

LM35 temperature sensor



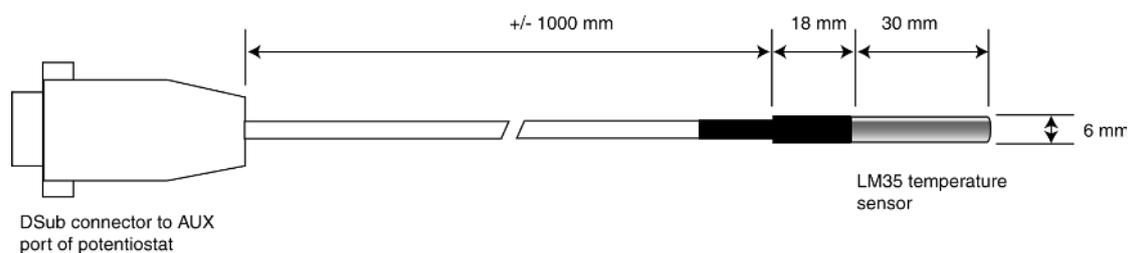
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1 Technical specifications

- Linear + 10-mV/°C Scale Factor
- 0.5°C Ensured Accuracy (at 25°C)
- Temperature measuring range: 0...100°C



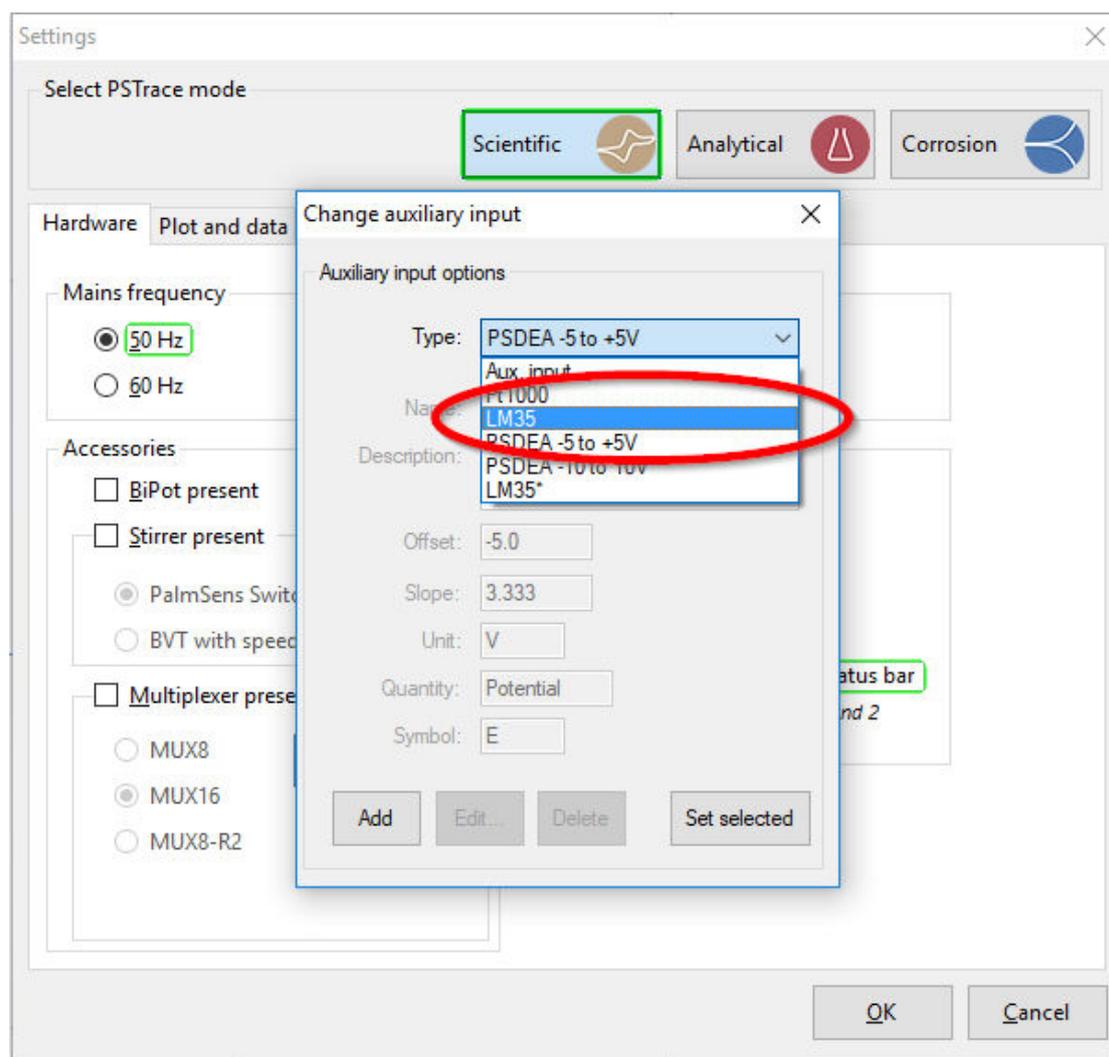
2 Using the LM35 with PSTrace

Follow the steps below in order to use a LM35 temperature sensor in PSTrace.
Make sure to connect to the instrument with the LM35 extension connected to its auxiliary port first.

Go to menu: Tools → General settings...

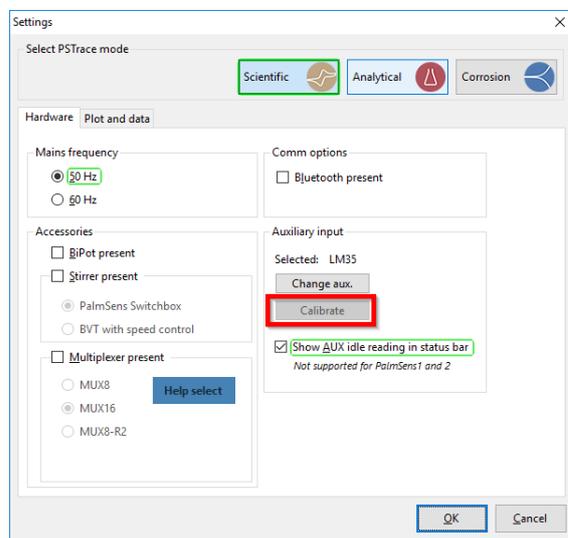
Click button 'Change aux. input'

Select LM35 as the auxiliary input.



3 Calibration

Make sure the instrument is connected in PSTrace.
Click the 'Calibrate' button in the Settings window.



The 'Calibrate' button is enabled if an instrument is connected

The LM35 gives a voltage of 10 mV per measured centigrade.

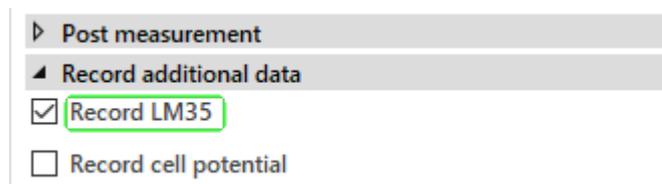
Calibration can be done by setting two points to determine both offset and slope of the linear relation or by just adjusting the offset.

The known actual temperature of the room or liquid the LM35 is emerged in can be entered in the field for Offset calibration to determine the offset. This is the easiest way to calibrate the LM35 sensor.

A more precise two-point calibration can also be used. In this case a high precision thermometer can be used in a low temperature and high temperature medium to enter two different values, e.g. room temperature and 100 degree Celsius by using the 'set point 1' and 'set point 2' buttons. This will determine both the offset and slope for the linear relation.

4 Measuring temperature as auxiliary input

Make sure to tick the 'LM35' checkbox in the method editor in PSTrace to record the temperature simultaneous with a measurement.



Please do not hesitate to contact PalmSens for more details:
info@palsens.com

PalmSens BV
The Netherlands
www.palsens.com

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