 mV/V @ 50 kg
- External analog reads 1274 uV from payload (0x1B)
- Internal battery reads 3628 mV from payload (0x07)

Full scale voltage is calculated to 2mV/V x 3628 mV = 7256 uV

Bridge voltage is then 1274/7256 of full scale, thus weight is 1274/7256 x 50 kg = 8,78 kg.

Note that maximum reading from ADC module is +- 28,000 uV (+- 28 mV)

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